

SELECTED BIBLIOGRAPHY FOR CONVERGENT SCIENCE & CONVERGE CFD SOFTWARE

Updated July 29, 2025

1. **Mazda Motor Corporation**
Fukuda, D., Matsuo, T., Nishioka, Y., Kim, S., Kanzaki, J., Shirahashi, N., Kanda, T., Yamamoto, A., Takaki, K., and Shimo, D., "Development of Technology to Enable the Use of Next-Generation Biodiesel Fuel HVO in Skyactiv-D 3.3," *Mazda Technical Review* 2025, 41, 112-118, 2025.
2. **Toyota Motor Corporation**
Kimura, K., Sakai, H., Omura, T., and Takahashi, D., "Development of Super Lean Burn Engine With 50% Thermal Efficiency to Achieve Carbon Neutrality," *Transactions of Society of Automotive Engineers of Japan*, 54(5), 2023. DOI: 10.11351/jsaeronbun.54.776
3. **Subaru Corporation; IDAJ Co. LTD; University of Tokyo**
Adachi, R., Suganuma, K., Koiwa, K., Nakaya, S., and Ren, F., "Development of a Spark Discharge Model for Predicting Ignition Stability in High EGR Conditions in SI Engines," *Transactions of the JSME*, 91(946), 2025. DOI: 10.1299/transjsme.25-00038
4. **Mitsubishi Heavy Industries, Ltd.**
Tanaka, T., Imamori, Y., Fuse, A., and Kogure, R., "Development of Ammonia Co-Firing Engine," *Mitsubishi Heavy Industries Technical Review*, 62(2), 2025.
5. **Isuzu Advanced Engineering Center, Ltd.**
Furukawa, S., Miyashita, K., Ishii, Y., and Ozawa, H., "Effect of Spray-Spray/Wall Interaction on Diesel Engine Combustion (Second Report)," *Transactions of Society of Automotive Engineers of Japan*, 56(4), 738-744, 2025. DOI: 10.11351/jsaeronbun.56.738
6. **Gamma Technologies**
Mishra, R., Gundlapally, S., and Wahiduzzaman, S., "Integrating High-Fidelity Urea–Water Solution—Computational Fluid Dynamics Simulations for Fast Three-Dimensional Selective Catalytic Reactor Modeling Using Artificial Neural Networks," *SAE International Journal of Engines*, 18(5), 2025. DOI: 10.4271/03-18-05-0030
7. **Marmara University**
Ozkara, M. and Gul, M.Z., "Optimization of a Heavy-Duty Hydrogen-Fueled Internal Combustion Engine Injector for Optimum Performance and Emission Level," *Applied Sciences*, 15(15), 2025. DOI: 10.3390/app15158131
8. **Bilecik Şeyh Edebali University; Kocaeli University**
Gördük, M.B., Demir, U., and Altinkurt, M.D., "Comparative Study of Diesel and Diesel-Hydrogen Dual Fuel Use in RCCI Engine Under Various Load Conditions," *11th International Automotive Technologies Congress, OTEKON 2024*, Bursa, Turkey, Sep 9–10, 2024.
9. **Kocaeli University; Sakarya University; Lund University**
Altinkurt, M.D., Coskun, G., Tunér, M., and Turkcan, A., "A Comprehensive Investigation of Early Pilot (e-Pilot) Mode Split Injection Variations for Improving NG-Diesel Dual-Fuel Combustion in a Medium-Speed Marine Engine: Experiments and CFD Study," *Case Studies in Thermal Engineering*, 68, 2025. DOI: 10.1016/j.csite.2025.105881
10. **Penn State Harrisburg; Convergent Science**
Ahn, J., Chai, X., and Maïcke, B.A., "Project HH Atmospheric ISRU Inlet Analysis: CFD Assessment of Shock Managed Hypersonic Intake Geometries," *2025 AIAA AVIATION Forum*, AIAA 2025-4081, Las Vegas, NV, United States, Jul 21–25, 2025. DOI: 10.2514/6.2025-4081

11. **IHI Corporation; Kyushu University; National Institute of Technology, Oshima College**
Aoyagi, T., Wakasugi, T., Tsuru, D., and Tashima, H., "Effects of Torch Flame Strength on the Combustion Process in Medium-Speed Gas Engines Through Pre-Chamber Orifice Specifications," *Combustion Engines*, 2025. DOI: 10.19206/CE-205609
12. **Nihon University**
Liu, J., Yamazaki, Y., Otaki, Y., Kato, H., Yokota, T., and Iijima, A., "Effect of Ignition Condition and Fuel Octane Number on Knock Intensity in a Small 2-Stroke Engine," *SAE Paper 2025-01-0211*, 2025. DOI: 10.4271/2025-01-0211
13. **Yildiz Technical University**
Akar, F. and Özener, O., "Numerical Investigation of In-Cylinder Gas Motion Dynamics in a Heavy-Duty Direct Injection Hydrogen Internal Combustion Engine," *International Journal of Hydrogen Energy*, 86, 730-741, 2024. DOI: 10.1016/j.ijhydene.2024.08.338
14. **Argonne National Laboratory; Clemson University; Achates Power**
O'Donnell, P.C., Gainey, B., Bhatt, A., Huo, M., and Lawler, B., "Computational Investigation of Advanced Compression Ignition With Wet Ethanol in an OP-2S," *SAE International Journal of Fuels and Lubricants*, 19(1), 1-23, 2026. DOI: 10.4271/04-19-01-0002
15. **The University of Tennessee, Knoxville**
Bakir, A.H.M., "Ammonia for Decarbonization: Spray Dynamics, Ignition Enhancement, and Practical Applications," Ph.D. thesis, The University of Tennessee, Knoxville, Knoxville, TN, United States, 2025.
16. **Indian Institute of Technology Delhi; Cummins Inc.; Indian Institute of Technology Bombay**
Duvvuri, P.P., Shrivastava, R.K., and Sreedhara, S., "Soot Coagulation Due to Pulsating Flow in Diesel Engine Exhaust: A Numerical Investigation," *The European Physical Journal Special Topics*, 2025. DOI: 10.1140/epjs/s11734-025-01738-1
17. **Delft University of Technology; TNO; Netherlands Defence Academy**
Zoumpourlos, K., Bekdemir, C., Geertsma, R., van de Ketterij, R., and Coraddu, A., "CFD Modeling Approach for Late-Injection Methanol Sprays Validated With ECN Spray M," *International Journal of Engine Research*, 26(8), 2025. DOI: 10.1177/14680874251323931
18. **Sapienza University of Rome**
Minerva, M., "Adaptive Mesh Refinement and Applications to Hydrogen Combustion and Supercritical Mixing Layers," M.S. thesis, Sapienza University of Rome, Rome, Italy, 2025.
19. **University of Wisconsin-Madison**
Mason, M.A., Jr., "An Investigation of High-Pressure Spray Modeling and Development of a Near-Field Lagrangian Dispersion Model," Ph.D. thesis, University of Wisconsin-Madison, Madison, WI, United States, 2025.
20. **Cranfield University**
Arnaud, G., "Numerical Simulation of a Wankel Engine to Investigate Advantages of Hydrogen Combustion," M.S. thesis, Cranfield University, Wharley End, England, 2024.
21. **Cranfield University**
Gorroño, A.M., "Numerical Analysis of Turbocharging in a Wankel Rotary Engine," M.S. thesis, Cranfield University, Wharley End, England, 2024.
22. **Universiti Teknologi PETRONAS; National University of Sciences & Technology; University College London**
Jamil, A., Baharom, M.B., Tariq, A., and Azam, F.I., "Validation of Different Turbulence Models to Analyse Flow Characteristics Within a Toroidal Crank-Rocker Engine Using Particle Image Velocimetry," *Alexandria Engineering Journal*, 127, 705-721, 2025. DOI: 10.1016/j.aej.2025.05.035

23. **University of Bath; King Abdullah University of Science and Technology**
Kaczmarczyk, K.O., Liu, X., Im, H.G., Turner, J.W.G., Yuan, H., Akehurst, S., and Esposito, S.,
"Investigation of URANS CFD Methods for Supersonic Hydrogen Jets," SAE Paper 2024-01-2687, 2024.
DOI: 10.4271/2024-01-2687
24. **King Abdullah University of Science and Technology; Saudi Aramco; Aramco Americas**
Liu, X., Menaca, R., Mohan, B., Silva, M., AlRamadan, A.S., Cenker, E., Zhao, L., Sari, R.L., Pei, Y., and Im, H.G., "Assessment of Piston and Injector Cap Designs on the Performance of a Hydrogen Direct-Injection Spark-Ignition Engine," *Applied Thermal Engineering*, 271, 2025. DOI: 10.1016/j.applthermaleng.2025.126372
25. **Saudi Aramco; King Abdullah University of Science and Technology; Umm Al-Qura University; Aramco Americas**
Aljabri, H., Menaca, R., Panthi, N., Moreno-Cabezas, K., Almatrafi, F., Liu, X., Silva, M., Cenker, E., AlRamadan, A., Mohan, B., Al-lehaibi, M., Amer, A.A., Magnotti, G., and Im, H.G., "Assessment of Combustion Models in Hydrogen Engine Simulations Using Optical Measurements," *Fuel*, 392, 2025. DOI: 10.1016/j.fuel.2025.134871
26. **Istanbul Technical University**
Dillice, H., "Numerical and Experimental Study of Turbulent Jet Ignition Method on Wankel Engine With Passive Pre-Chamber," M.S. thesis, Istanbul Technical University, Istanbul, Turkey, 2024.
27. **Istanbul Technical University; Turkish Naval Forces; Sakarya University of Applied Sciences; Turkish-German University**
Dillice, H., Kutlar, O.A., Taskiran, O.O., Cihan, O., Arslan, H., Calik, A., and Cetiner, A., "Numerical and Experimental Study of Passive Pre-Chamber Turbulent Jet Ignition on Wankel Engine," *AIP Conference Proceedings*, 2024. DOI: 10.1063/5.0201445
28. **Marquette University**
Zeman, J.J., "Flex-Fuel Mixing-Controlled Combustion Enabled by Prechamber Ignition (PC-MCC)," Ph.D. thesis, Marquette University, Milwaukee, WI, United States, 2025.
29. **LOGE Polska sp. zo.o.; Silesian University of Technology; Norwegian University of Science and Technology; Brandenburg University of Technology; University of Birmingham; Key Laboratory of Energy Thermal Conversion and Control of Ministry of Education**
Pasternak, M., Przybyła, G., Siddareddy, R., Lewandowski, M., Bjørgen, K., Mauss, F., Nadimi, E., Peczkis, G., Zhou, M.-M., and Adamczyk, W., "Development of Ammonia-Biodiesel Fueled Agricultural Tractor: Aspects of Retrofitting a Compression Ignition Engine to Direct Ammonia Injection," *Energy*, 327, 2025. DOI: 10.1016/j.energy.2025.136255
30. **CMT - Clean Mobility & Thermofluids**
Novella, R., Gomez-Soriano, J., González-Domínguez, D., and Olaciregui, O., "Understanding the Role of Thermo-Diffusive Instabilities in Hydrogen Combustion for Lean-Burn Spark-Ignition Engine Operation," *Energy Conversion and Management*, 334, 2025. DOI: 10.1016/j.enconman.2025.119801
31. **Silesian University of Technology**
Nadimi, E., "Experimental and Numerical Study on Ammonia Fueled Compression Ignition Engine," Ph.D. thesis, Silesian University of Technology, Gliwice, Poland, 2024.
32. **Argonne National Laboratory; University of Illinois Urbana-Champaign; Army Research Laboratory**
Oruganti, S.K., Lien, H.-P., Torelli, R., Motily, A., Lee, T., Kim, K., Mayhew, E., and Kweon, C.-B., "A Conjugate Heat Transfer Numerical Framework Applied to Energy-Assisted Ignition of Jet Fuel in a Rapid Compression Machine," SAE Paper 2025-01-8352, 2025. DOI: 10.4271/2025-01-8352
33. **University of Massachusetts Lowell**
Kumar, A. and Van Dam, N., "Impact of Injector Geometry and Parcel Injection Location on Flash Boiling Spray Simulations of the ECN Spray G Injector," SAE Paper 2025-01-8462, 2025. DOI: 10.4271/2025-01-8462

34. **Cummins Inc.; The University of Texas at Austin**
Kim, K., Hall, M., Joshi, S., and Matthews, R., "Development of a Detailed Ignition Model With Energy Deposition and Its Application to Full Engine Simulation," SAE Paper 2025-01-8360, 2025. DOI: 10.4271/2025-01-8360
35. **Convergent Science**
Yang, P. and Cheng, Z., "Gasoline Particulate Filter Modeling With Catalytic Washcoat and Ash Accumulation and Transient Soot Distribution Prediction," SAE Paper 2025-01-8483, 2025. DOI: 10.4271/2025-01-8483
36. **King Abdullah University of Science and Technology; Saudi Aramco**
Zaihi, A., Cabezas, K.M., Liu, X., Houidi, M.B., Wu, H., AlRamadan, A., Cenker, E., Mohan, B., Roberts, W., and Im, H., "Numerical Investigation of Injector Cap Design on Hydrogen Jet Characteristics," SAE Paper 2025-01-8463, 2025. DOI: 10.4271/2025-01-8463
37. **King Abdullah University of Science and Technology; Saudi Aramco**
Menaca, R., Liu, X., Mohan, B., Cenker, E., AlRamadan, A., and Im, H., "A Computational Investigation of Hydrogen Pre-Chamber and Spark-Ignition Combustion Engines at Different Load Conditions," SAE Paper 2025-01-8406, 2025. DOI: 10.4271/2025-01-8406
38. **TNO; NPS Driven**
Seykens, X., Doosje, E., Bekdemir, C., and Wezenbeek, P., "Development of Non-Road Spark Ignited H2-ICE With Port Fuel Injection for Fixed Speed Applications," SAE Paper 2025-01-8435, 2025. DOI: 10.4271/2025-01-8435
39. **Hyundai America Technical Center, Inc.; Michigan Technological University**
Ullal, A., Zhu, S., Ha, K.P., Purushothaman, A.K., and Ra, Y., "Six Stroke Engine Optimization for Mid to High Loads Using Genetic Algorithm," SAE Paper 2025-01-8438, 2025. DOI: 10.4271/2025-01-8438
40. **Technical University of Munich**
Zepf, A., Härtl, M., and Jaensch, M., "Optimization of the Numerical Spray Modeling for Polyoxymethylene Dimethyl Ethers for Combustion Prediction in CONVERGE," SAE Paper 2025-01-5026, 2025. DOI: 10.4271/2025-01-5026
41. **Delft University of Technology; TNO; Netherlands Defence Academy**
Zoumpourlos, K., Bekdemir, C., Geertsma, R., van de Ketterij, R., and Coraddu, A., "Methanol Sprays in Marine Engines: CFD Modelling of Port Fuel Injection Systems," *Journal of Marine Engineering & Technology*, 2025. DOI: 10.1080/20464177.2025.2473184
42. **Marmara University**
Alattwani, A.H.S., Gul, M.Z., and Yilmaz, M., "Optimization Methodologies for Analyzing the Impact of Operational Parameters on a Light-Duty Methane/Diesel Reactivity-Controlled Compression Ignition (RCCI) Engine," *Applied Sciences*, 15(7), 2025. DOI: 10.3390/app15073849
43. **Indian Institute of Technology Delhi**
Ailaboina, A. and Saha, K., "Numerical Modeling of Flash Boiling Sprays Using iso-Octane, Ethanol, and Methanol as Fuels for GDI Applications," *Thermal Science and Engineering Progress*, 61, 2025. DOI: 10.1016/j.tsep.2025.103557
44. **Clemson University International Center for Automotive Research**
Motwani, R., Gandolfo, J., Gainey, B., and Lawler, B., "Validation of a Multidimensional CFD Approach for Ethanol-Fueled Spark Ignition Engines at Knock-Limited Conditions," *Applied Thermal Engineering*, 271, 2025. DOI: 10.1016/j.applthermaleng.2025.126301
45. **Delft University of Technology; Indian Institute of Science**
Floris, M., Sai, T.S., Nayak, D., Langella, I., Aditya, K., and Doan, N.A.K., "Data-Driven Identification of Precursors of Flashback in a Lean Hydrogen Reheat Combustor," *Proceedings of the Combustion Institute*, 40(1-4), 2024. DOI: 10.1016/j.proci.2024.105524

46. **Technical University of Delft; Indian Institute of Science; Ansaldo Energia Switzerland AG**
Pousada, P.R., Doan, N.A.K., Aditya, K., Düsing, M., Ciani, A., and Langella, I., "Flashback Prevention in a Hydrogen-Fueled Reheat Combustor by Water Injection Optimized With Global Sensitivity Analysis," *Journal of Engineering for Gas Turbines and Power*, 147(6), 2025. DOI: 10.1115/1.4066895
47. **Jiangsu University**
Ogunjide, S.B., Zhong, W., Pachianan, T., and Zhu, Y., "Combustion and Emission Characteristics of High n-Pentanol Blends at Low Load: A Pathway to Eco-Friendly Internal Combustion Engine Operation," *Fuel*, 393, 2025. DOI: 10.1016/j.fuel.2025.135032
48. **The University of Melbourne**
Dou, X., Yosri, M., and Talei, M., "Investigation of Hydrogen Detonation in a Spark-Ignition Engine Using Large Eddy Simulations," *International Journal of Hydrogen Energy*, 117, 62-72, 2025. DOI: 10.1016/j.ijhydene.2025.02.430
49. **Delft University of Technology; Netherlands Defence Academy**
Zoumpourlos, K., Geertsma, R., van de Ketterij, R., and Coraddu, A., "Methanol Operation in Heavy-Duty DICI Dual-Fuel Engines: Investigating Charge Cooling Effects Using Engine Combustion Network Spray D Data," *Journal of Engineering for Gas Turbines and Power*, 147(10), 2025. DOI: 10.1115/1.4067862
50. **Xi'an University of Science and Technology; Shaanxi College of Communications Technology**
Gao, H., Zong, S., Wang, Y., Ma, Y., and Zhang, C., "The Influence of Hydrogen Injection Position on the Combustion Process of a Hydrogen Direct Injection X-Type Rotary Engine With Biased Combustion Chamber," *International Journal of Hydrogen Energy*, 100, 566-579, 2025. DOI: 10.1016/j.ijhydene.2024.12.171
51. **Shanghai Maritime University; Shanghai Ocean Shipping Co., Ltd.**
Liu, X., Zhu, J., Wang, Z., Wang, Z., Zhao, Z., Wang, W., and Cai, H., "Research on the Impact of Blending Dissociated Methanol Gas on the Performance and Emissions of Marine Medium-Speed Methanol Engines," *Journal of Marine Science and Engineering*, 13(1), 2025. DOI: 10.3390/jmse13010007
52. **Jiangsu University; State Key Laboratory of Intelligent Agricultural Power Equipment; Guangxi Yuchai Machinery Group Co., Ltd.**
Lu, Y., Wei, M., Wang, X., Wu, P., Zhao, W., Ji, Q., Wang, X., and Liu, J., "Numerical Study of Nozzle Hole Number and Pre-Injection Timing Effect on Combustion and Emissions of Methanol/Diesel Dual-Fuel Engine," *International Communications in Heat and Mass Transfer*, 161, 2025. DOI: 10.1016/j.icheatmasstransfer.2024.108512
53. **Hainan University**
Chen, Z., Wan, Y., Awad, O.I., and Pan, Z., "Effect of Multiple Injection Strategy Under High Ammonia Ratio on Combustion and Emissions of Liquid Ammonia/Diesel Dual DI Engine," *Atmosphere*, 16(1), 2025. DOI: 10.3390/atmos16010094
54. **Mitsubishi Turbocharger and Engine Europe B.V.; CMT - Clean Mobility & Thermofluids; Universitat Politècnica de València**
Martínez, M., Martí-Aldaraví, P., Salvador, F.J., and Martínez-Miracle, E.C., "Transient Nozzle Flow Analysis and Near-Field Characterization of Gasoline Direct Fuel Injectors Under Different Surrogate Fuel and Flash Boiling Conditions," *Experimental and Computational Multiphase Flow*, 2025. DOI: 10.1007/s42757-024-0208-z
55. **University of Bath; University of Naples Federico II; RWTH Aachen University**
Esposito, S., Malfi, E., De Felice, M., Golc, D., Beeckmann, J., Pitsch, H., and De Bellis, V., "Methanol Fuelling of a Spark-Ignition Engine: Experiments and 0D/1D Predictive Modelling for Combustion, Performance, and Emissions," *Fuel*, 393, 2025. DOI: 10.1016/j.fuel.2025.134657

56. **Argonne National Laboratory; Wabtec Corporation; Convergent Science**
O'Donnell, P.C., Kazmouz, S.J., Wu, S., Klingbeil, A., Lavertu, T., Jayakar, V., Sapkota, P., Liu, S., Wijeyakulasuriya, S., and Ameen, M., "Investigating the Combustion Performance of Dual Fuel Combustion With Diesel and Port Injected Hydrogen in a Large Bore Locomotive Engine," *Journal of Engineering for Gas Turbines and Power*, 147(9), 2025. DOI: 10.1115/1.4067708
57. **IAV GmbH**
Sallard, S., Nolte, O., von Roemer, L., Soltani, B., Fandakov, A., Mueller, K., Kalogirou, M., and Sens, M., "Exploring Thermal Runaway: Role of Battery Chemistry and Testing Methodology," *World Electric Vehicle Journal*, 16(3), 2025. DOI: 10.3390/wevj16030153
58. **South East Technological University**
Vashishtha, A., Kore, R., Palateerdham, S.K., and Ingenito, S.K., "Numerical Study of Hydrogen Injection to Initiate Oblique Detonation Wave," *3rd International Conference on High-Speed Vehicle Science and Technology*, Busan, Korea, Apr 14–19, 2024.
59. **South East Technological University**
Vashishtha, A., Dias, S.M., Palateerdham, S.K., Nolan, C., and Ingenito, A., "Numerical Investigation of Non-Premixed Oblique Detonation Operations in Scramjet Combustor," *8th International Conference on Jets, Wakes and Separated Flows*, Florence, Italy, Sep 23–25, 2024.
60. **University of Strathclyde**
Karvounis, P. and Theotokatos, G., "Parametric Optimisation of Diesel–Methanol Injection Timings of a Dual-Fuel Marine Engine Operating With High Methanol Fraction Using CFD," *Applied Thermal Engineering*, 264, 2025. DOI: 10.1016/j.applthermaleng.2025.125433
61. **Okayama University; Kawasaki Heavy Industries, Ltd.**
Khan, M.T., Kawahara, N., Kobashi, Y., Yamane, I., Hirayama, T., Shimizu, A., and Miyamoto, S., "Effect of Swirl Flow on the Main Chamber Combustion Dynamics of Methane in a Passive Pre-Chamber Spark Ignition Engine," *Fuel*, 391, 2025. DOI: 10.1016/j.fuel.2025.134735
62. **North Carolina State University**
Das Chaudhury, M., Sahoo, A., Ekkad, S.V., and Narayanaswamy, V., "Combustion Characteristics of Premixed Ammonia/Methane/Air Blends as an Alternative Fuel in a Swirl-Stabilized Gas Turbine Can Combustor Sustained Using a Pilot Flame," *Journal of Energy Resources Technology, Part A: Sustainable and Renewable Energy*, 1(4), 2025. DOI: 10.1115/1.4067957
63. **University of Massachusetts Lowell**
Kumar, A., "Advancing Lagrangian-Eulerian Spray Models for Flashing Sprays: Effects of Near Nozzle Conditions and Parcel Initialization Procedures," Ph.D. thesis, University of Massachusetts Lowell, Lowell, MA, United States, 2024.
64. **Jiangsu University**
Wen, H., Li, J., Li, J., and Xu, C., "Effect of Intake Air Conditions on Combustion and Emission Performance of Ammonia-Diesel Dual Fuel Engine," *Journal of the Energy Institute*, 118, 2025. DOI: 10.1016/j.joei.2024.101938
65. **Tongji University; Ibaraki University**
Hu, C., Wu, Z., Huang, W., Leng, P., Deng, J., and Li, L., "Spray Dynamics Characteristics in Gasoline Direct Injection Injectors at Varied Orifice Inlet Angles," *Physics of Fluids*, 37(1), 2025. DOI: 10.1063/5.0248414
66. **Hefei University of Technology; University of Technology Sydney; University of Oxford**
Zhuang, Y., Lin, Z., Zhai, R., Huang, Y., Nie, B., and Li, Y., "A Study on the Effect of Spark Plug Micro-Hole Hydrogen Injection on the Spray and Combustion Processes of a Gasoline Engine With Intake Port Water Injection," *Energy*, 315, 2025. DOI: 10.1016/j.energy.2025.134366
67. **Inha University**
Kim, Y.-J., Yoon, A.-S., and Lee, C.-E., "Validation of CFD Analysis on Flow and Combustion Characteristics for a GP3 Rotary Engine," *Energies*, 18(4), 2025. DOI: 10.3390/en18040758

68. **University of Calgary; Argonne National Laboratory; Cerfacs**
Arguelles, F.J., Fagade, M.D., Mehra, J., Xu, C., Sekularac, N., and Fang, X.H., "Computational Diagnostics and Characterization of Combustion Recession in Diesel Sprays," *Combustion and Flame*, 274, 2025. DOI: 10.1016/j.combustflame.2025.113993
69. **Oak Ridge National Laboratory**
Chuahy, F.D.F., Finney, C.E.A., Kaul, B.C., and Kass, M.D., "Comparison of a Full-Scale and a 1:10 Scale Low-Speed Two-Stroke Marine Engine Using Computational Fluid Dynamics," *Journal of Engineering for Gas Turbines and Power*, 147(9), 2025. DOI: 10.1115/1.4067472
70. **Aramco Americas; Cummins Inc.**
Zhao, L., Zhang, A., Sari, R.L., Popuri, S.S., Bowen, N., and Matuszak, G., "Simulated-Based Combustion System Development in a Direct-Injection Spark-Ignited Hydrogen Engine," *Fuel*, 388, 2025. DOI: 10.1016/j.fuel.2025.134434
71. **Argonne National Laboratory; University of Connecticut**
Xu, C. and Lu, T., "An Iterative Dynamic Chemical Stiffness Removal Method for Reacting Flow Simulations," *Propulsion and Energy*, 1(3), 2025. DOI: 10.1007/s44270-024-00006-2
72. **University of Minnesota; U.S. Army Combat Capabilities Development Command Army Research Laboratory**
Pavalavanni, P.K., Narayanan, S.R., Sun, Z., Yang, S., Kim, K., and Kweon, C.-B., "Bi-Fidelity Neural Network Model for Multi-Fuel Capable Internal Combustion Engines," *AIAA SciTech 2025 Forum*, AIAA 2025-0159, Orlando, FL, United States, Jan 6–10, 2025. DOI: 10.2514/6.2025-0159
73. **University of Minnesota; Duke University; U.S. Army Combat Capabilities Development Command Army Research Laboratory**
Narayanan, R.S., Sun, Z., Yang, S., Miller, J.J., Mak, S., Kim, K., and Kweon, C.-B., "Local-Transfer Gaussian Process (LTGP) Learning for Multi-Fuel Capable Engines," *AIAA SciTech 2025 Forum*, AIAA 2025-0790, Orlando, FL, United States, Jan 6–10, 2025. DOI: 10.2514/6.2025-0790
74. **University of Minnesota; U.S. Army Combat Capabilities Development Command Army Research Laboratory**
Narayanan, S.R., Raju, S.A.G., Sun, Z., Yang, S., Kim, K., and Kweon, C.-B., "Iso-Surface Sampler for Developing High-Dimensional Engine Controllers Using High-Fidelity CFD Models," *AIAA SciTech 2025 Forum*, AIAA 2025-0789, Orlando, FL, United States, Jan 6–10, 2025. DOI: 10.2514/6.2025-0789
75. **Convergent Science; Agile Space Industries**
Ravisankar, V., Shivkumar, G., Rowinski, D.H., and Dyess, J., "CFD Modeling of Toxic Plumes During Hypergolic Engine Testing," *AIAA SciTech 2025 Forum*, AIAA 2025-2469, Orlando, FL, United States, Jan 6–10, 2025. DOI: 10.2514/6.2025-2469
76. **Convergent Science**
Rowinski, D.H., Cheng, Z., Chai, X., and Burton, T., "Modeling Mixing and Reacting Flows at Subcritical and Supercritical Conditions With Detailed Chemistry and Adaptive Mesh Refinement," *AIAA SciTech 2025 Forum*, AIAA 2025-0126, Orlando, FL, United States, Jan 6–10, 2025. DOI: 10.2514/6.2025-0126
77. **Penn State Harrisburg; The Pennsylvania State University**
Saunders, L., Lyons, D.J., and Maicke, B.A., "Evaluation of Grain Geometry on Droplet Entrainment in Liquefying Hybrid Fuels," *AIAA SciTech 2025 Forum*, AIAA 2025-1522, Orlando, FL, United States, Jan 6–10, 2025. DOI: 10.2514/6.2025-1522
78. **Argonne National Laboratory; University of Illinois Urbana-Champaign; U.S. Army Combat Capabilities Development Command**
Dasgupta, D., Christopher, J., Shim, H., O'Brien, C., Lee, T., Kim, J., Mayhew, E., Temme, J., and Kweon, C.-B., "Computational Fluid Dynamics Modeling of Combustor Performance in the ARC-S1 Gas Turbine Combustor," *AIAA SciTech 2025 Forum*, AIAA 2025-1517, Orlando, FL, United States, Jan 6–10, 2025. DOI: 10.2514/6.2025-1517

79. **Politecnico di Torino; Ferrari S.p.A.**
Piano, A., Rolando, L., Roggio, S., Millo, F., Tonelli, R., Gullino, F., and Mortellaro, F.S., "Experimental and Numerical Investigation of Abnormal Combustion Phenomena in High-Performance Hydrogen Direct-Injection Engine Operated in Stoichiometric Conditions," *International Journal of Engine Research*, 2024. DOI: 10.1177/14680874241302562
80. **Bandırma Onyedi Eylül University**
Memiş, S. and Şener, R., "Classification of NOx Emission in Marine Engines Utilizing KNN-Based Machine Learning Algorithms," *International Journal of Pioneering Technology and Engineering*, 3(2), 2024. DOI: 10.56158/jpte.2024.97.3.02
81. **Federal University of Minas Gerais; Volvo Group**
Braga, R.M., Cota, F.S., Martins, C.M., Vaz, M.G.J., Hindi, G.Q., Baeta, J.G.C., and Huebner, R., "Numerical Simulation of a DISI Engine With a Reduced Chemical Kinetic Mechanism for Gasoline-Ethanol Blends," *Journal of the Brazilian Society of Mechanical Science and Engineering*, 47(27), 2025. DOI: 10.1007/s40430-024-05344-5
82. **University of Massachusetts Amherst; Convergent Science; Maritime Research Institute Netherlands (MARIN); National Renewable Energy Laboratory**
Darling, H., Schmidt, D.P., Xie, S., Sadique, J., Koop, A., Wang, L., Wiley, W., Archeli, R.B., Robertson, A., and Tran, T.T., "OC6 Phase IV: Validation of CFD Models for Stiesdal TetraSpar Floating Offshore Wind Platform," *Wind Energy*, 28(1), 2024. DOI: 10.1002/we.2966
83. **Oak Ridge National Laboratory; Virginia Tech**
Brandao, F.L., Boreyko, J.B., and Chuahyo, F.D.F., "Numerical Analysis of Coalescence-Induced Bubble Departure for Enhanced Boiling Heat Transfer," *International Journal of Heat and Fluid Flow*, 112, 2025. DOI: 10.1016/j.ijheatfluidflow.2024.109674
84. **IFP Energies nouvelles**
Garzon, E.S., Mehl, C., and Colin, O., "LES Prediction of the Ignition Probability Map for a Model Aeronautical Spray Burner," *Flow, Turbulence and Combustion*, 2024. DOI: 10.1007/s10494-024-00617-4
85. **The University of Melbourne; University of Toronto**
EssamAldin, A., Talei, M., and Gulder, O.L., "Numerical Simulation of Jet Premixed Flames With an Accurate Representation of the Inflow Turbulence," *24th Australasian Fluid Mechanics Conference - AFMC2024*, AFMC2024-101, Canberra, Australia, Dec 1–5, 2024.
86. **Purdue University; Hitachi Global Air Power**
Barrubeeah, M.S., Saravana, A., Bhaduri, S., Low, D., Groll, E.A., and Ziviani, D., "A Comparative Study of Structured and Cut-Cell Grids Applied to an Oil-Injected Screw Compressor," *International Conference on Screw Machines 2024*, Dortmund, Germany, Sep 3–5, 2024. DOI: 10.1088/1757-899X/1322/1/012016
87. **Università degli Studi dell'Aquila; Aramco Americas; STEMS CNR**
Duronio, F., Zhang, A., Zhao, L., and De Vita, A., "Assessment of an Effervescent Breakup Model for Lagrangian Simulations of Real Fuel Sprays," *International Journal of Thermofluids*, 25, 2025. DOI: 10.1016/j.ijft.2024.100991
88. **Shanghai Jiao Tong University; China Jiliang University; Shanghai Non-carbon Energy Conversion and Utilization Institute**
Han, D., Song, K., Huo, J., Li, X., and Xu, C., "Combustion Characteristics of Ammonia-Hydrogen Mixture With Turbulent Jet Ignition," *Applied Thermal Engineering*, 260, 2025. DOI: 10.1016/j.applthermaleng.2024.124995
89. **Beijing Jiaotong University; Beijing Institute of Aerospace Testing Technology; China North Engine Research Institute**
Yang, J., Ma, J., Li, G., Li, H., Jiang, R., Bai, H., and Hao, C., "Effect of Injection Strategy on Spray and Combustion Processes in 2-Stroke Rod-Less Opposed Piston Engine (2S-ROPE)," *Case Studies in Thermal Engineering*, 64, 2024. DOI: 10.1016/j.csite.2024.105442

90. **Shandong University; Weichai Power Co., Ltd.; Weichai Lovol Intelligent Agricultural Technology Co., Ltd.**
Lian, Z., Li, W., Cai, Y., Chen, H., Junxin, J., Li, G., Zhao, F., and Yu, W., "Investigations of Diesel and Natural Gas Injection Interaction on Combustion Characteristics of a High-Pressure Direct-Injection Dual-Fuel Engine Based on Large Eddy Simulation," *Applied Energy*, 378, Part A, 2025. DOI: 10.1016/j.apenergy.2024.124807
91. **Oak Ridge National Laboratory**
Chuahy, F.D.F., Finney, C.E.A., Kaul, B.C., and Kass, M.D., "Comparison of a Full-Scale and a 1:10 Scale Low-Speed Two-Stroke Marine Engine Using Computational Fluid Dynamics," *ASME 2024 ICE Forward Conference*, ICEF2024-142853, San Antonio, TX, United States, Oct 20–23, 2024. DOI: 10.1115/ICEF2024-142853
92. **Delft University of Technology; Netherlands Defence Academy**
Zoumpourlos, K., Geertsma, R., van de Ketterij, R., and Coraddu, A., "Methanol Operation in Heavy-Duty DICI Dual-Fuel Engines: Investigating Charge Cooling Effects Using ECN Spray D Data," *ASME 2024 ICE Forward Conference*, ICEF2024-142036, San Antonio, TX, United States, Oct 20–23, 2024. DOI: 10.1115/ICEF2024-142036
93. **Texas A&M University**
Beurlot, K. and Jacobs, T., "Effects of Inlet Port Geometry on MCC Mixing Sensitivity Study," *ASME 2024 ICE Forward Conference*, ICEF2024-141760, San Antonio, TX, United States, Oct 20–23, 2024. DOI: 10.1115/ICEF2024-141760
94. **University of Illinois at Chicago; Argonne National Laboratory**
Singh, H., Pal, P., and Aggarwal, S.K., "Large-Eddy Simulations of n-Heptane/Ammonia Dual-Fuel Spray Flames," *ASME 2024 ICE Forward Conference*, ICEF2024-141693, San Antonio, TX, United States, Oct 20–23, 2024. DOI: 10.1115/ICEF2024-141693
95. **Stony Brook University; University of Massachusetts Lowell; Sandia National Laboratories**
Shaalán, A., Sirna, A., Loprete, J., Mathai, J.R., Trelles, J.P., Mack, J.H., Van Dam, N., Lopez, D., and Assanis, D., "Computational Model Validation of a Non-Firing Compression Ignition Engine and Chemical Kinetic Mechanism Selection for Diesel-Pilot Assisted Methane Combustion," *ASME 2024 ICE Forward Conference*, ICEF2024-141649, San Antonio, TX, United States, Oct 20–23, 2024. DOI: 10.1115/ICEF2024-141649
96. **Argonne National Laboratory; University of Illinois at Chicago; Progress Rail Locomotive Inc.**
Suresh, R., Wang, Y., Xu, C., Ewphun, P.-P., Biruduganti, M., Fu, X., and Aggarwal, S.K., "A Numerical Study on Combustion and Emissions Characteristics of Diesel/Biodiesel Blends in a Locomotive Engine," *ASME 2024 ICE Forward Conference*, ICEF2024-140952, San Antonio, TX, United States, Oct 20–23, 2024. DOI: 10.1115/ICEF2024-140952
97. **The University of Alabama**
Cellek, M.S., Bittle, J.A., and Agrawal, A.K., "Computational Analysis of Peripheral Fuel Injection (PeFI) to Enhance Fuel-Oxidizer Mixing in the Near-Field of Diesel Sprays," *ASME 2024 ICE Forward Conference*, ICEF2024-140950, San Antonio, TX, United States, Oct 20–23, 2024. DOI: 10.1115/ICEF2024-140950
98. **King Abdullah University of Science and Technology**
Menaca, R., Shakeel, M.R., Moreno-Cabezas, K., Vorraro, G., Turner, J.W.G., and Im, H.G., "Lean Limit Extension in Hydrogen Direct Injection Pre-Chamber Opposed-Piston Engines: A Computational Approach," *ASME 2024 ICE Forward Conference*, ICEF2024-140872, San Antonio, TX, United States, Oct 20–23, 2024. DOI: 10.1115/ICEF2024-140872
99. **Argonne National Laboratory; Wabtec Corporation; Convergent Science**
O'Donnell, P.C., Kazmouz, S.J., Wu, S., Klingbeil, A., Lavertu, T., Jayakar, V., Sheth, P., Sapkota, P., Liu, S., Wijeyakulasuriya, S., and Ameen, M., "Investigating the Combustion Performance of Dual Fuel Combustion With Diesel and Port Injected Hydrogen in a Large Bore Locomotive Engine," *ASME 2024 ICE Forward Conference*, ICEF2024-140796, San Antonio, TX, United States, Oct 20–23, 2024. DOI: 10.1115/ICEF2024-140796

100. **Convergent Science; CMT - Clean Mobility & Thermofluids**
Sapkota, P., Wijeyakulasuriya, S., Liu, S., Zhang, Y., Parmar, B., Gomez-Soriano, J., and Novella, R., "Accelerating Detailed Chemistry Simulations of Hydrogen Combustion in IC Engines Using Reynolds-Averaged Navier-Stokes (RANS) Turbulence Modeling and a Thickened Flame Model," *ASME 2024 ICE Forward Conference*, ICEF2024-140645, San Antonio, TX, United States, Oct 20–23, 2024. DOI: 10.1115/ICEF2024-140645
101. **Technische Universität München; MAN Energy Solutions**
Pathak, U., Scharl, V., Krnac, D., and Sattelmayer, T., "Numerical Investigation on Temperature Dependence of Flame Behavior in High Pressure Direct Injection Combustion of Diesel Piloted Liquid Ammonia Sprays," *ASME 2024 ICE Forward Conference*, ICEF2024-140560 1 Copyright, San Antonio, TX, United States, Oct 20–23, 2024. DOI: 10.1115/ICEF2024-140560
102. **Argonne National Laboratory; Sandia National Laboratories**
Wang, Y., Scarcelli, R., Bestel, D., Demir, S., and Srna, A., "Multi-Dimensional Modeling of Mixture Formation in a Hydrogen-Fueled Heavy-Duty Optical Engine With Direct Injection," *ASME 2024 ICE Forward Conference*, ICEF2024-140413, San Antonio, TX, United States, Oct 20–23, 2024. DOI: 10.1115/ICEF2024-140413
103. **Eindhoven University of Technology**
Leenders, T.P.E., Diepstraten, N., Bekdemir, C., and van Oijen, J.A., "Exploring Pilot-Assisted Hydrogen High-Pressure Direct-Injection Engines by Numerical Modeling," *ASME 2024 ICE Forward Conference*, ICEF2024-140005, San Antonio, TX, United States, Oct 20–23, 2024. DOI: 10.1115/ICEF2024-140005
104. **Clemson University; Aramco Services Company**
Gainey, B., Koirala, P., Sellnau, M., Filipi, Z., and Lawler, B., "A CFD-FEA Co-Simulation Study of Thermal Barrier Coatings for Gasoline Compression Ignition," *ASME 2024 ICE Forward Conference*, ICEF2024-138747, San Antonio, TX, United States, Oct 20–23, 2024. DOI: 10.1115/ICEF2024-138747
105. **University of Galway; RWTH Aachen University; Convergent Science**
Liu, J., Zhou, S., Wang, P., Murakami, Y., Mohamad, A.A.E.-S., Raza, M., Nolte, A., Heufer, K.A., Senecal, P.K., and Curran, H.J., "An Experimental and Kinetic Modeling Study of the Ignition of Methane/n-Decane Blends," *Combustion and Flame*, 272, 2025. DOI: 10.1016/j.combustflame.2024.113884
106. **Waseda University; Suzuki Motor Corporation**
Isobe, K., Yoshimura, K., Kobayashi, T., Sok, R., and Kusaka, J., "Impacts of Low-Temperature Heat Release on Unstretched Laminar Burning Velocity in Advanced Flex-Fuel Gasoline-Ethanol Engines," *Applied Thermal Engineering*, 258, Part C, 2025. DOI: 10.1016/j.applthermaleng.2024.124826
107. **Gazi University; Hitit University; Afyon Kocatepe University**
Solmaz, H., Polat, S., Calam, A., Arslan, T.A., and Akbulut, F., "Combustion Performance of Ethanol, Methanol and Butanol in a Low Compression Ratio HCCI Engine," *Arabian Journal for Science and Engineering*, 2024. DOI: 10.1007/s13369-024-09775-z
108. **Marquette University**
Johnston, T.J., "Exhaust Rebreathe as an Ignition Assistance Source to Achieve Mixing-Controlled Combustion With Direct Injected Ethanol in a Heavy-Duty Diesel Engine," M.S. thesis, Marquette University, Milwaukee, WI, United States, 2024
<https://www.proquest.com/openview/11a4d77269a9350058c2ec7a72cb1491>.
109. **Norwegian University of Science and Technology**
Pedersen, K.A., Lewandowski, M.T., Bjørgen, K.O.P., and Løvås, T., "Identification of N₂O Formation in an Ammonia/n-Heptane Dual-Fueled Compression Ignition Engine Using Numerical Simulations," *Fuel*, 381, Part D, 2025. DOI: 10.1016/j.fuel.2024.133556
110. **Indian Institute of Technology Madras**
Naik, B. and Mallikarjuna, J.M., "Effect of Water Injection Parameters on Upper Load Limit and Nitrogen Oxides Emissions of a Homogeneous Charge Compression Ignition Engine—A Computational Fluid Dynamics Study," SAE Paper 03-18-01-0006, 2024. DOI: 10.4271/03-18-01-0006

111. **The University of Texas at Austin**
Li, D., "Understanding and Enhancing Performance in SI Engines: Simulation Investigations on Transient Behavior in Cold Start Processes and Cathode Spot Generation During Ignition Discharge," Ph.D. thesis, The University of Texas at Austin, Austin, TX, United States, 2024.
112. **University of Minnesota; ExxonMobil Technology and Engineering Company**
Ramachandran, S., Narayanan, S.R., Wang, Z., Behkish, A., and Yang, S., "Flame Acceleration and Deflagration to Detonation Transition in a Microchannel With Catalytic Nickel Walls," *Physics of Fluids*, 36, 2024. DOI: 10.1063/5.0235540
113. **Marquette University**
Johnston, T., Zeman, J., and Dempsey, A., "Mixing-Controlled Compression Ignition of Ethanol Using Exhaust Rebreath at a Low-Load Operating Condition—Single Cylinder Experiments in a Heavy-Duty Diesel Engine," *International Journal of Engine Research*, 2024. DOI: 10.1177/14680874241293823
114. **Delft University of Technology**
Khanduja, R., "Analysis of Intrinsic Instabilities in a Premixed, Counter-Flow Hydrogen Flame Setup," M.S. thesis, Delft University of Technology, Delft, Netherlands, 2024.
115. **Università degli studi di Foggia; Politecnico di Bari; University of Basilicata**
Anaclerio, F., Camporeale, S.M., Magi, V., and Fornarelli, F., "Impact of Ozone Addition to Gasoline Surrogates Combustion in Spark Ignition Engine," *The 79th ATI Annual Congress*, Genoa, Italy, Sep 4–6, 2024. DOI: 10.1088/1742-6596/2893/1/012101
116. **Politecnico di Bari; Università degli studi di Foggia; ENEA - Italian National Agency for New Technologies**
Ceglie, V., Anaclerio, F., Camporeale, S.M., Milozzi, A., Nicolini, D., and Fornarelli, F., "0D Physical Model for the Charging Phase of Shell-and-Tube Latent Heat Thermal Storage," *The 79th ATI Annual Congress*, Genoa, Italy, Sep 4–6, 2024. DOI: 10.1088/1742-6596/2893/1/012054
117. **Argonne National Laboratory; Aramco Americas**
Torelli, R., Wu, B., Park, J.-W., and Pei, Y., "Numerical Evaluation of Fuel-Air Mixing in a Direct-Injection Hydrogen Engine Using a Multi-Hole Injector," SAE Paper 2024-01-4295, 2024. DOI: 10.4271/2024-01-4295
118. **Argonne National Laboratory; West Virginia University; University of Illinois at Chicago**
Singh, H., Kutkut, A., Pal, P., Aggarwal, S.K., and Li, H., "Numerical Investigation of the Combustion Process and Emissions Formation in a Heavy-Duty Diesel Engine Featured With Multi-Pulse Fuel Injection," SAE Paper 2024-01-4285, 2024. DOI: 10.4271/2024-01-4285
119. **New York University Abu Dhabi; University of Illinois Urbana-Champaign; Combat Capabilities Development Command Army Research Laboratory**
Kim, S., Mehraj, H., Lee, T., Kim, K.S., Kweon, C.-B.M., and Ryu, J.I., "CFD-Aided Structural Rigidity Analysis for the Ignition Assistance Device Applicable to Small Aircraft Engines," *AIAA Aviation Forum and ASCEND 2024*, Las Vegas, NV, United States, Jul 29–Aug 2, 2024. DOI: 10.2514/6.2024-4411
120. **King Abdullah University of Science and Technology; Saudi Aramco**
Liu, X., Sim, J., Raman, V., Viollet, Y., AlRamadan, A.S., Cenker, E., and Im, H.G., "Parametric Study of Methanol Combustion Assisted by Glow Plug in a Low-Duty Diesel Engine," SAE Paper 2024-01-4284, 2024. DOI: 10.4271/2024-01-4284
121. **IFP Energies nouvelles**
Mehl, C., Poncet, S., Truffin, K., and Colin, O., "Large Eddy Simulation of Large-Scale Hydrogen Deflagrations Using the Thickened Flame Model With Stretch Sensitivity Adaptation and Thermo-Diffusive Instability Modeling," *International Journal of Hydrogen Energy*, 93, 457-468, 2024. DOI: 10.1016/j.ijhydene.2024.10.169

122. **University of Moratuwa**
Wickramaarachchi, I., Rassdeen, J., Kalana, S., and Nissanka, I.D., "Numerical Investigation on the Effect of Valve and Injection Timing on the Performance of a Port-Fuelled Hydrogen Internal Combustion Engine," *2024 Moratuwa Engineering Research Conference (MERCon)*, Moratuwa, Sri Lanka, Aug 8–10, 2024. DOI: 10.1109/MERCon63886.2024.10688770
123. **CMT - Clean Mobility & Thermofluids; Universitat Politècnica de València; Argonne National Laboratory**
Marco-Gimeno, J., Asztalos, K.J., Moon, C.Y., Powell, C.F., Martí-Aldaraví, P., and Nocivelli, L., "Breakup Dynamics in a Pressure-Swirl Injector for Urea-Water Solution Applications: A Computational Study," *International Journal of Engine Research*, 2024. DOI: 10.1177/14680874241286206
124. **Argonne National Laboratory; Sandia National Laboratories**
Wang, Y., Scarcelli, R., Xu, C., and Srna, A., "Modeling the Impact of Mixture Formation on Ignition and Flame Propagation in a Hydrogen Direct-Injection Engine," *Ignition Systems for SI Engines & Knocking in SI Engines*, Berlin, Germany, Sep 17–18, 2024.
125. **Convergent Science; Argonne National Laboratory; CMT - Clean Mobility & Thermofluids; Universitat Politècnica de València**
Li, L., Sapkota, P., Pal, P., See, Y.C., Liang, M., Gomez-Soriano, J., Wijeyakulasuriya, S., Scarcelli, R., and Novella, R., "Simulating Fuel Ignition and Combustion in IC Engines With Lagrangian-Eulerian Spark Ignition (LESI) Model and Detailed Chemistry," *Ignition Systems for SI Engines & Knocking in SI Engines*, Berlin, Germany, Sep 17–18, 2024.
126. **Argonne National Laboratory; Convergent Science**
Asztalos, K.J., Ameen, M., Waikar, A., and Rowinski, D., "Evaluation of Flow, Heat Transfer, and Phase Change Characteristics in Microchannel Condensers Using Computational Fluid Dynamic (CFD) Simulations," *20th International Refrigeration and Air Conditioning Conference at Purdue*, West Lafayette, IN, United States, Jul 15–18, 2024.
127. **University of Central Florida; University of Tennessee at Chattanooga**
Hasti, V.R. and Ranjan, R., "Numerical Investigation of Wave Dynamics During Mode Transition in a Hydrogen-Fueled Rotating Detonation Engine Combustor," *International Mechanical Engineering Congress & Exposition (IMECE2024)*, IMECE2024-145858, Portland, OR, United States, Nov 17–21, 2024.
128. **IFP Energies nouvelles; University of Cambridge**
Garzon, E.S., Mehl, C., Colin, O., De Oliveira, P.M., and Mastorakos, E., "Numerical Investigation of Two-Phase Ethanol Ignition in Uniform Droplet-Laden Weakly Turbulent Flows," *Combustion Theory and Modelling*, 2024. DOI: 10.1080/13647830.2024.2418502
129. **IFP Energies nouvelles**
Poncet, S., Mehl, C., Truffin, K., and Colin, O., "A Thickened Flame Model Adaptation to Weakly Stretched Flames for Non-Unity Lewis Number Mixtures," *Combustion and Flame*, 270, 2024. DOI: 10.1016/j.combustflame.2024.113758
130. **South East Technological University; Sapienza University of Rome**
Vashishtha, A., Dias, S.M., Palateerdham, S.K., Nolan, C., and Ingenito, A., "Numerical Investigation of Non-Premixed Oblique Detonation Operations in Scramjet Combustor," *The 8th International Conference on Jets, Wakes and Separated Flows*, Firenze, Italy, Sep 23–25, 2024.
131. **Indian Institute of Technology Madras**
Tripathi, S. and Krishnasamy, A., "Numerical Investigations on Reducing Unburned Hydrocarbon and Carbon Monoxide Emissions in Reactivity-Controlled Compression Ignition Using Partial Reactivity Stratification With Alternative Fuels and Additive," *SAE International Journal of Engines*, 18(1), 2025. DOI: 10.4271/03-18-01-0005
132. **RWTH Aachen University**
Yadav, J., "Influence of Renewable Fuels on Mixture Formation and Combustion in Heavy Duty Engines," Ph.D. thesis, RWTH Aachen University, Aachen, Germany, 2024 <https://publications.rwth-aachen.de/record/992600/files/992600.pdf>.

133. **Eindhoven University of Technology**
Diepstraten, N., Reyes, D.Q., and van Oijen, J.A., "Modeling of Non-Premixed Hydrogen Jet Combustion in an Argon/Oxygen Environment via Direct and Reynold's Averaged Numerical Simulations," *The 8th International Conference on Jets, Wakes and Separated Flows*, Firenze, Italy, Sep 23–25, 2024.
134. **North Carolina State University**
Chaudhury, M.D., Sahoo, A., Vinod, K.N., Fisher, W., Ekkad, S.V., Narayanaswamy, V., and Fang, T., "Characteristics of Premixed Ammonia/Methane/Air Blends as an Alternative Fuel in a Swirl-Stabilized Gas Turbine Combustor Under Varying Pilot Percentage," *Journal for Engineering for Gas Turbines and Power*, 146(11), 2024. DOI: 10.1115/1.4065923
135. **Kyungshung University**
Park, W., "The Effect of Injection Strategy on the Mixture Formation and Combustion in a Direct Injection Hydrogen Engine," *International Journal of Automotive Technology*, 2024. DOI: 10.1007/s12239-024-00151-2
136. **University of Michigan-Shanghai Jiao Tong University Joint Institute; Shanghai Jiao Tong University**
Liu, M. and Hung, D.L.S., "Segment-Based Eulerian-Lagrangian Transition Method for Flat Nozzle Spray Atomization Simulation," *Engineering Applications of Computational Fluid Mechanics*, 18(1), 2024. DOI: 10.1080/19942060.2024.2391448
137. **Guangxi University; Guangxi Yuchai Machinery Group Co., Ltd.**
Wang, Y., Zhang, L., Zhou, C., Guo, X., Xing, K., and Huang, H., "Numerical Study on the Potential of Stratified Mixture to Improve Thermal Efficiency and Reduce Carbon Emissions in High-Speed Gasoline Direct Injection Engine," *Journal of Engineering for Gas Turbines and Power*, 146(12), 2024. DOI: 10.1115/1.4066230
138. **King Abdullah University of Science and Technology**
Liu, X., Sim, J., Raman, V., Viollet, Y., AlRamadan, A.S., Cenker, E., and Im, H.G., "Computational Investigation of a Methanol Compression Ignition Engine Assisted by a Glow Plug," *International Journal of Engine Research*, 2024. DOI: 10.1177/14680874241276061
139. **Politecnico di Torino; POWERTECH Engineering**
Segatori, C., Piano, A., Paradisi, B.P., Millo, F., and Bianco, A., "Enhancing Ducted Fuel Injection Simulations: Assessment of RANS Turbulence Models Using LES Data," SAE Paper 2024-01-2689, 2024. DOI: 10.4271/2024-01-2689
140. **Brunel University London**
Iyer, S.N., Rrustemi, D.N., Ganippa, L.C., and Megaritis, T., "Hydrogen Enrichment in Methanol SI Engine at Varying Injection Timing During Compression Stroke," *International Journal of Hydrogen Energy*, 89, 952-963, 2024. DOI: 10.1016/j.ijhydene.2024.09.297
141. **Changan UK Research and Development Centre Ltd.; Chongqing Changan Automobile Co., Ltd.**
Peethambaram, M.R., Zhou, Q., Waters, B., Pendlebury, K., Fu, H., Haines, A., Hale, D., Hu, T., Zhang, J., Wu, X., and Zhang, X., "Combustion Analysis of Active Pre-Chamber Design for Ultra-Lean Engine Operation," SAE Paper 03-17-05-0040, 2024. DOI: 10.4271/03-17-05-0040
142. **GAC R&D Center**
Chen, C., Wei, J., Zhan, W., Xu, H., Zhang, P., and Lin, Q., "A Study on the CFD-Guided Gas Flow Field Plate Optimization of a PEM Fuel Cell With Wave Flow Channels," SAE Paper 2024-01-2747, 2024. DOI: 10.4271/2024-01-2747
143. **Zhejiang Lab; Texas Tech University; University of Tennessee Space Institute**
Ge, H., Parameswaran, S., and Zhao, P., "Modelling of Gasoline Direct-Injection Compression Ignition Engines," *Modelling Spark Ignition Combustion*, eds. Lakshminarayanan, P.A., Agarwal, A.K., Ge, H., and Mallikarjuna, J.M., Springer, Singapore, 2024. DOI: 10.1007/978-981-97-0629-7_8

144. **University of Tennessee Space Institute; Zhejiang Lab**
Bakir, A.H., Ge, H., Zhang, Z., and Zhao, P., "Computational Investigation on Spray Autoignition of Liquid Ammonia With Dissolved Hydrogen in Spray D Configuration," *Fuel*, 371, Part B, 2024. DOI: 10.1016/j.fuel.2024.132124
145. **Guangxi University; Guangxi Yuchai Machinery Group Co., Ltd.**
Huang, H., Xing, K., Ning, D., Guo, X., and Wang, Y., "Quantitative Analysis of the Relationship Between Charge Motion and Knocking Combustion in Spark-Ignition Natural-Gas Engines Under Critical Knocking Conditions," *Fuel*, 371, Part B, 2024. DOI: 10.1016/j.fuel.2024.132060
146. **Jiangsu University; Rongtong Aeroengine Technology Co., Ltd**
Lai, S., Zhong, W., Huang, Y., Guo, B., He, Z., and Wang, Q., "Development of an Ammonia/Diesel Combustion Mechanism for High Ammonia Energy Ratio: Validation of the Mechanisms in Kinetic Simulation and RCCI Optical Engine Simulation," *Journal of the Energy Institute*, 116, 2024. DOI: 10.1016/j.joei.2024.101767
147. **Dalian University of Technology; Wuhan University of Technology**
Jiang, L., Long, W., Wang, Y., Meng, X., Dong, D., Cao, J., Wei, F., and Xiao, G., "The Impact of Pilot Diesel Injection Strategies on the Combustion and Emission Characteristics of Diesel-Natural Gas Dual-Fuel Medium-Speed Marine Engines Based on Large-Eddy Simulation," *Journal of Energy Engineering*, 150(5), 2024. DOI: 10.1061/JLEED9.EYENG-5472
148. **Huazhong University of Science and Technology; Tanta University**
Elbanna, A.M. and Cheng, X., "The Role of Charge Reactivity in Ammonia/Diesel Dual Fuel Combustion in Compression Ignition Engine," *Energy*, 306, 2024. DOI: 10.1016/j.energy.2024.132387
149. **Shandong University of Technology; China National Heavy Duty Truck Group Co., Ltd.; Shandong University**
Yang, X., Li, G., Wang, P., Cheng, Y., and Zhao, Y., "Numerical Investigation of the Operating Characteristics of the Passive and Active Prechamber Jet Ignition in a Natural Gas Engine," *ACS Omega*, 9(29), 31933–31945, 2024. DOI: 10.1021/acsomega.4c03587
150. **Linyi University**
You, J., Liang, R., Shi, J., Song, Y., Zhang, D., and Yang, L., "The Chemical Kinetic and Heating Effects Decoupling of Pilot Diesel in a Diesel Ignited Natural Gas Engine Under Various Pilot Diesel Injection Timing," *Fuel*, 374, 2024. DOI: 10.1016/j.fuel.2024.132408
151. **Bandırma Onyedi Eylül University; Sandia National Laboratories**
Şener, R., Nyrenstedt, G., Baumgard, K.J., and Mueller, C.J., "Determining Tolerance Requirements for Spray-Duct Alignment in Ducted Fuel Injection," *International Journal of Engine Research*, 2024. DOI: 10.1177/14680874241272820
152. **New York University Abu Dhabi; University of Suwon; University of Illinois Urbana-Champaign; Combat Capabilities Development Command Army Research Laboratory; New York University**
Kim, S., Mehraj, H., Han, T., Lee, T., Kim, K.S., Kweon, C.-B.M., and Ryu, J.I., "Modeling Approach and Simulations of Mechanical Wall Stress Caused by Thermal-Spray Impacting Hot Surfaces," *ICLASS 2024: 16th Triennial International Conference on Liquid Atomization and Spray Systems*, Shanghai, China, Jun 23–27, 2024.
153. **Technical University of Munich; Technische Hochschule Ingolstadt**
Armbruster, F., Gelner, A., Zepf, A., Prager, M., Härtl, M., and Jaensch, M., "Investigations on Particle Emissions of Large-Bore Engines Powered by Natural Gas and Hydrogen," *Environmental Science: Advances*, 2024. DOI: 10.1039/D4VA00200H
154. **Lund University; Scania**
Treacy, M., Hadadpour, A., Bai, X.-S., and Fatehi, H., "Performance and Emissions of a Novel High-Pressure Direct Injection Hydrogen Dual-Fuel Engine," *Fuel*, 376, 2024. DOI: 10.1016/j.fuel.2024.132639

155. **Politecnico di Torino**
Roggio, S., "Study of Ultra-Low Emissions Diesel Combustion Systems by Synergetic Application of 3D-CFD and Single-Cylinder Engine," Ph.D. thesis, Politecnico di Torino, Torino, Italy, 2023.
156. **Politecnico di Bari**
Giuseppe, C., "Lubricant Oil Influence on the Combustion Process of Conventional and Innovative Internal Combustion Engines," Ph.D. thesis, Politecnico di Bari, Bari, Italy, 2023.
157. **Politecnico di Torino**
Segatori, C., "Ducted Fuel Injection: A Mixing-Enhancement Strategy to Abate Soot Emissions in Compression-Ignition Engines," Ph.D. thesis, Politecnico di Torino, Torino, Italy, 2024
https://iris.polito.it/retrieve/6381f468-0a6d-4c9f-b155-ef994895ff1f/Segatori_PhD_Thesis_DFI_Review.pdf.
158. **Clemson University**
Motwani, R., Gandolfo, J., Gainey, B., Filipi, Z., and Lawler, B., "A 3D CFD-FEA Co-Simulation Study of Low Thermal Effusivity TBCs Applied to the Piston and Valves of an SI Engine," *International Journal of Engine Research*, 2024. DOI: 10.1177/14680874241265759
159. **Cambridge Centre for Advanced Research and Education in Singapore; University of Cambridge**
Liu, Y., Harikrishnan, B., Kolluru, R., and Mastorakos, E., "Computational Fluid Dynamics Simulation of Ammonia Leakage Scenarios During Ship-to-Ship Bunkering," *Ocean Engineering*, 312, Part 2, 2024. DOI: 10.1016/j.oceaneng.2024.119136
160. **University of Central Florida; University of Tennessee at Chattanooga**
Hasti, V.R. and Ranjan, R., "High-Fidelity Numerical Simulation of Longitudinal Thermoacoustic Instability in a High-Pressure Subscale Rocket Combustor," *Aerospace Science and Technology*, 154, 2024. DOI: 10.1016/j.ast.2024.109487
161. **IAV GmbH; Convergent Science**
Sens, M., Fandakov, A., Mueller, K., von Roemer, L., Woebke, M., Tournalias, P., Mueller, T., Burton, T., Srivastava, K., and Senecal, P.K., "From Thermal Runaway to No Thermal Propagation," *45th International Vienna Motor Symposium*, Vienna, Austria, Apr 24–26, 2024.
162. **Convergent Science**
Anumolu, C.R.L. and Dahale, A.R., "In Situ Estimation of the Coefficient of Stress Source in the Eulerian–Lagrangian Spray Atomization Model," *SAE Paper 2024-01-5069*, 2024. DOI: 10.4271/2024-01-5069
163. **Tongji University**
Ding, W., Deng, R., Deng, J., Wang, C., and Li, L., "Combustion Characteristics Optimization and Thermal Efficiency Enhancement by Stratified Charge of Hydrogen Direct Injection for Argon Power Cycle Hydrogen Engine," *International Journal of Engine Research*, 25(8), 2024. DOI: 10.1177/14680874241233218
164. **Tsinghua University; Brunel University London**
Zhang, Y., Ma, X., Mao, J., Fang, Y., Jiang, C., Wang, Z., and Shuai, S., "Optical and Numerical Study on the Effect of Wall Impingement on Passive Jet Ignition Characteristics of Methane/Air Mixture," *Fuel*, 367, 2024. DOI: 10.1016/j.fuel.2024.131467
165. **Tsinghua University**
Lin, Z., Liu, S., Sun, Q., Qi, Y., and Wang, Z., "Numerical Investigation of Multiple Hydrogen Injection in a Jet Ignition Ammonia-Hydrogen Engine," *International Journal of Hydrogen Energy*, 77, 2024. DOI: 10.1016/j.ijhydene.2024.06.098
166. **Purdue University; Bechtel**
Bhaduri, S., Ren, J., Peltier, L.J., Ladd, D., Groll, E.A., and Ziviani, D., "Flow Physics of a Subcritical Carbon Dioxide Jet in a Multiphase Ejector," *Applied Thermal Engineering*, 256, 2024. DOI: 10.1016/j.applthermaleng.2024.124043

167. **Michigan State University**
Thelen, B.C., "A Study of Advanced Ignition Systems for Spark Ignited Internal Combustion Engines," Ph.D. thesis, Michigan State University, East Lansing, MI, United States, 2024.
168. **Università degli Studi di Perugia; Universidad de Oviedo; Université d'Orléans**
Zembi, J., Battistoni, M., Pandal, A., Pelé, R., Brequigny, P., Hespel, C., and Mounaïm-Rousselle, C., "Lagrangian CFD Modeling of Ammonia Sprays: A Correlation Across Flash Boiling and Evaporative Conditions," *International Communications in Heat and Mass Transfer*, 158, 2024. DOI: 10.1016/j.icheatmasstransfer.2024.107866
169. **University of Naples Federico II; University of Bath; RWTH Aachen University**
Malfi, E., Esposito, S., De Felice, M., Pitsch, H., Pischinger, S., and De Bellis, V., "Phenomenological Model for Unburned Hydrocarbon Emissions From Spark-Ignition, Pre-Chamber, and Dual-Fuel Internal Combustion Engines," *International Journal of Engine Research*, 2024. DOI: 10.1177/14680874241255157
170. **Carnegie Mellon University; Sandia National Laboratories**
Varma, A.R., Singh, S., Rajasegar, R., and Srna, A., "Computational Analysis of Flame Initiation, Quenching, and Re-Ignition in a Prechamber Natural Gas Engine Under Varying EGR-Dilution Levels," *Fuel*, 375, 2024. DOI: 10.1016/j.fuel.2024.132529
171. **University of Massachusetts Lowell; Stony Brook University**
Mathai, J.R., Rana, S., Shaalan, A., Nasim, M.N., Trelles, J.P., Mack, J.H., Assanis, D., and Van Dam, N., "Numerical Study of Buoyancy and Flame Characteristics of Ammonia-Air Flames," *2024 ASME ICE Forward Conference*, ICEF2024-141569, San Antonio, TX, United States, Oct 20–23, 2024. DOI: 10.1115/ICEF2024-141569
172. **University of Massachusetts Lowell**
Kumar, A. and Van Dam, N., "Liquid Ammonia Sprays for Engine Applications," *ILASS-Americas 34th Annual Conference on Liquid Atomization and Spray Systems*, Ithaca, NY, United States, May 19–22, 2024.
173. **King Abdullah University of Science and Technology; Sandia National Laboratories**
Shakeel, M.R., Liu, X., Nyrenstedt, G., Mueller, C.J., and Im, H., "Numerical Investigation of the Effect of Piston Geometry on the Performance of a Ducted Fuel Injection Engine," *SAE Paper 2024-01-3024*, 2024. DOI: 10.4271/2024-01-3024
174. **University of West Attica**
Theodorakakos, A., "Numerical Simulation and Comparison of Different Steady-State Tumble Measuring Configurations for Internal Combustion Engines," *Computation*, 12(7), 2024. DOI: 10.3390/computation12070138
175. **Eindhoven University of Technology**
Diepstraten, N., Somers, L.M.T., and van Oijen, J.A., "Numerical Characterization of High-Pressure Hydrogen Jets for Compression-Ignition Engines Applying Real Gas Thermodynamics," *International Journal of Hydrogen Energy*, 79, 2024. DOI: 10.1016/j.ijhydene.2024.06.325
176. **Argonne National Laboratory; North Carolina State University; Purdue University**
Pal, P., Braun, J., Wang, Y., Athmanathan, V., Paniagua, G., and Meyer, T.R., "Numerical Study of Flow and Combustion Dynamics in a Hydrogen-Air Rotating Detonation Combustor-Stator Integrated System," *ASME Turbo Expo 2024*, GT2024-129058, London, United Kingdom, Jun 24–28, 2024.
177. **IFP Energies nouvelles**
Ding, Z., Truffin, K., and Jay, S., "Cause-and-Effect Chain Analysis of Combustion Cyclic Variability in a Spark-Ignition Engine Using Large-Eddy Simulation, Part II: Origins of Flow Variations From Intake," *Combustion and Flame*, 267, 2024. DOI: 10.1016/j.combustflame.2024.113565
178. **Argonne National Laboratory; Aramco Americas; Sandia National Laboratories**
Bestel, D., Kim, J., Zhao, L., Zhang, A., Park, J.-W., Tagliante, F., Pickett, L., Ameen, M., and Torelli, R., "A Comprehensive Numerical Investigation on Spray Models for Direct-Injection Spark-Ignition Engines," *Fuel*, 373, 2024. DOI: 10.1016/j.fuel.2024.132325

179. **Università degli Studi di Perugia**
Zembi, J., Ricci, F., Grimaldi, C., and Battistoni, M., "Numerical Simulation of the Early Flame Development Produced by a Barrier Discharge Igniter in an Optical Access Engine," SAE Paper 2021-24-0011, 2021. DOI: 10.4271/2021-24-0011
180. **Università degli Studi di Perugia; Consiglio Nazionale Delle Ricerche**
Zembi, J., Mariani, F., Grimaldi, C., Battistoni, M., Irimescu, A., and Merola, S., "Experimental and Numerical Investigation of the Flow Field Effect on Arc Stretching for a J-Type Spark Plug," SAE Paper 2021-24-0020, 2021. DOI: 10.4271/2021-24-0020
181. **Università degli Studi di Perugia; STEMS CNR**
Zembi, J., Battistoni, M., Mariani, F., Irimescu, A., and Merola, S.S., "Pressure and Flow Field Effects on Arc Channel Characteristics for a J-Type Spark Plug," SAE Paper 2022-01-0436, 2022. DOI: 10.4271/2022-01-0436
182. **Università degli Studi di Perugia; Argonne National Laboratory**
Zembi, J., Cruccolini, V., Mariani, F., Scarcelli, R., and Battistoni, M., "Modeling of Thermal and Kinetic Processes in Non-Equilibrium Plasma Ignition Applied to a Lean Combustion Engine," *Applied Thermal Engineering*, 197, 2021. DOI: 10.1016/j.applthermaleng.2021.117377
183. **Università degli Studi di Perugia; Universidad de Oviedo; Università degli Studi dell'Aquila; Université d'Orléans**
Zembi, J., Battistoni, M., Pandal, A., Duronio, F., De Vita, A., Mounaïm-Rousselle, C., Pelé, R., Brequigny, P., and Hespel, C., "Assessment of Breakup Modelling for Lagrangian Simulation of Ammonia Spray in Flash Boiling Condition," *2nd Symposium on Ammonia Energy*, Orléans, France, Jul 11–13, 2023.
184. **Università degli Studi di Napoli Parthenope; Università degli Studi di Perugia; Università degli Studi di Bologna; Università degli Studi dell'Aquila; Politecnico di Torino**
Arsie, I., Battistoni, M., Brancaleoni, P.P., Cipollone, R., Corti, E., Di Battista, D., Millo, F., Occhicone, A., Paradisi, B.P., Rolando, L., and Zembi, J., "A New Generation of Hydrogen-Fueled Hybrid Propulsion Systems for the Urban Mobility of the Future," *Energies*, 17(1), 2024. DOI: 10.3390/en17010034
185. **CMT - Clean Mobility & Thermofluids; Universitat Politècnica de València**
García-Oliver, J.M., Novella, R., Micó, C., and Bin-Khalid, U., "Development of a Reduced Primary Reference Fuel – Oxymethylene Dimethyl Ether (PRF-OMEx) Mechanism for Diesel Engine Applications," *International Journal of Engine Research*, 2024. DOI: 10.1177/14680874241255755
186. **IFP Energies nouvelles**
Ding, Z., Truffin, K., and Jay, S., "Cause-and-Effect Chain Analysis of Combustion Cyclic Variability in a Spark-Ignition Engine Using Large-Eddy Simulation, Part I: From Tumble Compression to Flame Initiation," *Combustion and Flame*, 267, 2024. DOI: 10.1016/j.combustflame.2024.113566
187. **IFP Energies nouvelles; Safran Aircraft Engines**
Chaouki, H., Gaballa, H., and de Hemptinne, J.-C., "A New Real-Fluid Modelling Framework Applied to Cavitation Simulation," *12th International Cavitation Symposium – CAV2024*, Chania, Greece, Jun 2–7, 2024.
188. **Egypt-Japan University of Science and Technology; Alexandria University; Sultan Qaboos University; Benha University; Assiut University; Tokyo Institute of Technology**
Rashed, E.S., Elwardany, A.E., Emam, M., Abo-Elfadl, S., Mori, S., and Hassan, H., "3D Numerical Study of NH₃/H₂ MILD Combustion in a Reversed Flow MILD Combustion Furnace," *Applied Thermal Engineering*, 252, 2024. DOI: 10.1016/j.applthermaleng.2024.123610
189. **Delft University of Technology; Netherlands Defence Academy**
Zoumpourlos, K., Coraddu, A., Geertsma, R., and van de Ketterij, R., "Evaluation of Methanol Sprays in Marine Internal Combustion Engines: A Case Study for Port Fuel Injection Systems," *4th International Conference on Modelling and Optimisation of Ship Energy Systems*, Delft, Netherlands, Oct 26–27, 2023. DOI: 10.59490/theses.2023.655

190. **Convergent Science; IFP Energies nouvelles**
Bhatt, M.P., Yang, P., and Habchi, C., "Numerical Modeling of Liquid Film Boiling, Urea Deposition and Solidification in SCR Applications," SAE Paper 2024-01-2626, 2024. DOI: 10.4271/2024-01-2626
191. **Federal University of Uberlândia; Otto von Güricke Universität Magdeburg**
de Lima, B.S., Sommerfeld, M., and de Souza, F.J., "Physical and Numerical Experimentation of Water Droplet Collision on a Wall: A Comparison Between PLIC and HRIC Schemes for the VOF Transport Equation With High-Speed Imaging," *Fluids*, 9(5), 2024. DOI: 10.3390/fluids9050117
192. **The University of Alabama**
Bogdanowicz, E.F., Bittle, J.A., and Agrawal, A.K., "Numerical Investigation of Peripheral Fuel Injection to Increase Performance in Diesel Engines," *Fuel*, 371, Part A, 2024. DOI: 10.1016/j.fuel.2024.131895
193. **Politecnico di Bari**
Distaso, E., Cassone, E., Tamburrano, P., Amirante, R., and De Palma, P., "Characterization of the Hydrogen Combustion Process in a Scramjet Engine," *International Journal of Hydrogen Energy*, 71, 651-660, 2024. DOI: 10.1016/j.ijhydene.2024.05.184
194. **Marquette University**
Zeman, J. and Dempsey, A., "Numerical Investigation of Equivalence Ratio Effects on Flex-Fuel Mixing Controlled Combustion Enabled by Prechamber Ignition," *Applied Thermal Engineering*, 249, 2024. DOI: 10.1016/j.applthermaleng.2024.123445
195. **Brandenburg University of Technology Cottbus-Senftenberg**
Franken, T., "Multi-Objective Optimization of Stochastic Engine Models," Ph.D. thesis, Brandenburg University of Technology Cottbus-Senftenberg, Cottbus, Germany, 2023
<https://doi.org/10.26127/BTUOpen-6633>.
196. **King Abdullah University of Science and Technology; Saudi Aramco**
Silva, M., Cenker, E., Liu, X., and Im, H.G., "Modelling and Optimization of Narrow-Throat Pre-Chamber Engines," *Modelling Spark Ignition Combustion*, eds. Lakshminarayanan, P.A., Agarwal, A.K., Ge, H., and Mallikarjuna, J.M., Springer, Singapore, 2024. DOI: 10.1007/978-981-97-0629-7_13
197. **King Abdullah University of Science and Technology; Tianjin University**
Liu, X., Tang, Q., and Im, H.G., "Enhancing Ammonia Engine Efficiency Through Pre-Chamber Combustion and Dual-Fuel Compression Ignition Techniques," *Journal of Cleaner Production*, 436, 2024. DOI: 10.1016/j.jclepro.2024.140622
198. **King Abdullah University of Science and Technology**
Liu, X., Guo, J., and Im, H.G., "Development of Correlation Model for Cavitating Spray Using Eulerian Simulations," *International Journal of Engine Research*, 25(4), 2023. DOI: 10.1177/14680874231200759
199. **King Abdullah University of Science and Technology; Saudi Aramco; Oregon State University**
Liu, X., Aljabri, H., Panthi, N., AlRamadan, A.S., Cenker, E., Alshammari, A.T., Magnotti, G., and Im, H.G., "Computational Study of Hydrogen Engine Combustion Strategies: Dual-Fuel Compression Ignition With Port- And Direct-Injection, Pre-Chamber Combustion, and Spark-Ignition," *Fuel*, 350, 2023. DOI: 10.1016/j.fuel.2023.128801
200. **King Abdullah University of Science and Technology**
Menaca, R., Cabezas, K.M., Shakeel, M.R., Vorraro, G., Turner, J.W., G, and Im, H.G., "A Computational Study of Hydrogen Direct Injection Using a Pre-Chamber in an Opposed-Piston Engine," SAE Paper 2024-01-3010, 2024.
201. **King Abdullah University of Science and Technology**
Cabezas, K.M., Zaihi, A., Liu, X., Aljohani, B., Wu, H., Houdi, M.B., Roberts, W.L., and Im, H.G., "Numerical Analysis of Different Hydrogen Injector Characteristics in a Constant Volume Chamber," SAE Paper 2024-01-2693, 2024. DOI: 10.4271/2024-01-2693

202. **Clemson University; Ground Vehicle Systems Center**
Avinash, R., Wright, S., Redmond, L., Gingrich, E., Korivi, V., Tess, M., Piehl, J., and Lawler, B., "Numerical Evaluation of Injection Parameters on Transient Heat Flux and Temperature Distribution of a Heavy-Duty Diesel Engine Piston," SAE Paper 2024-01-2688, 2024. DOI: 10.4271/2024-01-2688
203. **Silesian University of Technology; Norwegian University of Science and Technology**
Nadimi, E., Przybyła, G., Løvås, T., and Adamczyk, W., "Effects of Biodiesel Injector Configuration and Its Injection Timing on Performance, Combustion and Emissions Characteristics of Liquid Ammonia Dual Direct Injection Engine," *Journal of the Energy Institute*, 114, 2024. DOI: 10.1016/j.joei.2024.101605
204. **University of Calgary**
Arguelles, F.J., Fagade, M.D., Hus, S.P., and Fang, X.H., "Computational Diagnostics of Diesel Spray End-of-Injection Combustion Recession," *2024 Spring Technical Meeting of the Canadian Section of the Combustion Institute*, Kingston, Canada, May 13–16, 2024.
205. **Università degli Studi di Firenze; National Renewable Energy Laboratory**
Papi, F., Jonkman, J., Robertson, A., and Bianchini, A., "Going Beyond BEM With BEM: An Insight Into Dynamic Inflow Effects on Floating Wind Turbines," *Wind Energy Science*, 9(5), 1069–1088, 2024. DOI: 10.5194/wes-9-1069-2024
206. **Eindhoven University of Technology; TNO**
Maas, R., Bekdemir, C., and Somers, B., "Numerical Study on the Design of a Passive Pre-Chamber for a Heavy-Duty Hydrogen Combustion Engine," SAE Paper 2024-01-2112, 2024. DOI: 10.4271/2024-01-2112
207. **MAHLE Powertrain**
Yan, Z., Peters, N., Harrington, A., Michael, B., and Hall, J., "Investigation of Ammonia-Fueled SI Combustion in a High Tumble Engine," SAE Paper 2024-01-2815, 2024. DOI: 10.4271/2024-01-2815
208. **Université d'Orléans**
Ferreira, J.M., Oung, R., and Foucher, F., "Effect of In-Cylinder Flow Motion on Fuel-Air Mixture Formation in a Medium-Duty DI-SI H₂ Engine: An Experimentally Supported CFD Study," SAE Paper 2024-01-2117, 2024. DOI: 10.4271/2024-01-2117
209. **Argonne National Laboratory; Noble Thermodynamic Systems, Inc.**
Kim, J., Scarcelli, R., Beardsell, G., Strickland, T., Nilsen, C., and Aznar, M.S., "Modeling Pre-Chamber Assisted Efficient Combustion in an Argon Power Cycle Engine," SAE Paper 2024-01-2690, 2024. DOI: 10.4271/2024-01-2690
210. **Argonne National Laboratory; FCA US LLC**
Kazmouz, S.J., Scarcelli, R., and Bresler, M., "Application of a Comprehensive Lagrangian–Eulerian Spark-Ignition Model to Different Operating Conditions," SAE Paper 03-17-05-0036, 2024. DOI: 10.4271/03-17-05-0036
211. **Purdue University**
Saravana, A., "Fluid Dynamic, Conjugated Heat Transfer and Structural Analyses of an Internally Cooled Twin-Screw Compressor," M.S. thesis, Purdue University, West Lafayette, IN, United States, 2024.
212. **University of East Anglia**
Furze, S.F., Barraclough, S., Liu, D., and Melendi-Espina, S., "Model Based Mapping of a Novel Prototype Spark Ignition Opposed-Piston Engine," *Energy Conversion and Management*, 309, 2024. DOI: 10.1016/j.enconman.2024.118434
213. **Renault Nissan Technology & Business Centre India; Renault Technocentre**
G, S.V., Servant, C., and Rathinam, B., "Application of Large Eddy Simulation to Gasoline Engine and Comparison Against RANS," SAE Paper 2024-01-2419, 2024. DOI: 10.4271/2024-01-2419

214. **Indian Institute of Technology Madras**
Tripathi, S. and Krishnasamy, A., "Strategies to Reduce Higher Unburned Hydrocarbon and Carbon Monoxide Emissions in Reactivity Controlled Compression Ignition," SAE Paper 2024-01-2360, 2024. DOI: 10.4271/2024-01-2360
215. **MAHLE Powertrain; Liebherr Machines Bulle SA**
Michael, B., Seba, B., Andreutti, R., Yan, Z., and Peters, N., "Development of a High Power, Low Emissions Heavy Duty Hydrogen Engine," SAE Paper 2024-01-2610, 2024. DOI: 10.4271/2024-01-2610
216. **Brandenburg University of Technology; LOGE AB; LOGE Deutschland GmbH**
Kurapati, V.R., Anders, B., Seidel, L., and Mauss, F., "Fast CFD Diesel Engine Modelling Using the 1-Dimensional SprayLet Approach," SAE Paper 2024-01-2684, 2024. DOI: 10.4271/2024-01-2684
217. **Chalmers University of Technology; Volvo Group Trucks Technology**
Tripathy, S., Dahlander, P., Somhorst, J., and Kuylensstierna, C., "1D-3D CFD Investigations to Improve the Performance of Two-Stroke Camless Engine," SAE Paper 2024-01-2686, 2024. DOI: 10.4271/2024-01-2686
218. **Graz University of Technology; Large Engines Competence Center; Korea Maritime & Ocean University**
Nyongesa, A.J., Kim, J.K., and Lee, W.-J., "Investigation on the Combustion of Ammonia Using Direct High/Medium-Pressure-Otto Injection Approach in a Diesel Two-Stroke Marine Slow Speed Engine," *Journal of the Energy Institute*, 114, 2024. DOI: 10.1016/j.joei.2024.101641
219. **Argonne National Laboratory; Wabtec Corporation; Convergent Science**
O'Donnell, P., Kazmouz, S., Wu, S., Ameen, M., Klingbeil, A., Lavertu, T., Jayakar, V., Sheth, P., and Wijeyakulasuriya, S., "Computational Investigation of Hydrogen-Air Mixing in a Large-Bore Locomotive Dual Fuel Engine," SAE Paper 2024-01-2694, 2024. DOI: 10.4271/2024-01-2694
220. **Dalian University of Technology**
Xie, K., Long, W., Wang, Y., and Tian, H., "Study on the Forming Process of the Cylinder Wall Fuel Film and the Piston Top Land Ablation Mechanism of a Medium Speed Marine Diesel Engine Under Cold Start Condition," *Applied Thermal Engineering*, 243, 2024. DOI: 10.1016/j.applthermaleng.2024.122634
221. **Dalian University of Technology**
Qu, W., Fang, Y., Song, M., Wang, Z., Xia, Y., Lu, Y., and Feng, L., "Hydrogen Injection Optimization of a Low-Speed Two-Stroke Marine Hydrogen/Diesel Engine," *Fuel*, 366, 2024. DOI: 10.1016/j.fuel.2024.131352
222. **Hefei University of Technology; Brunel University London**
Wan, J., Qian, L., Qian, Y., Zhuang, Y., Gong, Z., Sun, Y., and Wei, X., "Experimental and Numerical Investigation of Combustion, Performance and Emission Characteristics of a GDI Engine Using Hydrogen-Water Complementary Regulation," *Journal of the Energy Institute*, 113, 2024. DOI: 10.1016/j.joei.2024.101554
223. **Indian Institute of Technology Mandi**
Ahamad, J., Kumar, P., and Dhar, A., "Effect of Multi-Injection Strategy on Characteristics of Methanol-Fueled Direct Injection Spark Ignition Engine," *Physics of Fluids*, 36, 2024. DOI: 10.1063/5.0198169
224. **IFP Energies nouvelles; Polytechnique Montréal**
Rondeaux, E., Poubeau, A., Angelberger, C., Zuniga, M.M., Aubagnac-Karkar, D., and Paoli, R., "Exploring the Potential and the Practical Usability of a Machine Learning Approach for Improving Wall Friction Predictions of RANS Wall Functions in Non-Equilibrium Turbulent Flows," *Flow, Turbulence and Combustion*, 2024. DOI: 10.1007/s10494-024-00539-1
225. **Brunel University London**
Rrustemi, D.N., Ganippa, L.C., Megaritis, T., and Axon, C.J., "New Laminar Flame Speed Correlation for Lean Mixtures of Hydrogen Combustion With Water Addition Under High Pressure Conditions," *International Journal of Hydrogen Energy*, 63, 609-617, 2024. DOI: 10.1016/j.ijhydene.2024.03.177

226. **JSS Academy of Technical Education Noida; Delhi Technological University; Qatar University; Uşak University; Kyung Hee University**
Yadav, P.S., Ahmed, S.F.A., Gautam, R., Caliskan, H., Caliskan, N., and Hong, H., "Nozzle Effects on Spray Combustion and Emissions in Compression Ignition Engines Using Waste Cooking Oil Biodiesel: A Computational Fluid Dynamics Analysis at Varying Injection Pressures," *IET Renewable Power Generation*, 2024. DOI: 10.1049/rpg2.12979
227. **Federal University of Santa Maria**
França, L.B.M., Pasa, B.R., Fagundes, J.L.S., Pereira, J.S., Martins, M.E.S., LanzaNova, T.D.M., and Salau, N.P.G., "Validation of a CFD Hydrogen Combustion Model on an PFI SI Engine Under Lean Combustion," *SAE Paper 2023-36-0125*, 2023. DOI: 10.4271/2023-36-0125
228. **The University of Melbourne**
Dou, X., Yosri, M.R., Talei, M., and Yang, Y., "Impact of Wall Heat Transfer Modelling in Large-Eddy Simulation of Hydrogen Knocking Combustion," *International Journal of Hydrogen Energy*, 62, 405-417, 2024. DOI: 10.1016/j.ijhydene.2024.03.076
229. **IMT Atlantique; Ecole Militaire Polytechnique, Algeria**
Sehili, Y., Loubar, K., Tarabet, L., Cerdoun, M., and Lacroix, C., "Computational Investigation of the Influence of Combustion Chamber Characteristics on a Heavy-Duty Ammonia Diesel Dual Fuel Engine," *Energies*, 17(5), 2024. DOI: 10.3390/en17051231
230. **King Abdullah University of Science and Technology; Saudi Aramco**
Tang, W., Silva, M., Hakimov, K., Zhang, X., Hlaing, P., Cenker, E., AlRamadan, A.S., Turner, J.W.G., Farooq, A., Im, H.G., and Sarathy, S.M., "Skeletal CH₃OH/NO_x Kinetic Model for Simulating Spark-Ignition and Turbulent Jet Ignition Engines," *ACS Omega*, 9(10), 11255–11265, 2024. DOI: 10.1021/acsomega.3c06488
231. **Argonne National Laboratory; Sandia National Laboratories**
Guo, H., Torelli, R., Kim, N., Reuss, D.L., and Sjöberg, M., "In-Cylinder Spray Evolution in a Motored Central-Injection Gasoline Engine: Imaging and Simulating the Effects of Flash-Boiling and Intake Crossflow," *International Journal of Engine Research*, 2024. DOI: 10.1177/14680874241231623
232. **University of Minnesota; Duke University; University of Wisconsin–Madison; U.S. Army DEVCOM Army Research Laboratory**
Narayanan, S.R., Ji, Y., Sapra, H.D., Kweon, C.-B.M., Kim, K.S., Sun, Z., Kokjohn, S., Mak, S., and Yang, S., "A Misfire-Integrated Gaussian Process (MInt-GP) Emulator for Energy-Assisted Compression Ignition (EACI) Engines With Varying Cetane Number Jet Fuels," *International Journal of Engine Research*, 2024. DOI: 10.1177/14680874241229514
233. **Convergent Science; University of Massachusetts Amherst**
Sadique, J., Xie, S., Shekhawat, Y.S., Darling, H., and Schmidt, D., "Numerical Assessment and Validation of Floating Offshore Wind Turbines in One Fully Coupled CFD Simulation," *Offshore Technology Conference Asia*, Kuala Lumpur, Malaysia, Feb 27–Mar 1, 2024. DOI: 10.4043/34956-MS
234. **El-Wancharissi University of Tissemsilt**
Rahmani, Z., Zebbar, D., Mostefa, K., and Kherris, S., "CFD Simulation Approved by an Experimental Validation of the Diffusion Absorption Refrigeration System Evaporator," *International Journal of Refrigeration*, 2024. DOI: 10.1016/j.ijrefrig.2024.02.021
235. **Oak Ridge National Laboratory**
Chuahy, F.D.F. and Splitter, D., "Piston Geometry and Stroke Optimization for High Efficiency Propane Spark Ignition Engines," *Applied Thermal Engineering*, 244, 2024. DOI: 10.1016/j.applthermaleng.2024.122708
236. **Università degli Studi di Perugia**
Gammaitoni, T., Miliozzi, A., Zembi, J., and Battistoni, M., "Hydrogen Mixing and Combustion in an SI Internal Combustion Engine: CFD Evaluation of Premixed and DI Strategies," *Case Studies in Thermal Engineering*, 55, 2024. DOI: 10.1016/j.csite.2024.104072

237. **CMT - Clean Mobility & Thermofluids; Sandia National Laboratories**
García-Oliver, J.M., Novella, R., Micó, C., Bin-Khalid, U., and Lopez-Pintor, D., "A Numerical Analysis of Hydrotreated Vegetable Oil and Dimethoxymethane (OME1) Blends Combustion and Pollutant Formation Through the Development of a Reduced Reaction Mechanism," *International Journal of Engine Research*, 2024. DOI: 10.1177/14680874231226321
238. **RWTH Aachen University**
Yadav, J., Günther, M., and Pischinger, S., "Optical Spray Investigation and Numerical Spray Model Calibration for the RCCI Combustion Mode With Ethanol/CNG and Diesel Fuel," *Energy Conversion and Management*, 302, 2024. DOI: 10.1016/j.enconman.2024.118159
239. **"Dunărea de Jos" University of Galați**
Frățița, M., "Assessment of Water Injection on Internal Combustion Engines Performances," Ph.D. thesis, "Dunărea de Jos" University of Galați, Galați, Romania, 2023.
240. **University of Massachusetts Lowell**
Kumar, A., Boussom, J.A., and Van Dam, N., "Large-Eddy Simulation Study of Injector Geometry and Parcel Injection Location on Spray Simulation of the Engine Combustion Network Spray G Injector," *Journal of Engineering for Gas Turbines and Power*, 146(8), 2024. DOI: 10.1115/1.4063957
241. **IMT Atlantique; Ecole Militaire Polytechnique, Algeria**
Sehili, Y., Cerdoun, M., Tarabet, L., Loubar, K., and Lacroix, C., "Development of a Novel Multi-Fidelity Meta Modeling Approach for Robust Multi-Objective Optimization of a Natural Gas-Hydrogen/Diesel Dual Fuel Engine," *Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering*, 2024. DOI: 10.1177/09544070231226349
242. **Cambridge Centre for Advanced Research and Education in Singapore; University of Cambridge**
Harikrishnan, B., Gkantonas, S., and Mastorakos, E., "LES-DCMC of Dual-Fuel Ignition Problems," *AIAA SciTech 2024 Forum*, AIAA 2024-2426, Orlando, FL, United States, Jan 8–12, 2024. DOI: 10.2514/6.2024-2426
243. **Volvo Group Trucks Technology; Convergent Science**
Alen, J., Probst, D., and Biware, M., "A Machine Learning Approach for Hydrogen Internal Combustion (H2ICE) Mixture Preparation," *SAE Paper 2024-26-0254*, 2024. DOI: 10.4271/2024-26-0254
244. **Oslo Metropolitan University; Convergent Science**
Norbeck, O.M.H., Sundsdal, O.M., Nambully, S.K., and Chaudhuri, A., "CFD Modeling of the Transport of Human Respiratory Droplets in an Indoor Environment," *63rd International Conference of Scandinavian Simulation Society*, Trondheim, Norway, Sep 20–21, 2022. DOI: 10.3384/ecp192035
245. **Argonne National Laboratory; U.S. Army DEVCOM Army Research Laboratory**
Oruganti, S.K., Torelli, R., Kim, K.S., Mayhew, E., and Kweon, C.-B., "A Phenomenological Thermal Spray Wall Interaction Modeling Framework Applied to a High-Temperature Ignition Assistant Device," *Journal of Engineering for Gas Turbines and Power*, 146(9), 2024. DOI: 10.1115/1.4064481
246. **Marquette University; University of Wisconsin–Madison**
Nsaif, O., Kokjohn, S., Hessel, R., and Dempsey, A., "Reducing Methane Emissions From Lean Burn Natural Gas Engines With Prechamber Ignited Mixing-Controlled Combustion," *Journal of Engineering for Gas Turbines and Power*, 146(6), 2024. DOI: 10.1115/1.4064454
247. **Marquette University**
Zeman, J. and Dempsey, A., "Characterization of Flex-Fuel Prechamber Enabled Mixing-Controlled Combustion With Gasoline/Ethanol Blends at High Load," *Journal of Engineering for Gas Turbines and Power*, 146(8), 2024. DOI: 10.1115/1.4064453
248. **South East Technological University; Indian Institute of Technology Bombay**
Kore, R.U., Kumar, N., and Vashishtha, A., "Studying the Influence of Aluminium in ADN/HTPB Based Solid Propellants," *AIAA SciTech 2024 Forum*, AIAA 2024-1818, Orlando, FL, United States, Jan 8–12, 2024. DOI: 10.2514/6.2024-1818

249. **Argonne National Laboratory; U.S. Army Combat Capabilities Development Command**
Oruganti, S.K.V., Torelli, R., Kim, K.S., Mayhew, E., and Kweon, C.-B.M., "Numerical Modeling of Jet Fuel Ignition and Ensuing Combustion Using a Superheated Ignition Assistant," *AIAA SciTech 2024 Forum*, AIAA 2024-2778, Orlando, FL, United States, Jan 8–12, 2024. DOI: 10.2514/6.2024-2778
250. **University of Minnesota; U.S. Army Combat Capabilities Development Command**
Narayanan, S.R., Cornelius, A., Raju, S.A.G., Sun, Z., Yang, S., Kim, K.S., and Kweon, C.-B.M., "Simulation-Based Engine Control for an Ignition-Assisted Diesel Engine With Varying Cetane Number Fuels," *AIAA SciTech 2024 Forum*, AIAA 2024-0798, Orlando, FL, United States, Jan 8–12, 2024. DOI: 10.2514/6.2024-0798
251. **Convergent Science**
Drennan, S.A., Malewicki, T., Zhaoyu, L., Davis, K., and Golden, G., "Simulations of Soot Volume Fraction and Size Distribution in a High Pressure Non-Premixed Ethylene Flame Using a Detailed Mechanism," *Turbo Expo IGTI 2015*, GT2015-43594, Montreal, Canada, Jun 15–19, 2015.
252. **Beijing University of Technology**
Ji, C., Qiang, Y., Wang, S., Xin, G., Wang, Z., Hong, C., and Yang, J., "Numerical Investigation on the Combustion Performance of Ammonia-Hydrogen Spark-Ignition Engine Under Various High Compression Ratios and Different Spark-Ignition Timings," *International Journal of Hydrogen Energy*, 56, 817-827, 2024. DOI: 10.1016/j.ijhydene.2023.12.243
253. **Shanghai Jiao Tong University; National Engineering Laboratory of Ship and Ocean Engineering Power System; Shaanxi Diesel Heavy Industry**
Huo, J., Zhao, T., Lin, H., Li, J., Zhang, W., Huang, Z., and Han, D., "Study on Lean Combustion of Ammonia-Hydrogen Mixtures in a Pre-Chamber Engine," *Fuel*, 361, 2024. DOI: 10.1016/j.fuel.2023.130773
254. **Università degli Studi di Firenze; Convergent Science**
Pagamonci, L., Papi, F., Balduzzi, Xie, S., Sadique, J., Scienza, P., and Bianchini, A., "To What Extent Is Aeroelasticity Impacting Multi-Megawatt Wind Turbine Upscaling? A Critical Assessment," *Journal of Physics: Conference Series*, 2648, 2023. DOI: 10.1088/1742-6596/2648/1/012005
255. **Argonne National Laboratory; Aramco Americas**
Kim, S., Nocivelli, L., Zhang, A., Voice, A.K., and Pei, Y., "Realistic Fuel Spray Modeling for Gasoline Direct Injection Engine Applications," *International Journal of Engine Research*, 2023. DOI: 10.1177/14680874231210929
256. **University of Galway; Beihang University; RWTH Aachen University; Convergent Science**
Zhu, Y., Curran, H.J., Girhe, S., Murakami, Y., Pitsch, H., Senecal, P.K., Yang, L., and Zhou, C.-W., "The Combustion Chemistry of Ammonia and Ammonia/Hydrogen Mixtures: A Comprehensive Chemical Kinetic Modeling Study," *Combustion and Flame*, 260, 2024. DOI: 10.1016/j.combustflame.2023.113239
257. **RWTH Aachen University; ISATEC GmbH**
Esposito, S., Diekhoff, L., and Pischinger, S., "Prediction of Gaseous Pollutant Emissions From a Spark-Ignition Direct-Injection Engine With Gas-Exchange Simulation," *International Journal of Engine Research*, 22(12), 2021. DOI: 10.1177/14680874211005053
258. **Anna University**
Kumar, M.S., Muniyappan, M., and Selvan, S.A., "Experimental and CFD Analysis on the Impact of Hydrogen as Fuel on the Behavior of a Passenger Car Gasoline Direct Injection Engine," *Journal of the Energy Institute*, 113, 2024. DOI: 10.1016/j.joei.2023.101487
259. **Politecnico di Torino; POWERTECH Engineering**
Segatori, C., Piano, A., Paradisi, B.P., Bianco, A., and Millo, F., "Exploiting the Potential of Large Eddy Simulations (LES) for Ducted Fuel Injection Investigation in Non-Reacting Conditions," *International Journal of Multiphase Flow*, 171, 2024. DOI: 10.1016/j.ijmultiphaseflow.2023.104686

260. **King Abdullah University of Science and Technology; Edinburgh Napier University**
Dimitrova, I.D., Luong, M.-B., Sanal, S., Tingas, E.-A., and Im, H.G., "Asymptotic Analysis of Detonation Development at SI Engine Conditions Using Computational Singular Perturbation," *Combustion Theory and Modelling*, 2023. DOI: 10.1080/13647830.2023.2281379
261. **IMT Atlantique; Université M'Hamed Bougara Boumerdès; Ecole Militaire Polytechnique, Algeria**
Sehili, Y., Loubar, K., Lounici, M.S., Tarabet, L., Cerdoun, M., and Lacroix, C., "Development of Knock Prediction Technique in Dual Fuel Engines and Its Mitigation With Direct Water Injection," *Fuel*, 358, Part B, 2024. DOI: 10.1016/j.fuel.2023.130297
262. **New York University Abu Dhabi; Combat Capabilities Development Command Army Research Laboratory; University of Illinois Urbana-Champaign**
Kim, S., Ryu, J.I., Kang, S.-G., Motily, A.H., Numkiatsakul, P., Alonso, R., Lee, T., Kriven, W.M., Kim, K.S., and Kweon, C.-B.M., "Numerical Investigations of Combustion Dynamics and Thermo-Mechanical Stress in the Ignition Assistance System for Small Aircraft Engines," *Combustion Science and Technology*, 2023. DOI: 10.1080/00102202.2023.2278075
263. **Jiangsu University**
Mahmoud, N.M., Zhong, W., Wang, Q., and He, Z., "Impact of n-Butanol Addition to Hydrogenated Catalytic Biodiesel Fueled a Constant Volume Combustion Chamber; a Computational Study," *Energy Sources, Part A: Recovery, Utilization, and Environmental Effects*, 45(4), 2023. DOI: 10.1080/15567036.2023.2273986
264. **Purdue University**
Wang, H. and Liu, J., "Machine Learning Assisted Modeling of Mixing Timescale for LES/PDF of High-Karlovitz Turbulent Premixed Combustion," *Combustion and Flame*, 238, 2022. DOI: 10.1016/j.combustflame.2021.111895
265. **Tsinghua University; BYD Auto Co., Ltd.**
Liu, S., Qi, Y., Lin, Z., Liu, W., Lu, G., Wang, B., Lui, Y., and Wang, Z., "A Wall Heat Transfer Model and a Skeletal Reaction Mechanism of iso-Octane for CFD Simulation of Gasoline Engines," *Energy Conversion and Management*, 298, 2023. DOI: 10.1016/j.enconman.2023.117784
266. **King Abdullah University of Science and Technology; Sandia National Laboratories**
Liu, X., Im, H.G., Mueller, C.J., and Nyrenstedt, G., "A Computational Parametric Study of Ducted Fuel Injection Implementation in a Heavy-Duty Diesel Engine," *Fuel*, 358, Part A, 2024. DOI: 10.1016/j.fuel.2023.130228
267. **Argonne National Laboratory**
Addepalli, S.K., Pamminger, M., Scarcelli, R., and Wallner, T., "Modeling the Impact of the Fuel Injection Strategy on the Combustion and Performance Characteristics of a Heavy-Duty GCI Engine," *International Journal of Engine Research*, 2023. DOI: 10.1177/14680874231206650
268. **Tongji University**
Liu, X. and Zhiyu, H., "LES Study of the Mixing Process and Cyclic Variation of a Direct-Injection Hydrogen Engine," SAE Paper 2023-01-7025, 2023. DOI: 10.4271/2023-01-7025
269. **Beijing University of Technology**
Yin, Y., Lei, Y., Shen, H., Yi, Y., Zhao, T., and Qiu, T., "Modeling Investigation on Transient Behaviors of Gaseous Ammonia Jet Flow With Direct Injection," *Fuel*, 358, Part A, 2024. DOI: 10.1016/j.fuel.2023.129997
270. **CMT - Clean Mobility & Thermofluids**
Novella, R., Pastor, J.M., Gomez-Soriano, J., and Barbery, I., "Effects of Pre-Chamber Flow-Field on Combustion Stability in a Spark-Ignition Engine Using Large-Eddy Simulations," *Physics of Fluids*, 35, 2023. DOI: 10.1063/5.0169655

271. **New York University Abu Dhabi; Argonne National Laboratory; New York University; Combat Capabilities Development Command Army Research Laboratory; University of Illinois Urbana-Champaign**
Kim, S., Torelli, R., Oruganti, S.K., Ryu, J.I., Lee, T., Kim, K.S., and Kweon, C.-B.M., "Modeling of the Spray-Induced Wall Stress Acting on the Ignition Assistance Device," *Physics of Fluids*, 35, 2023. DOI: 10.1063/5.0173360
272. **Southwest Research Institute**
Briggs, T. and Conway, G., "A Predictive Model for Spark Stretch and Mixture Ignition in SI Engines," SAE Paper 2023-01-0202, 2023. DOI: 10.4271/2023-01-0202
273. **University of Minnesota**
Shim, G., Narayanan, S.R., and Yang, S., "Numerical Simulation of Virus-Laden Aerosol Transmission in Real Human Respiratory Airways," *Physics of Fluids*, 35, 2023. DOI: 10.1063/5.0164842
274. **Shandong University of Technology; Tianjin University**
Yang, B., Liu, L., Zhang, Y., Gong, J., Zhang, F., and Zhang, T., "Effects of I-EGR and Pre-Injection on Performance of Gasoline Compression Ignition (GCI) at Low-Load Condition," *Energy Engineering*, 120(10), 2233-2250, 2023. DOI: 10.32604/ee.2023.028898
275. **Convergent Science**
Xie, S. and Sadique, J., "CFD Simulations of Two Tandem Semi-Submersible Floating Offshore Wind Turbines Using a Fully-Coupled Fluid-Structure-Interaction Simulation Methodology," *ASME 2022 4th International Offshore Wind Technical Conference*, IOWTC2022-98645, Boston, MA, United States, Dec 7-8, 2022. DOI: 10.1115/IOWTC2022-98645
276. **Silesian University of Technology; Norwegian University of Science and Technology**
Nadimi, E., Przybyła, G., Løvås, T., Peczkis, G., and Adamczyk, W., "Experimental and Numerical Study on Direct Injection of Liquid Ammonia and Its Injection Timing in an Ammonia-Biodiesel Dual Injection Engine," *Energy*, 284, 2023. DOI: 10.1016/j.energy.2023.129301
277. **Marquette University**
Chowdhury, M., Gross, J., Allen, C., and Dempsey, A., "Simulation of a Rapid Compression Machine for Evaluation of Ignition Chemistry and Soot Formation Using Gasoline/Ethanol Blends," *Frontiers in Energy Research*, 11, 2023. DOI: 10.3389/fenrg.2023.1258304
278. **Bursa Technical University; Bandırma Onyedi Eylül University; Bursa Uludağ University**
Kucuk, M., Sener, R., and Surmen, A., "Effectiveness of Hydrogen Enrichment Strategy for Wankel Engines in Unmanned Aerial Vehicle Applications at Various Altitudes," *International Journal of Hydrogen Energy*, 54, Part B, 1534-1549, 2024. DOI: 10.1016/j.ijhydene.2023.08.304
279. **Technische Universität Wien**
Gotthard, T., "Development of a Spark-Ignited Kerosene Combustion Process on a Single-Disc Wankel Engine Taking Cold Start Capability Into Account," Ph.D. thesis, Technische Universität Wien, Vienna, Austria, 2023 <https://doi.org/10.34726/hss.2023.105600>.
280. **Technische Universität Wien; Austro Engine GmbH**
Gotthard, T., Hofmann, P., and Zahradnik, F., "Expansion of the Operating Range of a Multi-Fuel Single-Disk Rotary Engine Using a 2+2-Spark Plug Combustion Process," SAE Paper 2023-01-5018, 2023. DOI: 10.4271/2023-01-5018
281. **Illinois Institute of Technology; Wisconsin Engine Research Consultants; WM International Engineering**
Ankobe-Ansah, K.L., Hassan, H.A., Wickman, D.D., De Ojeda, W., and Hall, C.M., "Evaluation of the Performance and Exhaust Emissions of a 4 Cylinder CI Engine Operating With Dimethyl Ether (DME) and Propane Blends," *ASME 2023 ICE Forward Conference*, ICEF2023-110517, Pittsburgh, PA, United States, Oct 8-11, 2023.

282. **Illinois Institute of Technology; Wisconsin Engine Research Consultants; WM International Engineering**
Hasssan, H.A., Ankobea-Ansah, K., Wickman, D., De Ojeda, W., and Hall, C., "Performance and Emissions of an SI Engine Fueled With DME-Propane Blends," *ASME 2023 ICE Forward Conference*, ICEF2023-110498, Pittsburgh, PA, United States, Oct 8–11, 2023.
283. **Università di Modena e Reggio Emilia; Atris Engineering s.r.l.**
Scrignoli, F., Savioli, T., and Rinaldini, C.A., "Optimization of the Combustion Chamber Design of a Natural Gas-Diesel Dual Fuel Engine Running at Low Load," *ASME 2023 ICE Forward Conference*, ICEF2023-110482, Pittsburgh, PA, United States, Oct 8–11, 2023.
284. **Argonne National Laboratory; Wabtec Corporation; Convergent Science**
Kazmouz, S.J., Wu, S., Klingbeil, A., Lavertu, T., Jayakar, V., Sheth, P., Wijeyakulasuriya, S., and Ameen, M., "Large-Bore Locomotive Engines – Numerical Simulations of Natural Gas/Diesel Dual-Fuel Operation," *ASME 2023 ICE Forward Conference*, ICEF2023-110164, Pittsburgh, PA, United States, Oct 8–11, 2023.
285. **King Abdullah University of Science and Technology**
Menaca, R., Silva, M., Moreno-Cabezas, K., Vorraro, G., Turner, J.W.G., and Im, H.G., "A Computational Analysis of Fuel Evaporation and Mixing in a Methanol Opposed-Piston Engine With a Passive Pre-Chamber," *ASME 2023 ICE Forward Conference*, ICEF2023-110099, Pittsburgh, PA, United States, Oct 8–11, 2023.
286. **King Abdullah University of Science and Technology; Saudi Aramco**
Silva, M., Liu, X., Hlaing, P., Cenker, E., Al-Ramadan, A., Turner, J.W.G., and Im, H.G., "Computational Investigation on the Effects of Pre-Chamber Volume in an Active Narrow-Throat Pre-Chamber Engine," *ASME 2023 ICE Forward Conference*, ICEF2023-110084, Pittsburgh, PA, United States, Oct 8–11, 2023.
287. **Stony Brook University; Mississippi State University; Center for Advanced Vehicular Systems; Sandia National Laboratories; Lawrence Livermore National Laboratory**
Assanis, D., Hwang, J., Guleria, G., Lopez-Pintor, D., Wagnon, S.W., and Whitesides, R., "Quantitative Validation of a Computational Fluid Dynamics Methodology for Gasoline Sprays Under Cold Start Conditions," *ASME 2023 ICE Forward Conference*, ICEF2023-110054, Pittsburgh, PA, United States, Oct 8–11, 2023.
288. **Texas A&M University; Colorado State University; Cooper Machinery Services**
Beurlot, K., Jacobs, T., Vieira, G., Olsen, D., and Patterson, M., "Investigation of Practical Delivery of Radical Species for Main Chamber Seeding Using a Radical-Generating Pre-Combustion Chamber," *ASME 2023 ICE Forward Conference*, ICEF2023-110053, Pittsburgh, PA, United States, Oct 8–11, 2023.
289. **Marquette University**
Zeman, J. and Dempsey, A., "Characterization of Flex-Fuel Prechamber Enabled Mixing-Controlled Combustion (PC-MCC) With Gasoline/Ethanol Blends at High Load," *ASME 2023 ICE Forward Conference*, ICEF2023-110006, Pittsburgh, PA, United States, Oct 8–11, 2023.
290. **Mahindra & Mahindra Ltd.; Indian Institute of Technology Madras**
Ramkumar, J., Anand, K., and Ramesh, A., "Design of a Novel Impulse Turbine for a Supercharged Single Cylinder Diesel Engine – A Simulation Approach," *ASME 2023 ICE Forward Conference*, ICEF2023-110004, Pittsburgh, PA, United States, Oct 8–11, 2023.
291. **University of Wisconsin–Madison; U.S. Army DEVCOM Army Research Laboratory**
Sapra, H.D., Hessel, R.P., Miganakallu, N., Stafford, J., Amezcua, E.R., Rothamer, D., Kim, K., Kweon, C.M., and Kokjohn, S., "Hot-Surface Pilot Ignition: A Novel Sustainable Aviation Fuel Agnostic Combustion Strategy," *ASME 2023 ICE Forward Conference*, ICEF2023-109999, Pittsburgh, PA, United States, Oct 8–11, 2023.
292. **Argonne National Laboratory; U.S. Army DEVCOM Army Research Laboratory**
Oruganti, S.K., Torelli, R., Kim, K.S., Mayhew, E., and Kweon, C.-B., "A Phenomenological Thermal Spray Wall Interaction Modeling Framework Applied to a High Temperature Ignition Assistant Device," *ASME 2023 ICE Forward Conference*, ICEF2023-109989, Pittsburgh, PA, United States, Oct 8–11, 2023.

293. **Texas A&M University; Cooper Machinery Services**
Nowlin, J., Patterson, M., and Jacobs, T.J., "Study of NO_x Formation at Lean Conditions in a Prechamber-Ignited Two-Stroke Natural Gas Engine," *ASME 2023 ICE Forward Conference*, ICEF2023-109975, Pittsburgh, PA, United States, Oct 8–11, 2023.
294. **University of Minnesota; University of Wisconsin–Madison; Combat Capabilities Development Command Army Research Laboratory**
Nejadmalayeri, A., Narayanan, S.R., Yang, S., Sun, Z., Sapra, H.D., Hessel, R., Kokjohn, S., Kim, K.S., and Kweon, C.-B.M., "Multi-Fidelity Neural Network Regression for Efficient Training of Energy-Assisted Diesel Engine Control System," *ASME 2023 ICE Forward Conference*, ICEF2023-109750, Pittsburgh, PA, United States, Oct 8–11, 2023.
295. **Marquette University; University of Wisconsin–Madison**
Nsaif, O., Kokjohn, S., Hessel, R., and Dempsey, A., "Reducing Methane Emissions From Lean Burn Natural Gas Engines With Prechamber Ignited Mixing-Controlled Combustion," *ASME 2023 ICE Forward Conference*, ICEF2023-109652, Pittsburgh, PA, United States, Oct 8–11, 2023.
296. **Marquette University**
Johnston, T. and Dempsey, A., "Mixing-Controlled Compression Ignition With Exhaust Rebreath on a Heavy-Duty Engine – A CFD Modelling Investigation Comparing Diesel Fuel and Ethanol," *ASME 2023 ICE Forward Conference*, ICEF2023-109548, Pittsburgh, PA, United States, Oct 8–11, 2023.
297. **Università di Modena e Reggio Emilia**
Volza, A., Scrignoli, F., Caprioli, S., Mattarelli, E., and Rinaldini, C.A., "Exploring the Potential of Hydrogen Opposed Piston Engines for Single-Cylinder Electric Generators: A Computational Study," *SAE Paper 2023-24-0128*, 2023. DOI: 10.4271/2023-24-0128
298. **Aurobay**
Bovo, M. and Ali, M.J.M., "Piston Pre-Heating Using a Pressurized-Heated Oil Buffer: A Practical Method to Reduce ICE Emissions and Fuel Consumption," *SAE Paper 2023-24-0123*, 2023. DOI: 10.4271/2023-24-0123
299. **Università degli Studi di Perugia; STSE S.r.l.; Marelli**
Postriotti, L., Battistoni, M., Zembi, J., Brizi, G., La Sana, M., Brignone, M., Napoli, F., Pizza, S., and Milani, E., "Experimental and Numerical Analysis of a Swirled Fuel Atomizer for an Aftertreatment Diesel Burner," *SAE Paper 2023-24-0106*, 2023. DOI: 10.4271/2023-24-0106
300. **FEV Europe GmbH**
Koerfer, T., "Efficiency-Biased Design of an H₂-Fueled Internal Combustion Engine for Heavy and Challenging Applications," *SAE Paper 2023-24-0075*, 2023. DOI: 10.4271/2023-24-0075
301. **Université d'Orléans; ISAE-ENSMA**
Leite, C.R., Laignel, M., Brequigny, P., Borée, J., and Foucher, F., "Experimental Combustion Analysis in a Gasoline Baseline Hydrogen-Fueled Internal Combustion Engine at Ultra-Lean Conditions," *SAE Paper 2023-24-0073*, 2023. DOI: 10.4271/2023-24-0073
302. **King Abdullah University of Science and Technology**
Cabezas, K.M., Vorraro, G., Liu, X., Menaca, R., Im, H.G., and Turner, J.W.G., "Numerical Analysis of Hydrogen Injection and Mixing in Wankel Rotary Engines," *SAE Paper 2023-24-0069*, 2023. DOI: 10.4271/2023-24-0069
303. **Universitat Politècnica de València; Convergent Science**
Gomez-Soriano, J., Sapkota, P., Wijeyakulasuriya, S., D'Elia, M., Probst, D., Viswanathan, V., Olcina-Girona, M., and Novella, R., "Numerical Modeling of Hydrogen Combustion Using Preferential Species Diffusion, Detailed Chemistry and Adaptive Mesh Refinement in Internal Combustion Engines," *SAE Paper 2023-24-0062*, 2023. DOI: 10.4271/2023-24-0062

304. **Ford Motor Company**
Yang, S., "Soot Modeling of GTDI Engines Using a Recently Developed Turbulent Premixed Combustion Model Implemented With an Improved TRF Mechanism and a Practical Semi-Detailed Soot Model," SAE Paper 2023-24-0044, 2023. DOI: 10.4271/2023-24-0044
305. **Waseda University**
Feng, Y., Yamazaki, R., Sok, R., and Kusaka, J., "Effects of Pre-Chamber Internal Shape on CH₄-H₂ Combustion Characteristics Using Rapid-Compression Expansion Machine Experiments and 3D-CFD Analysis," SAE Paper 2023-24-0043, 2023. DOI: 10.4271/2023-24-0043
306. **University of Stuttgart; FKFS**
Feng, Y., Grill, M., and Kulzer, A., "Numerical Investigation on the Cause-and-Effect Chain for Cycle-to-Cycle Variation of Direct-Injection Spark-Ignition Engine," SAE Paper 2023-24-0035, 2023. DOI: 10.4271/2023-24-0035
307. **CNRS**
Sehili, Y., Loubar, K., Tarabet, L., Mahfoudh, C., and Lacroix, C., "Meta-Model Optimization of Dual-Fuel Engine Performance and Emissions Using Emulsified Diesel With Varying Water Percentages and Injection Timing," SAE Paper 2023-24-0032, 2023. DOI: 10.4271/2023-24-0032
308. **RWTH Aachen University; University of Bath**
Golc, D., Esposito, S., Pitsch, H., and Beeckmann, J., "Experimental Investigation of Ion Formation for Auto-Ignition Combustion in a High-Temperature and High-Pressure Combustion Vessel," SAE Paper 2023-24-0029, 2023. DOI: 10.4271/2023-24-0029
309. **Ferrari S.p.A.; Convergent Science**
Mortellaro, F.S., Silvestri, N., Zaffino, F., Medda, M., D'Elia, M., Viswanathan, V., and Rothbauer, R., "Effect of Start of Injection in a Hydrogen-Fueled DISI Engine: Experimental and Numerical Investigation," SAE Paper 2023-24-0015, 2023. DOI: 10.4271/2023-24-0015
310. **King Abdullah University of Science and Technology; Saudi Aramco**
Silva, M., Almatrafi, F., Uddeen, K., Cenker, E., Sim, J., Younes, M., Jamal, A., Guiberti, T., Turner, J., and Im, H., "Computational Assessment of Ammonia as a Fuel for Light-Duty SI Engines," SAE Paper 2023-24-0013, 2023. DOI: 10.4271/2023-24-0013
311. **Beijing Institute of Technology; Chinese Academy of Sciences; Yanshan University; National University of Singapore**
Wang, H., Ji, C., Wang, D., Wang, Z., Yang, J., Meng, H., Shi, C., Wang, S., Wang, X., Ge, Y., and Yang, W., "Investigation on the Potential of Using Carbon-Free Ammonia and Hydrogen in Small-Scaled Wankel Rotary Engines," *Energy*, 283, 2023. DOI: 10.1016/j.energy.2023.129166
312. **Guangxi University of Science and Technology; Beibu Gulf University; Guangxi Earthmoving Machinery Collaborative Innovation Center**
Tan, D., Li, D., Wang, S., Zhang, Z., Tian, J., Li, J., Lv, J., Zheng, W., and Ye, Y., "Evaluation and Optimization of Hydrogen Addition on the Performance and Emission for Biodiesel Dual-Fuel Engines With Different Blend Ratios Based on the Response Surface Method," *Energy*, 283, 2023. DOI: 10.1016/j.energy.2023.129168
313. **Serrano, J.R., Díaz, J.M., Gomez-Soriano, J., and Raggi, R.,** "Exploring the Oxy-Fuel Combustion in Spark-Ignition Engines for Future Clean Powerplants," *Journal of Engineering for Gas Turbines and Power*, 145(10), 2023. DOI: 10.1115/1.4063126
314. **Beijing Institute of Technology**
Sun, C., Shi, Z., Li, Y., Lou, Y., Wei, G., and Yang, Z., "Development of a Skeletal Mechanism of a Four-Component Diesel Surrogate Fuel Using the Decoupling Method," *ACS Omega*, 8(39), 2023. DOI: 10.1021/acsomega.3c01540

315. **Clemson University**
O'Donnell, P., "Applications of Large Eddy Simulations to Novel Internal Combustion Concepts," Ph.D. thesis, Clemson University, Clemson, SC, United States, 2023
https://tigerprints.clemson.edu/cgi/viewcontent.cgi?article=4474&context=all_dissertations.
316. **Norwegian University of Science and Technology**
Haugsvær, M., "Computational Fluid Dynamic Simulations of Liquid Ammonia Spray," M.S. thesis, Norwegian University of Science and Technology, Trondheim, Norway, 2023
<https://hdl.handle.net/11250/3089291>.
317. **IFP Energies nouvelles**
Delhom, B., Faney, T., McGinn, P., Habchi, C., and Bohbot, J., "Development of a Multi-Species Real Fluid Modelling Approach Using a Machine Learning Method," *ILASS Europe 2023*, Napoli, Italy, Sep 4–7, 2023.
318. **The SARM Project**
Savvakis, S., Sotirios, D., and Zoumpourlos, K., "The Effect of the Isolator Size on the Efficiency of Rotary Piston Compressors," *Green Energy and Environmental Technology*, 2023. DOI: 10.5772/GEET.19
319. **Beijing Institute of Technology; Beijing Institute of Space Launch Technology**
Wu, H., Bo, Y., Xiao, P., Shi, Z., and Li, X., "Effect Mechanism and Quantitative Analysis of Injector Faults on Diesel Engine Performance," *Applied Thermal Engineering*, 236, Part A, 2024. DOI: 10.1016/j.applthermaleng.2023.121559
320. **Sandia National Laboratories; Cummins Inc.; Convergent Science; Mississippi State University; Center for Advanced Vehicular Systems**
Lopez-Pintor, D., Busch, S., Wu, A., Nguyen, T., Hwang, J., and Cho, S., "Catalyst-Heating Operation in Compression-Ignition Engines: A Comprehensive Understanding Using Large Eddy Simulations," *Applications in Energy and Combustion Science*, 16, 2023. DOI: 10.1016/j.jaecs.2023.100203
321. **Chongqing Jiaotong University; Chongqing University**
Yu, J., Guo, F., Deng, T., Liu, P., and Yu, J.-J., "Development of Physical-Chemical Surrogate Models and Skeletal Mechanisms for the Combustion Simulation of Several Jet Fuels," *Journal of Engineering for Gas Turbines and Power*, 145(11), 2023. DOI: 10.1115/1.4063304
322. **BP International; University College London**
Mahmood, A. and Hellier, P., "Developing a Numerical Method for Simulating Physical and Chemical Processes That Lead to LSPI," SAE Paper 2023-32-0082/JSAE 20239261, 2023.
323. **New Ace Inst. Co. Ltd.; DENSO Corporation**
Uchida, N. and Watanabe, K., "Study on Novel Combustion Technologies to Achieve "High-Heels" Heat Release Rate Profile in a Higher-Compression-Ratio Diesel Engine," SAE Paper 2023-32-0077/JSAE 20239259, 2023.
324. **Mazda Motor Corporation**
Nagasawa, T., Uchida, K., and Yamashita, H., "Development of Film Heat Transfer Model Based on Multiphase Flow Numerical Analysis," SAE Paper 2023-32-0012/JSAE 20239257, 2023.
325. **Mazda Motor Corporation**
Kato, Y., Matsuo, T., Kanzaki, J., Kim, S.-K., Shimo, D., and Morinaga, S., "Fuel Consumption Improvement of a New Generation Diesel Engine for Passenger Cars by Quantitative Management of Thermal Efficiency Control Factors and Expansion of Load Range of Premixed Charge Compression Ignition Combustion," SAE Paper 2023-32-0022/JSAE 20239193, 2023.
326. **Tokyo City University; Flatfield; Enable; Riken; Kanazawa Institute of Technology**
Hiyama, D., Ito, A., Nishibe, K., Nozaki, S., Nanba, Y., Yamaura, T., Sasaki, R., and Naganuma, K., "A Study on Developing MPI Hydrogen ICE Over 2MPa BMEP for Medium Duty Vehicles," SAE Paper 2023-32-0037/JSAE 20239186, 2023.

327. **ISUZU Advanced Engineering Center Ltd.**
Miyashita, K., Furukawa, S., Hashimoto, M., Ishii, Y., and Yamashita, K., "In-Cylinder Air Injection for Diesel Combustion Improvement," SAE Paper 2023-32-0076/JSAE 20239183, 2023.
328. **Shanghai Jiao Tong University**
Xue, X., Chen, R., Zhou, X., Cao, J., and Tang, X., "Research on Wall Temperature of Flame-Wall Interaction Based on Laser-Induced Phosphorescence and Heat Transfer Simulation," SAE Paper 2023-32-0056/JSAE 20239174, 2023.
329. **Mazda Motor Corporation**
Matsuda, H., Uchida, K., Harada, Y., and Yamashita, H., "Influence of Combustion Mode on Heat Loss Distribution in Gasoline Engines," SAE Paper 2023-32-0075/JSAE 20239172, 2023. DOI: 10.4271/2023-32-0075
330. **Chiba University**
Nomura, T., Moriyoshi, Y., Morikawa, K., and Kuboyama, T., "Numerical Investigation of Multi-Stage HCCI Combustion With Small Chamber Inside Piston," SAE Paper 2023-32-0020/JSAE 20239162, 2023.
331. **Chiba University; Sustainable Engine Research Center Co., Ltd.; Yamabiko Corporation**
Eto, K., Kuboyama, T., Moriyoshi, Y., Yamada, T., Yamazaki, T., and Yamaguchi, S., "Numerical Investigation of Knocking in a Small Two-Stroke Engine With a High Compression Ratio to Improve Thermal Efficiency," SAE Paper 2023-32-0079/JSAE 20239148, 2023.
332. **Sandia National Laboratories; Toyota Motor Corporation**
Strickland, T., Lopez-Pintor, D., Matsubara, N., Kaneko, K., and Kitano, K., "Adapting Dimensionless Numbers Developed for Knock Prediction Under Homogeneous Conditions to Ultra-Lean Spark Ignition Conditions," SAE Paper 2023-32-0008/JSAE 20239144, 2023.
333. **Sandia National Laboratories**
Manin, J. and Wan, K., "Investigating Molecular Decomposition via High-Speed Laser-Induced Rayleigh Scattering," SAE Paper 2023-32-0118/JSAE 20239138, 2023.
334. **Okayama University; Kawasaki Heavy Industries, Ltd.**
Khan, M.D.T., Kawahara, N., Kobashi, Y., Hirayama, T., Shimizu, A., and Miyamoto, S., "Visualization of Combustion and Flow Phenomena in a Methane-Fueled Passive Pre-Chamber Ignited Gas Engine," SAE Paper 2023-32-0057/JSAE 20239119, 2023.
335. **Mazda Motor Corporation; Tohoku University**
Sasaki, Y., Hori, J., Seto, M., Fujikawa, T., Morii, Y., Nakamura, H., and Maruta, K., "Advanced Rapid Combustion Concept Using Autoignition Assisted Flame for High Compression Ratio SI Engines," SAE Paper 2023-32-0119/JSAE 20239079, 2023.
336. **Tianjin University; GAC R&D Center**
Zhen, F., Wenzhi, G., Duanzheng, Z., and Yuhuai, L., "Numerical Simulation of Effects of Operating Parameters on Combustion in a Hydrogen Direct Injection Engine," SAE Paper 2023-32-0040/JSAE 20239071, 2023.
337. **Toyota Motor Corporation**
Tsukamoto, Y., Tanno, S., Miyamoto, Y., Sakai, H., Omura, T., and Takahashi, D., "Analysis of the Effect of Hydrogen Combustion Characteristics on Engine Performance," SAE Paper 2023-32-0039/JSAE 20239062, 2023.
338. **YANMAR Co., Ltd.; Tohoku University**
Hiraoka, K., Matsunaga, D., Kamino, T., Honda, Y., Toshinga, K., Murakami, Y., and Nakamura, H., "Experimental and Numerical Analysis on Combustion Characteristics of Ammonia and Diesel Dual Fuel Engine," SAE Paper 2023-32-0102/JSAE 20239048, 2023.

339. **RWTH Aachen University; FEV Europe GmbH**
Betgeri, V., Pischinger, S., Dhongde, A., and Schoenfeld, S., "Closed Cycle Measures for Thermal Efficiency Improvement of a Heavy-Duty Ultra-High Compression Ratio Combustion Engine: A Numerical and Experimental Analysis," SAE Paper 2023-32-0078/JSAE 20239031, 2023.
340. **Honda Motor Co. Ltd.**
Ando, H., Shintani, Y., Kobayashi, H., Shiina, R., and Kimura, N., "Study of Knocking Mitigation and Thermal Efficiency Enhancement of Pre-Chamber Jet Combustion in Stoichiometric Gasoline Engine," SAE Paper 2023-32-0006/JSAE 20239024, 2023.
341. **RWTH Aachen University**
Burkardt, P., Günther, M., and Pischinger, S., "Experimental and Numerical Assessment of Engine Performance Using Cyclopentanone and Anisole as Neat Fuels and as Blends With Gasoline," SAE Paper 2023-32-0050/JSAE 20239002, 2023.
342. **University of São Paulo; Instituto Mauá de Tecnologia; Instituto Tecnológico de Aeronáutica**
Filho, G.C.K., Silva, F.M.F., Pacífico, A.L., Filho, F.L.S., Zabeu, C.B., Nigro, F.B., França, O.M., Jr, Penaranda, A., and Lacava, P.T., "Extended Coherent Flame Model Applied to an Optical Single-Cylinder Engine Fueled With Ethanol," *Applied Thermal Engineering*, 236, Part A, 2024. DOI: 10.1016/j.applthermaleng.2023.121399
343. **Politecnico di Torino; CMT-Motores Térmicos; PUNCH Torino S.p.A.; POWERTECH Engineering**
Millo, F., Piano, A., Roggio, S., Pastor, J.V., Micó, C., Lewiski, F., Pesce, F.C., Vassallo, A., and Bianco, A., "Mixture Formation and Combustion Process Analysis of an Innovative Diesel Piston Bowl Design Through the Synergetic Application of Numerical and Optical Techniques," *Fuel*, 309, 2022. DOI: 10.1016/j.fuel.2021.122144
344. **Pamukkale University; Gazi University; Hitit University**
Halis, S., Solmaz, H., Polat, S., and Yücesu, H.S., "Numerical Investigation of a Reactivity-Controlled Compression Ignition Engine Fueled With n-Heptane and iso-Octane," *Sustainability*, 15(13), 2023. DOI: 10.3390/su151310406
345. **Gazi University; Pamukkale University; Hitit University**
Halis, S., Solmaz, H., Polat, S., and Yücesu, H.S., "Numerical Study of the Effects of Lambda and Injection Timing on RCCI Combustion Mode," *International Journal of Automotive Science and Technology*, 6(2), 120-126, 2022. DOI: 10.30939/ijastech..1105470
346. **King Abdullah University of Science and Technology; Saudi Aramco**
Almatrafi, F., Silva, M., Houidi, M.B., Cenker, E., Badra, J., Mohan, B., Im, H.G., and Turner, J., "Numerical Investigation of the Effects of Piston Design and Injection Strategy on Passive Pre-Chamber Enrichment," SAE Paper 2022-01-1041, 2022. DOI: 10.4271/2022-01-1041
347. **King Abdullah University of Science and Technology; Umm Al-Qura University; Saudi Aramco**
Aljabri, H., Silva, M., Houidi, M.B., Liu, X., Allehaibi, M., Almatrafi, F., AlRamadan, A.S., Mohan, B., Cenker, E., and Im, H.G., "Comparative Study of Spark-Ignited and Pre-Chamber Hydrogen-Fueled Engine: A Computational Approach," *Energies*, 15(23), 2022. DOI: 10.3390/en15238951
348. **King Abdullah University of Science and Technology; Saudi Aramco**
Silva, M.R., Houidi, M.B., Hlaing, P., Sanal, S., Cenker, E., AlRamadan, A., Chang, J., Turner, J., and Im, H., "The Effects of Piston Shape in a Narrow-Throat Pre-Chamber Engine," SAE Paper 2022-01-1059, 2022. DOI: 10.4271/2022-01-1059
349. **King Abdullah University of Science and Technology; Saudi Aramco**
Liu, X., Silva, M., Mohan, B., AlRamadan, A.S., Cenker, E., and Im, H.G., "Computational Optimization of the Performance of a Heavy-Duty Natural Gas Pre-Chamber Engine," *Fuel*, 352, 2023. DOI: 10.1016/j.fuel.2023.129075

350. **King Abdullah University of Science and Technology; Saudi Aramco**
Liu, X., Aljabri, H., Silva, M., AlRamadan, A.S., Houidi, M.B., Cenker, E., and Im, H.G., "Hydrogen Pre-Chamber Combustion at Lean-Burn Conditions on a Heavy-Duty Diesel Engine: A Computational Study," *Fuel*, 335, 2023. DOI: 10.1016/j.fuel.2022.127042
351. **King Abdullah University of Science and Technology; Saudi Aramco**
Liu, X., Aljabri, H., AlRamadan, A.S., Cenker, E., Badra, J., and Im, H.G., "Computational Study of the Multi-Injector Isobaric Combustion Concept in a Heavy-Duty Compression Ignition Engine," *Fuel*, 326, 2022. DOI: 10.1016/j.fuel.2022.125099
352. **Yildiz Technical University; Arçelik A.Ş.**
Bacak, A., Pınarbaşı, A., and Dalkılıç, A.S., "A 3-D FSI Simulation for the Performance Prediction and Valve Dynamic Analysis of a Hermetic Reciprocating Compressor," *International Journal of Refrigeration*, 2023. DOI: 10.1016/j.ijrefrig.2023.01.028
353. **Indian Institute of Technology Madras**
Kale, A.V. and Krishnasamy, A., "Numerical Investigation on Selecting Appropriate Piston Bowl Geometry and Compression Ratio for Gasoline-Fuelled Homogeneous Charge Compression Ignited Light-Duty Diesel Engine," *Energy*, 2023. DOI: 10.1016/j.energy.2023.128861
354. **Beijing Institute of Technology**
Wang, W., Liang, Y., Zuo, Z., Jia, B., and Wang, W., "Effects of Multitype Intake Structures on Combustion Performance of Different Opposed-Piston Engines," *Applied Thermal Engineering*, 235, 2023. DOI: 10.1016/j.applthermaleng.2023.121438
355. **Università degli Studi di Perugia; Universidad de Oviedo; Université d'Orléans**
Zembi, J., Battistoni, M., Pandal, A., Rousselle, C., Pelè, R., Brequigny, P., and Hespel, C., "Numerical Study of Ammonia Spray With a GDI Engine Injector," *The Journal of Ammonia Energy*, 1(1), 2023. DOI: 10.18573/jae.13
356. **King Abdullah University of Science and Technology; Saudi Aramco; Tianjin University**
Liu, X., Sharma, P., Silva, M., AlRamadan, A.S., Cenker, E., Tang, Q., Magnotti, G., and Im, H.G., "Computational Investigation of Methanol Pre-Chamber Combustion in a Heavy-Duty Engine," *Applications in Energy and Combustion Science*, 15, 2023. DOI: 10.1016/j.jaecs.2023.100192
357. **Bursa Technical University; Bursa Uludağ University; Bandırma Onyedi Eylül University**
Kucuk, M., Surmen, A., and Sener, R., "Combustion Characteristics and Performance of a Wankel Engine for Unmanned Aerial Vehicles at Various Altitudes," *Fuel*, 355, 2024. DOI: 10.1016/j.fuel.2023.129483
358. **Université d'Orléans; BorgWarner**
Ferreira, J.M., Tinchon, A., Coratella, C., Oung, R., Doradoux, L., and Foucher, F., "A Validation Methodology for the 3D-CFD Model of a Hydrogen Injector," 23. *Internationales Stuttgarter Symposium*, 2023. DOI: 10.1007/978-3-658-42048-2_24
359. **Indian Institute of Technology Kanpur; Chonnam National University; Konkuk University; Hanyang University**
Kalwar, A., Pham, Q., Park, S., Park, S., and Agarwal, A., "Numerical Study of Direct Injection Spray Behavior of Gasoline and Methanol-Gasoline Blends Under Split-Injection Strategy in Engine-Like Conditions," *Atomization and Sprays*, 2023. DOI: 10.1615/AtomizSpr.2023046136
360. **University of West Attica**
Theodorakakos, A., "Numerical Study of Different Steady-State Flow Rigs for the Tumble Motion Characterization of a Four-Valve Cylinder Head," *CFD Letters*, 15(9), 18-31, 2023. DOI: 10.37934/cfdl.15.9.1831
361. **Politecnico di Torino; STEMS CNR; POWERTECH Engineering**
Piano, A., Scalambro, A., Millo, F., Catapano, F., Sementa, P., Di Iorio, S., and Bianco, A., "CFD-Based Methodology for the Characterization of the Combustion Process of a Passive Pre-Chamber Gasoline Engine," *Transportation Engineering*, 13, 2023. DOI: 10.1016/j.treng.2023.100200

362. **Università degli Studi di Perugia; Loccioni**
Gammaidoni, T., Zembi, J., Battistoni, M., Biscontini, G., and Mariani, A., "CFD Analysis of an Electric Motor's Cooling System: Model Validation and Solutions for Optimization," *Case Studies in Thermal Engineering*, 49, 2023. DOI: 10.1016/j.csite.2023.103349
363. **Argonne National Laboratory; Sandia National Laboratories**
Kim, J., Ameen, M., Scarcelli, R., Kim, N., Singh, E., and Sjöberg, M., "Evaluation of Spray and Combustion Models for Simulating Dilute Combustion in a Direct-Injection Spark-Ignition Engine," *Journal of Engineering for Gas Turbines and Power*, 145(8), 2023. DOI: 10.1115/1.4062481
364. **San Francisco State University; National Renewable Energy Laboratory**
Cheng, A.S., Ratcliff, M.A., and McCormick, R.L., "Modeling Ethanol-Blend Fuel Sprays Under Direct-Injection Spark-Ignition Engine Conditions," *Energy & Fuels*, 2023. DOI: 10.1021/acs.energyfuels.2c03108
365. **Dalian University of Technology; Zichai Power Co., Ltd; Zichai Machines Co., Ltd**
Jiang, L., Xiao, G., Long, W., Dong, D., Tian, J., Tian, H., Jia, B., and Yang, S., "Numerical Study on the Effect of a Two-Stage Pilot Injection Strategy on the Performance of Medium-Speed Diesel/Natural Gas Dual-Fuel Marine Engine," *Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering*, 2023. DOI: 10.1177/09544070231188873
366. **National Renewable Energy Laboratory**
Martin, J., Ratcliff, M.A., Rahimi, M.J., Burton, J.L., Sindler, P., Hays, C.K., and McCormick, R.L., " ϕ -Sensitivity of Gasoline/Oxygenate Blends in an Advanced Compression Ignition Engine," *Energy Fuels*, 2023. DOI: 10.1021/acs.energyfuels.3c01537
367. **Argonne National Laboratory**
Guo, H. and Torelli, R., "Computational Study of the ECN Spray C via One-Way Coupling of Internal Nozzle Flow and Ensuing Spray," *Journal of Aerosol Science*, 174, 2023. DOI: 10.1016/j.jaerosci.2023.106243
368. **Ford Otosan; Gebze Technical University**
Cengiz, C. and Unverdi, S.O., "Effect of Early Intake Valve Closing, Exhaust Gas Recirculation and Split Injection on Combustion and Emissions Characteristics of a HDDI Diesel Engine Operating in PCCI Combustion Mode," *Fuel*, 353, 2023. DOI: 10.1016/j.fuel.2023.129079
369. **Marquette University; MAHLE Powertrain**
Zeman, J., Yan, Z., Bunce, M., and Dempsey, A., "Assessment of Design and Location of an Active Prechamber Igniter to Enable Mixing-Controlled Combustion of Ethanol in Heavy-Duty Engines," *International Journal of Engine Research*, 2023. DOI: 10.1177/14680874231185421
370. **Clemson University; Sandia National Laboratories; Mainspring Energy, Inc.**
O'Donnell, P.C., Lawler, B., Lopez-Pintor, D., and Sofianopoulos, A., "Effects of Injection Pressure and Timing on Low Load Low Temperature Gasoline Combustion Using LES," *Applied Thermal Engineering*, 232, 2023. DOI: 10.1016/j.applthermaleng.2023.121001
371. **Norwegian University of Science and Technology; LOGE Polska sp. zo.o.**
Lewandowski, M.T., Pasternak, M., Haugsvær, M., and Løvås, T., "Simulations of Ammonia Spray Evaporation, Cooling, Mixture Formation and Combustion in a Direct Injection Compression Ignition Engine," *International Journal of Hydrogen Energy*, 52, Part A, 916-935, 2024. DOI: 10.1016/j.ijhydene.2023.06.143
372. **Tongji University**
Zhou, H., Meng, S., and Han, Z., "Combustion Characteristics and Misfire Mechanism of a Passive Pre-Chamber Direct-Injection Gasoline Engine," *Fuel*, 352, 2023. DOI: 10.1016/j.fuel.2023.129067
373. **Lund University**
Liu, H., "3D CFD Simulations of Hydrogen Engine Combustion," M.S. thesis, Lund University, Lund, Sweden, 2023 <https://lup.lub.lu.se/luur/download?func=downloadFile&recordId=9125419&fileId=9125444>.

374. **University of Massachusetts Lowell**
Fernandez, J.E., Dyakov, O.A., Mack, J.H., and Van Dam, N.E., "Comparison of F-76 and JP-8 Fuel Surrogates in a Low-Pressure Swirl Burner," *AIAA SciTech 2023 Forum*, AIAA 2023-0782, National Harbor, MD, United States, Jan 23–27, 2023. DOI: 10.2514/6.2023-0782
375. **Oak Ridge National Laboratory**
Edwards, D., Abuheiba, A., and Stoyanov, M., "Reduced Order Model to Predict Dispersion of Flammable Refrigerant Into a Space," Oak Ridge National Laboratory 1971052, 2023.
376. **IFP Energies nouvelles**
Poncet, S., Mehl, C., Truffin, K., and Colin, O., "Modified Diffusion Model Adapted to Non-Unity Lewis Number Mixtures for Low Flame Stretch Using the Thickened Flame Model," *11th European Combustion Meeting*, Rouen, France, Apr 26–28, 2023.
377. **Politecnico di Torino; PUNCH Torino S.p.A.**
Piano, A., Segatori, C., Millo, F., Pesce, F.C., and Vassallo, A.L., "Investigation of Ducted Fuel Injection Implementation in a Retrofitted Light-Duty Diesel Engine Through Numerical Simulation," *SAE International Journal of Engines*, 16(5), 643-661, 2023. DOI: 10.4271/03-16-05-0038
378. **RWTH Aachen University; FEV Europe GmbH**
Betgeri, V., Pischinger, S., and Schönfeld, S., "Experimental and Numerical Investigation of an Innovative Complex Piston With Enhanced Free Spray Length for the Heavy-Duty Engine Applications," *International Journal of Engine Research*, 2023. DOI: 10.1177/14680874231183025
379. **South East Technological University**
Kore, R. and Vashishtha, A., "Numerical Study of Oblique Detonation Wave Control for Fuel Blends," *57th 3AF International Conference on Applied Aerodynamics*, AERO2023-49-KORE, Bordeaux, France, Mar 29–31, 2023.
380. **CMT-Motores Térmicos**
Novella, R., Pastor, J., Gomez-Soriano, J., and Sánchez-Bayona, J., "Numerical Study on the Use of Ammonia/Hydrogen Fuel Blends for Automotive Spark-Ignition Engines," *Fuel*, 351, 2023. DOI: 10.1016/j.fuel.2023.128945
381. **University of Cambridge**
Gkantonas, S. and Mastorakos, E., "Low-Order Autoignition Modeling for Hydrogen Transverse Jets," *Journal of Propulsion and Power*, 2023. DOI: 10.2514/1.B39142
382. **Zhejiang University; The University of Tennessee, Knoxville**
Ge, H., Bakir, A.H., and Zhao, P., "Knock Mitigation and Power Enhancement of Hydrogen Spark-Ignition Engine Through Ammonia Blending," *Machines*, 11(6), 2023. DOI: 10.3390/machines11060651
383. **Stony Brook University; Sandia National Laboratories**
Guleria, G., Lopez-Pintor, D., Dec, J.E., and Assanis, D., "Development and Evaluation of a Skeletal Mechanism for EHN Additized Gasoline Mixtures in Large Eddy Simulations of HCCI Combustion," *International Journal of Engine Research*, 2023. DOI: 10.1177/14680874231178099
384. **IFP Energies nouvelles**
Mehl, C. and Aubagnac-Karkar, D., "On-the-Fly Accuracy Evaluation of Artificial Neural Networks and Hybrid Method to Improve the Robustness of Neural Network Accelerated Chemistry Solving," *Physics of Fluids*, 35, 2023. DOI: 10.1063/5.0151026
385. **Wayne State University**
Alkhayat, S.A., "Surrogate Fuels for Hydrotreated Vegetable Oil (HVO): Development, Experimental Validation, and 3D-CFD Simulation," Ph.D. thesis, Wayne State University, Detroit, MI, United States, 2023 <https://www.proquest.com/openview/39d6a6181f8a7640db2ee7d75f42fe85/1?pq-origsite=gscholar&cbl=18750&diss=y>.

386. **Convergent Science**
Raju, M., Hasbestan, J., Attal, N.O., and Mittal, A., "On the GPU-Accelerated Preconditioners for Pressure Poisson Equation," *2023 AIAA Aviation Forum*, AIAA 2023-3429, San Diego, CA, United States, Jun 12–16, 2023. DOI: 10.2514/6.2023-3429
387. **Argonne National Laboratory; Purdue University**
Pal, P., Braun, J., Karimli, K., Athmanathan, V., Paniagua, G., and Meyer, T.R., "Large-Eddy Simulation of a Hydrogen-Air Non-Premixed Rotating Detonation Combustor Coupled With a Downstream Nozzle," *2023 AIAA Aviation Forum*, AIAA 2023-4271, San Diego, CA, United States, Jun 12–16, 2023. DOI: 10.2514/6.2023-4271
388. **Penn State Harrisburg**
Maicke, B.A., "Simulation of Liquefying Propellants With Swirl," *2023 AIAA Aviation Forum*, AIAA 2023-4030, San Diego, CA, United States, Jun 12–16, 2023. DOI: 10.2514/6.2023-4030
389. **University of Ulsan**
Windarto, C., Setiawan, A., Duy, N.H.X., and Lim, O., "Investigation of Propane Direct Injection Performance in a Rapid Compression and Expansion Machine: Pathways to Diesel Marine Engine Efficiency Parity With Spark Discharge Duration Strategies," *International Journal of Hydrogen Energy*, 2023. DOI: 10.1016/j.ijhydene.2023.05.131
390. **Lviv Polytechnic National University; Emerson Automation Solutions; Convergent Science; University of Massachusetts Amherst**
Shchur, I., Klymko, V., Xie, S., and Schmidt, D., "Design Features and Numerical Investigation of Counter-Rotating VAWT With Co-Axial Rotors Displaced From Each Other Along the Axis of Rotation," *Energies*, 16(11), 2023. DOI: 10.3390/en16114493
391. **National University of Ireland, Galway; Physikalisch-Technische Bundesanstalt; Huazhong University of Science and Technology; Beihang University; Convergent Science**
Hamdy, M., Nadiri, S., Mohamed, A., Dong, S., Wu, Y., Fernandes, R., Zhou, C., Liu, S., Senecal, P.K., Zhang, K., and Curran, H., "An Updated Comprehensive Chemical Kinetic Mechanism for Ammonia and Its Blends With Hydrogen, Methanol, and n-Heptane," *SAE Paper 2023-01-0204*, 2023. DOI: 10.4271/2023-01-0204
392. **Oak Ridge National Laboratory**
Edwards, K.D., Stoyanov, M., Abu-Heiba, A., and Baxter, V., "Completion of Initial Reduced-Order Model for Flammable Refrigerant Dispersal in Residential Spaces," *Oak Ridge National Laboratory ORNL/LTR-2022/21*, 2022.
393. **Federal University of Santa Maria**
Da Silva, C.D., Fagundes, J.L., Roso, V., LanzaNova, T.D., and Martins, M.E., "Comparison of RANS, DES and LES Turbulence Models to Determine Discharge Coefficients of an Engine Cylinder Head," *9th Brazilian Congress of Thermal Sciences and Engineering*, Bento Gonçalves, Brazil, Nov 6–10, 2022.
394. **Michigan Technological University**
Zhai, J., "Energy Analysis of Droplet Impingement on an Inclined Wall Under Different Temperature Environments," Ph.D. thesis, Michigan Technological University, Houghton, MI, United States, 2023 <https://www.proquest.com/openview/f4086ff350fd5a8d816785806751eb6b/1?pq-origsite=gscholar&cbl=18750&diss=y>.
395. **Politecnico di Torino**
Seddiq, M., Delprete, C., Brusa, E., and Razavykia, A., "A Numerical Study of Piston Bowl Geometry and Diesel Injection Timing in a Heavy-Duty Diesel/Syngas RCCI Engine," *International Journal of Engine Research*, 2023. DOI: 10.1177/14680874231175736
396. **The University of Tennessee, Knoxville; Texas Tech University**
Bakir, A.H., Ge, H., Zhang, Z., and Zhao, P., "Autoignition Enhancement of Ammonia Spray Under Engine-Relevant Conditions via Hydrogen Addition: Thermal, Chemical, and Charge Cooling Effects," *International Journal of Engine Research*, 2023. DOI: 10.1177/14680874231177361

397. **Argonne National Laboratory; Convergent Science**
 Poblador-Ibanez, J., Nocivelli, L., Magnotti, G.M., Anumolu, L., and Sforzo, B.A., "A Physics-Driven Σ -Y Atomization Model for Heavy-Duty Engine Simulations," *International Journal of Multiphase Flow*, 2023. DOI: 10.1016/j.ijmultiphaseflow.2023.104523
398. **The Pennsylvania State University**
 Gresh-Sill, P.J., "Effects of Inclined Inlet and Outlet Ports in Jet Arrays," M.S. thesis, The Pennsylvania State University, Centre County, PA, United States, 2023
https://etda.libraries.psu.edu/files/final_submissions/28027.
399. **The University of Texas at Austin**
 Li, D., Hu, J., Hall, M., and Matthews, R., "Development of a Fractal Engine Simulation Model in a Multidimensional Simulation for the Cold Start Process of a Gasoline Direct Injection Engine," *International Journal of Engine Research*, 2023. DOI: 10.1177/14680874231174272
400. **Università degli Studi dell'Aquila; STEMS CNR**
 Duronio, F., De Vita, A., Montanaro, A., and Allocca, L., "Experimental Investigation and Numerical CFD Assessment of a Thermodynamic Breakup Model for Superheated Sprays With Injection Pressure up to 700 Bar," *Fluids*, 8(5), 2023. DOI: 10.3390/fluids8050155
401. **Université Paris-Saclay**
 Gaballa, H., "Modeling of Dual-Fuel Jet Break-Up, Phase Change, and Mixing," Ph.D. thesis, Université Paris-Saclay, Paris, France, 2023 https://theses.hal.science/tel-04095769/file/120889_GABALLA_2023_archivage.pdf.
402. **Indian Institute of Technology Madras**
 Kale, A.V. and Krishnasamy, A., "Numerical Study on the Load-Range Extension of Gasoline-Fueled Homogeneous Charge Compression Ignition Combustion in a Light-Duty Diesel Engine," *Fuel*, 349, 2023. DOI: 10.1016/j.fuel.2023.128592
403. **RWTH Aachen University**
 Yadav, J. and Pischinger, S., "A Novel Surrogate Fuel Approach for the Numerical Simulation of Renewable Fuels for the Transport Sector," *Energy Conversion and Management*, 287, 2023. DOI: 10.1016/j.enconman.2023.117056
404. **Kocaeli University; Lund University**
 Altinkurt, M.D., Merts, M., Tunér, M., and Turkcan, A., "Effects of Split Diesel Injection Strategies on Combustion, Knocking, Cyclic Variations and Emissions of a Natural Gas-Diesel Dual Fuel Medium Speed Engine," *Fuel*, 347, 2023. DOI: 10.1016/j.fuel.2023.128517
405. **Tianjin University; State Key Laboratory of Intelligent Agricultural Power Equipment**
 Feng, Y., Shang, T., Cai, J., Sun, K., and Wang, Y., "Leaner Lifted-Flame Combustion With Ducted Fuel Injection: The Key Role of Forced Two-Stage Mixing," *Fuel*, 347, 2023. DOI: 10.1016/j.fuel.2023.128431
406. **China Automotive Technology & Research Center Co., Ltd.**
 Mo, Q., Du, K., and Mao, Z., "Computational Studies of Urea-Derived Deposits in a Close-Coupled SCR System," *Proceedings of China SAE Congress 2022: Selected Papers*, 2023. DOI: 10.1007/978-981-99-1365-7_73
407. **Jiangsu University; Guangxi Yuchai Machinery Group Co., Ltd.**
 Ji, Q., Liu, Y., Li, Z., Liu, J., Sun, P., Li, J., and Wang, X., "Simulation Investigation on the Effects of EGR Ratio and Nozzle Angle on In-Cylinder Combustion and Pollutant Generation of PODE/Methanol Blends," *Combustion Science and Technology*, 2023. DOI: 10.1080/00102202.2023.2204520
408. **University of Massachusetts Lowell**
 Kumar, A. and Van Dam, N., "Study of Injector Geometry and Parcel Injection Location on Spray Simulation of the Engine Combustion Network Spray G Injector," *Journal of Engineering for Gas Turbines and Power*, 145(7), 2023. DOI: 10.1115/1.4062414

409. **Università degli Studi dell'Aquila; STEMS CNR**
Duronio, F., Allocca, L., Montanaro, A., Ranieri, S., and De Vita, A., "Effects of Ultra-High Injection Pressure and Flash Boiling Onset on GDI Sprays Morphology," SAE Paper 2023-01-0299, 2023. DOI: 10.4271/2023-01-0299
410. **Tianjin University; China Shipbuilding Power Engineering Institute Co., Ltd.**
Lu, Z., Ye, J., Gui, Y., Lu, T., Shi, L., An, Y., and Wang, T., "Numerical Study of the Compression Ignition of Ammonia in a Two-Stroke Marine Engine by Using HTCGR Strategy," *Energy*, 276, 2023. DOI: 10.1016/j.energy.2023.127578
411. **Sandia National Laboratories; Toyota Motor Corporation**
Strickland, T., Sjöberg, M., Matsubara, N., Kitano, K., and Kaneko, K., "CFD-Based Assessment of the Effect of End-Gas Temperature Stratification on Acoustic Knock Generation in an Ultra-Lean Burn Spark Ignition Engine," SAE Paper 2023-01-0250, 2023. DOI: 10.4271/2023-01-0250
412. **Clemson University; U.S. Army DEVCOM GVSC**
Wright, S., Ravikumar, A., Redmond, L., Lawler, B., Castanier, M., Gingrich, E., and Tess, M., "Data Reduction Methods to Improve Computation Time for Calibration of Piston Thermal Models," SAE Paper 2023-01-0112, 2023. DOI: 10.4271/2023-01-0112
413. **Michigan Technological University**
Zhai, J., Narasimhamurthy, N.M., Naber, J., and Lee, S.-Y., "Experimental and Numerical Study of Water Injection Under Gasoline Direct Injection Engine Relevant Conditions," SAE Paper 2023-01-0313, 2023. DOI: 10.4271/2023-01-0313
414. **Universitat Politècnica de València**
Salvador, F.J., Pastor, J.M., Gomez-Soriano, J., and Martínez-Miracle, E.C., "Performance of Elliptical Nozzles on the Spray Dynamics of Convergent and Constant Section Nozzles by Means of a $\Sigma - Y$ Coupled Model," *Fuel*, 346, 2023. DOI: 10.1016/j.fuel.2023.128259
415. **Universitat Politècnica de València; Sandia National Laboratories**
Garcia-Oliver, J.M., Novella, R., Pintor, D.L., Micó, C., and Bin-Khalid, U., "A Numerical Approach for the Analysis of Hydrotreated Vegetable Oil and Dimethoxy Methane Blends as Low-Carbon Alternative Fuel in Compression Ignition Engines," SAE Paper 2023-01-0338, 2023. DOI: 10.4271/2023-01-0338
416. **Technion – Israel Institute of Technology**
Pisnoy, S., Frankel, S., and Tartakovsky, L., "A Conjugate Heat Transfer Analysis of a Rotary Combustion Engine With a Focus on the Effect of Thermal Barrier Coatings," SAE Paper 2023-01-0199, 2023. DOI: 10.4271/2023-01-0199
417. **Clemson University; Mainspring Energy, Inc.; Sandia National Laboratories**
O'Donnell, P.C., Lawler, B., Sofianopoulos, A., and Pintor, D.L., "Effects of Injector Included Angle on Low-Load Low Temperature Gasoline Combustion Using LES," SAE Paper 2023-01-0270, 2023. DOI: 10.4271/2023-01-0270
418. **University of Applied Sciences and Arts Northwestern Switzerland; RWTH Aachen University**
Hoffmann, J., Mirsch, N., Vera-Tudela, W., Wüthrich, D., Rosenberg, J., Günther, M., Pischinger, S., Weiss, D.A., and Herrmann, K., "Flow Field Investigation of a Single Engine Valve Using PIV, POD, and LES," *Energies*, 16(5), 2023. DOI: 10.3390/en16052402
419. **Universitat Politècnica de València**
Broatch, A., Carreres, M., García-Tíscar, J., and Rodríguez-Pastor, M., "Numerical Analysis of Combustion Noise in an Atmospheric Swirl-Stabilized LDI Burner Through Modal Decomposition Techniques," *Aerospace Science and Technology*, 137, 2023. DOI: 10.1016/j.ast.2023.108281
420. **Tianjin University**
Lu, T., Lu, Z., Gao, Y., Shi, L., Wang, H., and Wang, T., "Investigation on Suitable Swirl Ratio and Spray Angle of a Large-Bore Marine Diesel Engine Using Genetic Algorithm," *Fuel*, 345, 2023. DOI: 10.1016/j.fuel.2023.128187

421. **Politecnico di Torino; POWERTECH Engineering**
Segatori, C., Piano, A., Paradisi, B.P., Millo, F., and Bianco, A., "Ensemble Average Method for Runtime Saving in Large Eddy Simulation of Free and Ducted Fuel Injection (DFI) Sprays," *Fuel*, 344, 2023. DOI: 10.1016/j.fuel.2023.128110
422. **University of Massachusetts Amherst; Convergent Science; Sandia National Laboratories**
Schmidt, D.P., Haghshenas, M., Mitra, P., Wang, C., Senecal, P.K., Tagliante, F., and Pickett, L.M., "The Eulerian Lagrangian Mixing-Oriented (ELMO) Model," *International Journal of Multiphase Flow*, 152, 2022. DOI: 10.1016/j.ijmultiphaseflow.2022.104041
423. **Universidad Tecnológica de Pereira; Universidad de Pamplona**
Sanchez, Y.O., Florez, E.G., and Mesa, D.H., "Analysis of the Influence of Droplet Breakup Time Using Kelvin-Helmholtz Model, on the Diesel Spray Formation, Evaporation and Combustion," *International Journal of Automotive and Mechanical Engineering*, 18(4), 2021. DOI: 10.15282/ijame.18.4.2021.10.0713
424. **Stony Brook University; University of Massachusetts Lowell**
Shaaan, A., Nasim, M.N., Mack, J.H., Van Dam, N., and Assanis, D., "Understanding Ammonia/Hydrogen Fuel Combustion Modeling in a Quiescent Environment," *ASME 2022 ICE Forward Conference*, ICEF2022-91185, Indianapolis, IN, United States, Oct 16–19, 2023. DOI: 10.1115/ICEF2022-91185
425. **Stony Brook University; Sandia National Laboratories**
Guleria, G., Lopez-Pintor, D., Dec, J.E., and Assanis, D., "A Comparative Study of Gasoline Skeletal Mechanisms Under Partial Fuel Stratification Conditions Using Large Eddy Simulations," *International Journal of Engine Research*, 23(10), 2021. DOI: 10.1177/14680874211031370
426. **Convergent Science**
Waikar, A., Rowinski, D., and Dahale, A., "Conjugate Heat Transfer Modeling of Oil Jet Impingement Cooling on Corrugated Wire Surfaces," *ILASS-Americas 33rd Annual Conference on Liquid Atomization and Spray Systems*, Albuquerque, NM, United States, May 14–17, 2023.
427. **Politecnico di Torino; Convergent Science**
Di Mauro, A., Ravetto, M., Goel, P., Baratta, M., Misul, D.A., Salvadori, S., Rothbauer, R., and Gretter, R., "Modelling Aspects in the Simulation of the Diffusive Flame in a Bluff-Body Geometry," *Energies*, 14(11), 2021. DOI: 10.3390/en14112992
428. **The University of Tennessee, Knoxville; Texas Tech University**
Bakir, A.H., Ge, H., Zhang, Z., and Zhao, P., "Ignition Enhancement of Liquid Ammonia Sprays Under Engine-Relevant Conditions via Ambient Hydrogen Addition," *13th U.S. National Combustion Meeting*, College Station, TX, United States, Mar 19–22, 2023.
429. **The University of Alabama**
Bogdanowicz, E.F., Loper, A., Harris, Z., Bittle, J., and Agrawal, A.K., "A Numerical Investigation of Peripheral Injection in a Constant Volume Combustion Chamber," *13th U.S. National Combustion Meeting*, College Station, TX, United States, Mar 19–22, 2023.
430. **Aramco Research Center - Detroit; Convergent Science; IFP Energies nouvelles**
Park, J.-W., Mandapati, R., Zhang, A., Zhao, L., Pei, Y., Mittal, A., Malewicki, T., and Hajiw, M., "Numerical Investigation of Differential Evaporation of Multi-Component Gasoline Surrogate Fuels," *13th U.S. National Combustion Meeting*, College Station, TX, United States, Mar 19–22, 2023.
431. **Colorado State University; Texas A&M University; Cooper Machinery Services**
Vieira, G., Beurlot, K., Xie, N., Patterson, M., and Olsen, D., "Pre-Combustion Chamber Nozzle Design Effect on Unburned Methane Emissions of a Large Bore Two-Stroke Lean-Burn Natural Gas Engine," *13th U.S. National Combustion Meeting*, College Station, TX, United States, Mar 19–22, 2023.
432. **Argonne National Laboratory; Wabtec Corporation; Convergent Science**
Kazmouz, S.J., Klingbeil, A., Lavertu, T., Jayakar, V., Sheth, P., Wijeyakulasurya, S., and Ameen, M., "Simulations of Dual-Fuel Natural Gas/Diesel Operation in Large-Bore Locomotive Engines," *13th U.S. National Combustion Meeting*, College Station, TX, United States, Mar 19–22, 2023.

433. **Colorado State University**
Castro, M.A.V., Kessler, I., and Windom, B.C., "Development of Natural Gas/Hydrogen Fuel Flexible Reduced Chemical Mechanism for Modeling of a Low Emission Gas Turbines," *13th U.S. National Combustion Meeting*, College Station, TX, United States, Mar 19–22, 2023.
434. **Colorado State University**
Bayer, J., Windom, B., Montgomery, D., Olsen, D., and Zdanowicz, A., "Reduction of Methane Emissions With Hydrogen Substitution on a Lean Burn Four Stroke Natural Gas Engine," *13th U.S. National Combustion Meeting*, College Station, TX, United States, Mar 19–22, 2023.
435. **Argonne National Laboratory**
Dasgupta, D., Bhattacharya, C., and Som, S., "Computational Fluid Dynamics Modeling of Flame Behavior for Sustainable Aviation Fuels in Gas Turbine Combustors," *13th U.S. National Combustion Meeting*, College Station, TX, United States, Mar 19–22, 2023.
436. **Sandia National Laboratories**
Soriano, B.S., Owen, L., and Chen, J., "Flame Stabilization of Sustainable Aviation Fuels at Gas Turbine Relevant Conditions," *13th U.S. National Combustion Meeting*, College Station, TX, United States, Mar 19–22, 2023.
437. **Texas A&M University; Colorado State University; Cooper Machinery Services**
Beurlot, K., Jacobs, T.J., Vieira, G., Olsen, D., and Patterson, M., "Practical Pre-Ignition Introduction of Radical Species Using a Radical-Generating Pre-Combustion Chamber for Main Chamber Seeding," *13th U.S. National Combustion Meeting*, College Station, TX, United States, Mar 19–22, 2023.
438. **University of Minnesota; Duke University; University of Wisconsin–Madison; Combat Capabilities Development Command Army Research Laboratory**
Narayanan, S.R., Sun, Z., Yang, S., Ji, Y., Mak, S., Sapra, H.D., Kokjohn, S., Kim, K.S., and Kweon, C.-B.M., "Physics-Integrated Segmented Gaussian Process (SegGP) Learning for Cost-Efficient Training of Diesel Engine Control System With Low Cetane Numbers," *13th U.S. National Combustion Meeting*, College Station, TX, United States, Mar 19–22, 2023.
439. **Colorado State University; Propane Education and Research Council**
Churchill, R., Vishwanathan, G., Olsen, D., and Windom, B., "The Research and Motor Octane Numbers of Liquified Petroleum Gas (LPG) and Dimethyl Ether (rDME) Blends," *13th U.S. National Combustion Meeting*, College Station, TX, United States, Mar 19–22, 2023.
440. **Wayne State University**
Goyal, T., Klein, J., and Samimi-Abianeh, O., "Numerical and Experimental Study of Autoignition-Assisted Premixed n-Heptane Flames Using RCM-Flame Apparatus," *13th U.S. National Combustion Meeting*, College Station, TX, United States, Mar 19–22, 2023.
441. **Texas Tech University; The University of Tennessee, Knoxville**
Ge, H., Bakir, A.H., and Zhao, P., "Performance Enhancement of a Hydrogen Spark-Ignition Engine With Ammonia Blending," *13th U.S. National Combustion Meeting*, College Station, TX, United States, Mar 19–22, 2023.
442. **Southwest Research Institute**
Jha, P., Cung, K., Smith, E., Briggs, T., Bitsis, D.C., Jr., and Abidin, Z., "A Numerical Study on Combustion and Emissions of Renewable Diesel Surrogate Under Engine-Like Conditions," *13th U.S. National Combustion Meeting*, College Station, TX, United States, Mar 19–22, 2023.
443. **Universitat Politècnica de València**
Climent, H., Tiseira, A., Gomez-Soriano, J., and Darbhamalla, A., "In-Cylinder Heat Transfer Model Proposal Compatible With 1D Simulations in Uniflow Scavenged Engines," *Applied Sciences*, 13(6), 2023. DOI: 10.3390/app13063996

444. **IFP Energies nouvelles; Technische Universität Darmstadt; Université d'Orléans; Université de Poitiers**
Ding, Z., Truffin, K., Jay, S., Schmidt, M., Foucher, F., and Borée, J., "On the Use of LES and 3D Empirical Mode Decomposition for Analyzing Cycle-to-Cycle Variations of In-Cylinder Tumbling Flow," *Flow, Turbulence and Combustion*, 2023. DOI: 10.1007/s10494-023-00405-6
445. **Ford Otosan; Gebze Technical University**
Cengiz, C. and Unverdi, S.O., "A CFD Study on the Effects of Injection Timing and Spray Inclusion Angle on Performance and Emission Characteristics of a DI Diesel Engine Operating in Diffusion-Controlled and PCCI Modes of Combustion," *Energies*, 16(6), 2023. DOI: 10.3390/en16062861
446. **Texas A&M University; Cooper Machinery Services**
Nowlin, J., Patterson, M., and Jacobs, T.J., "Study of NO_x Formation at Lean Conditions in a Prechamber-Ignited Two-Stroke Natural Gas Engine," *13th U.S. National Combustion Meeting*, College Station, TX, United States, Mar 19–22, 2023.
447. **Yildiz Technical University**
Bacak, A. and Pinarbaşı, A., "Investigation of Thermodynamic Exhaust Line Losses of Hermetic Piston Compressor by FSI Method," *1st International Conference on Trends in Advanced Research*, Konya, Turkey, Mar 4–7, 2023.
448. **Argonne National Laboratory**
Guo, H. and Torelli, R., "A Unified Non-Equilibrium Phase Change Model for Injection Flow Modeling," *International Journal of Heat and Mass Transfer*, 208, 2023. DOI: 10.1016/j.ijheatmasstransfer.2023.124063
449. **Marquette University**
Chowdhury, M., "Simulation of a Rapid Compression Machine for Evaluation of Ignition Chemistry and Soot Formation Using Gasoline/Ethanol Blends," M.S. thesis, Marquette University, Milwaukee, WI, United States, 2022 <https://www.proquest.com/openview/3a9baa4f97de643a0dfe008f3a6df421/1?pq-origsite=gscholar&cbl=18750&diss=y>.
450. **Hebei University of Technology; Shandong University**
Li, M., Li, C., Wei, Z., Zhang, Q., and Rao, Z., "Numerical Study on the Combustion and Emission Characteristics of a Direct Injection Natural Gas Engine Ignited by Diesel/n-Butanol Blends," *Applied Thermal Engineering*, 226, 2023. DOI: 10.1016/j.applthermaleng.2023.120333
451. **University of Massachusetts Lowell**
Fernandez, J.E., "Spray Model Setup for Combustion Simulations in a Low-Pressure Swirl Burner Using CFD," M.S. thesis, University of Massachusetts Lowell, Lowell, MA, United States, 2023 <https://www.proquest.com/openview/585d218f2a8ddc84dd991e73460e0830/1.pdf?pq-origsite=gscholar&cbl=18750&diss=y>.
452. **The University of Melbourne**
Manzoor, M.U., Yosri, M.R., Talei, M., Poursadegh, F., Yang, Y., and Brear, M., "Normal and Knocking Combustion of Hydrogen: A Numerical Study," *Fuel*, 344, 2023. DOI: 10.1016/j.fuel.2023.128093
453. **University of Cambridge**
La Heij, L., Gkantonas, S., and Mastorakos, E., "Personalized Displacement Ventilation as an Energy-Efficient Solution for Airborne Disease Transmission Control in Offices," *Frontiers in Mechanical Engineering*, 9, 2023. DOI: 10.3389/fmech.2023.1148276
454. **The University of Texas at Austin; Ford Motor Company**
Hu, J., Li, D., Hall, M., Matthews, R., Moilanen, P., Wooldridge, S., and Yi, J., "A Parametric Study to Improve First Firing Cycle Emissions of a Gasoline Direct Injection Engine During Cold Start," *International Journal of Engine Research*, 2023. DOI: 10.1177/14680874231153302

455. **The University of Texas at Austin**
Li, D., Hu, J., Hall, M., and Matthews, R., "A Simulation Study on the Transient Behavior of a Gasoline Direct Injection Engine Under Cold Start Conditions," SAE Paper 2022-01-0401, 2022. DOI: 10.4271/2022-01-0401
456. **RWTH Aachen University**
Yadav, J., Venkatesh, P., and Pischinger, S., "Application of Micro-Genetic Algorithms to Optimize Piston Bowl Geometries for Heavy-Duty Engines Running on Diesel and 1-Octanol Fuels," *Applied Thermal Engineering*, 226, 2023. DOI: 10.1016/j.applthermaleng.2023.120236
457. **University of Oxford**
Şekularac, N., "Conditional Source-Term Estimation Evaluations for Partially-Premixed Flames," Ph.D. thesis, University of Oxford, Oxford, England, 2022 https://ora.ox.ac.uk/objects/uuid:6688d972-4249-48d1-8b73-ac42ce538873/download_file?file_format=application%2Fpdf&safe_filename=Sekularac_2023_conditional_source_term.pdf&type_of_work=Thesis.
458. **CRRC Academy Corporation Limited; Beijing Institute of Technology**
Zhang, B., Wang, H., and Wang, S., "Computational Investigation of Combustion, Performance, and Emissions of a Diesel-Hydrogen Dual-Fuel Engine," *Sustainability*, 15(4), 2023. DOI: 10.3390/su15043610
459. **Universiti Teknologi PETRONAS; University of Bahri**
Jamil, A., Baharom, M.B., Aziz, A.R.B.A., Mohammed, S.E., Ayandotun, W.B., and Tariq, A., "A Study on In-Cylinder Flow Characteristics of Crank-Rocker Engine Using CFD and PIV," *Materials Today: Proceedings*, 2023. DOI: 10.1016/j.matpr.2023.02.082
460. **Argonne National Laboratory; Aramco Americas**
Wu, B., Torelli, R., and Pei, Y., "Numerical Modeling of Hydrogen Mixing in a Direct-Injection Engine Fueled With Gaseous Hydrogen," *Fuel*, 341, 2023. DOI: 10.1016/j.fuel.2023.127725
461. **Tongji University; United Automotive Electronic Systems Co., Ltd.**
Wu, Z., Han, Z., Meng, S., Li, T., and Hu, B., "Knock Limited Spark Advance Prediction of a Direct-Injection Spark-Ignition Engine Using a Livengood-Wu Integral Transport Equation Based Knock Model," SAE Paper 2022-01-7054, 2022. DOI: 10.4271/2022-01-7054
462. **The University of Alabama**
Partridge, K.R., "Pathways for Low Emissions Utilizing Spray Targeted Reactivity Stratification (STARS) in High Efficiency Natural Gas Dual Fuel Combustion," Ph.D. thesis, The University of Alabama, Tuscaloosa, AL, United States, 2022 <https://www.proquest.com/openview/9953a7aedc41695e39a8e3cb99099724/1?pq-origsite=gscholar&cbl=18750&diss=y>.
463. **Tongji University**
Meng, S., Wu, Z., Han, Z., Wang, Y., Lyu, M., and Kong, D., "Modeling Analysis of Thermal Efficiency Improvement Up to 45% of a Turbocharged Gasoline Engine," SAE Paper 2022-01-7051, 2022. DOI: 10.4271/2022-01-7051
464. **The University of Alabama**
Partridge, K.R., Jha, P.R., Srinivasan, K.K., and Krishnan, S.R., "An Experimental and Computational Analysis of Combustion Heat Release Transformation in Dual Fuel Combustion," *Fuel*, 341, 2023. DOI: 10.1016/j.fuel.2023.127561
465. **King Abdullah University of Science and Technology; Saudi Aramco**
Liu, X., Marquez, M.E., Sanal, S., Silva, M., AlRamadan, A.S., Cenker, E., Sharma, P., Magnotti, G., Turner, J.W., and Im, H.G., "Computational Assessment of the Effects of Pre-Chamber and Piston Geometries on the Combustion Characteristics of an Optical Pre-Chamber Engine," *Fuel*, 341, 2023. DOI: 10.1016/j.fuel.2023.127659

466. **Purdue University; Argonne National Laboratory; University of South Carolina**
Hasti, V.R., Kundu, P., Som, S., Won, S.H., Dryer, F.L., and Gore, J.P., "Computation of Conventional and Alternative Jet Fuel Sensitivity to Lean Blowout," *Journal of the Energy Institute*, 101, 19-31, 2022. DOI: 10.1016/j.joei.2021.12.006
467. Jha, P., Bitsis, C., Smith, E., Briggs, T., Abidin, Z., Shah, B., and Cung, K., "Development of High Compression-Ratio Stepped-Lip Piston Using Machine Learning," SAE Paper 2022-01-1054, 2022. DOI: 10.4271/2022-01-1054
468. **Indian Institute of Technology Madras**
Chaurasiya, R. and Krishnasamy, A., "Parametric Investigation of Various Factors Affecting Engine Performance and Emissions in a Homogeneous Charge With Direct Injection Strategy at High Load: A CFD Approach," SAE Paper 2022-01-1048, 2022. DOI: 10.4271/2022-01-1048
469. **RWTH Aachen University**
Golc, D., Esposito, S., Loffredo, F., Pitsch, H., and Beeckmann, J., "A Numerical Investigation of Potential Ion Current Sensor Applications in Premixed Charge Compression Ignition Engine," SAE Paper 2022-24-0041, 2022. DOI: 10.4271/2022-24-0041
470. **Indian Institute of Technology Madras**
Chaurasiya, R. and Krishnasamy, A., "Numerical Investigations on Oxides of Nitrogen Mitigation Strategies in a Homogeneous Charge With Direct Injection Engine," *SAE International Journal of Engines*, 16(1), 49-78, 2023. DOI: 10.4271/03-16-01-0004
471. **Università degli Studi di Perugia; Marelli Europe S.p.A.**
Battistoni, M., Zembi, J., Casadei, D., Ricci, F., Martinelli, R., Grimaldi, C., La Sana, M., Brignone, M., Mantovanelli, A., and Milani, E., "Burner Development for Light-Off Speed-Up of Aftertreatment Systems in Gasoline SI Engines," SAE Paper 2022-37-0033, 2022. DOI: 10.4271/2022-37-0033
472. **Università degli Studi di Perugia**
Rahantamialisoa, F.N.Z., Zembi, J., Miliuzzi, A., Sahranavardfard, N., and Battistoni, M., "CFD Simulations of Under-Expanded Hydrogen Jets Under High-Pressure Injection Conditions," *Journal of Physics: Conference Series*, 2385, 2022. DOI: 10.1088/1742-6596/2385/1/012051
473. **Clemson University**
Motwani, R., Gandolfo, J., Gainey, B., Levi, A., Moser, S., Filipi, Z., and Lawler, B., "Assessing the Impact of a Novel TBC Material on Heat Transfer in a Spark Ignition Engine Through 3D CFD-FEA Co-Simulation Routine," SAE Paper 2022-01-0402, 2022. DOI: 10.4271/2022-01-0402
474. **Batman University; Sandia National Laboratories**
Şener, R., Nilsen, C.W., Biles, D.E., and Mueller, C.J., "A Computational Investigation of Engine Heat Transfer With Ducted Fuel Injection," *International Journal of Engine Research*, 2023. DOI: 10.1177/14680874221149321
475. **Colorado State University**
Bestel, D.B., "Modeling and Parametric Study of End-Gas Autoignition to Allow the Realization of Ultra-Low Emissions, High-Efficiency Heavy-Duty Spark-Ignited Natural Gas Engines," Ph.D. thesis, Colorado State University, Fort Collins, CO, United States, 2022
https://mountainscholar.org/bitstream/handle/10217/236027/Bestel_colostate_0053A_17478.pdf?sequence=1.
476. **North Carolina State University; Convergent Science**
Chaudhury, M.D., Ekkad, S., and Kumar, G., "Numerical Simulation of Ammonia/Methane/Air Blends in a Swirl-Stabilized Gas Turbine Combustor," *AIAA SciTech 2023 Forum*, AIAA 2023-0497, National Harbor, MD, United States, Jan 23-27, 2023. DOI: 10.2514/6.2023-0497

477. **University of Minnesota; University of Wisconsin–Madison; Duke University; Combat Capabilities Development Command Army Research Laboratory**
Narayanan, S.R., Sun, Z., Yang, S., Ji, Y., Mak, S., Sapra, H.D., Kokjohn, S., Kim, K., and Kweon, C.-B.M., "Physics-Integrated Segmented Gaussian Process (SegGP) Learning for Cost-Efficient Training of Diesel Engine Control System With Low Cetane Numbers," *AIAA SciTech 2023 Forum*, AIAA 2023-1283, National Harbor, MD, United States, Jan 23–27, 2023. DOI: 10.2514/6.2023-1283
478. **Harbin Engineering University; University of Strathclyde**
Xiang, L., Theotokatos, G., and Ding, Y., "Parametric Investigation on the Performance-Emissions Trade-Off and Knocking Occurrence of Dual Fuel Engines Using CFD," *Fuel*, 340, 2023. DOI: 10.1016/j.fuel.2023.127535
479. **Convergent Science**
Raju, M.P., Malewicki, T., Attal, N.O., Probst, D., and Senecal, P.K., "Implementation of Gradient Based Optimizers for Reaction Mechanism Tuning," *AIAA SciTech 2023 Forum*, AIAA 2023-1282, National Harbor, MD, United States, Jan 23–27, 2023. DOI: 10.2514/6.2023-1282
480. **Harbin Engineering University; Thaksin University**
Mei, Q., Naruemon, I., Liu, L., Wu, Y., and Ma, X., "Numerical Investigation on the Combustion and Emission Characteristics of Diesel Engine With Flexible Fuel Injection," *Machines*, 11(1), 2023. DOI: 10.3390/machines11010120
481. **Federal University of Santa Catarina; Federal University of Lavras; Federal University of Santa Maria; Federal University of Minas Gerais**
Sandoval, M.H.B., Alvarez, C.E.C., Roso, V.R., Santos, N.D.S.A., and Braga, R.M., "Numerical Study of Homogeneous Pre-Chamber Design in an Ethanol-Fueled Vehicular Engine," *Journal of the Brazilian Society of Mechanical Sciences and Engineering*, 45, 2023. DOI: 10.1007/s40430-022-03988-9
482. **Aramco Americas; Argonne National Laboratory**
Zhao, L., Zhang, Y., Pei, Y., Zhang, A., and Ameen, M.M., "Numerical Optimization of Spray-Guided Spark Assistance for Cold Idle Operation in a Heavy-Duty Gasoline Compression Ignition Engine," *Energies*, 16(2), 2023. DOI: 10.3390/en16020637
483. **Convergent Science**
Li, Y., Rowinski, D.H., Reddy, K.R., and Bansal, K., "Computational Fluid Dynamics Study on Transonic Axial Compressors Using Cartesian Cut-Cell Based Method With Adaptive Mesh Refinement and Boundary Layer Mesh," *25th International Compressor Engineering Conference at Purdue*, West Lafayette, IN, United States, May 24–28, 2021.
484. **Norwegian University of Science and Technology; LOGE Polska sp. zo.o.**
Lewandowski, M.T., Pasternak, M., and Løvås, T., "Simulations of Ammonia Spray Evaporation, Cooling and Mixture Formation in a Direct Injection Compression Ignition Engine," *7th International Conference on Contemporary Problems of Thermal Engineering*, Warsaw, Poland, Sep 20–23, 2022.
485. **Clemson University; Achates Power**
O'Donnell, P.C., Gainey, B., Vorwerk, E., Prucka, R., Lawler, B., Huo, M., and Salvi, A., "An Investigation Into the Effects of Swirl on the Performance and Emissions of an Opposed-Piston Two-Stroke Engine Using Large Eddy Simulations," *SAE Paper 2022-01-1039*, 2022. DOI: 10.4271/2022-01-1039
486. **Argonne National Laboratory; FCA US LLC**
Kazmouz, S.J., Scarcelli, R., Bresler, M., Blash, E., and Hardman, K., "A Comprehensive Model to Capture Electrical Discharge and Spark Channel Evolution During Spark-Ignition Processes," *Combustion and Flame*, 248, 2023. DOI: 10.1016/j.combustflame.2022.112589
487. **Kunming University of Science and Technology**
Chen, G., Yang, S., Wei, F., Zhang, K., Nie, D., and Gong, H., "Effects of Operating Parameters on Combustion and Soot Emissions in a Pilot Ignited HPDI Natural Gas Engine for Different Combustion Modes," *Fuel*, 337, 2023. DOI: 10.1016/j.fuel.2022.127160

488. **University of Ulsan**
Windarto, C. and Lim, O., "Spark Discharge Energy Effect on In-Cylinder Characteristics Performance of Rapid Compression and Expansion Machine With Spark Ignition Direct Injection Strategy," *Fuel*, 337, 2023. DOI: 10.1016/j.fuel.2022.127165
489. **IFP Energies nouvelles**
Gaballa, H., Habchi, C., and de Hemptinne, J.-C., "Modeling and LES of High-Pressure Liquid Injection Under Evaporating and Non-Evaporating Conditions by a Real Fluid Model and Surface Density Approach," *International Journal of Multiphase Flow*, 160, 2023. DOI: 10.1016/j.ijmultiphaseflow.2022.104372
490. **Tongji University**
Meng, S., Han, Z., and Wu, Z., "A Numerical Study on Knock Combustion Suppression Using Targeted Fuel Injection in an SI Engine," *Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering*, 2022. DOI: 10.1177/09544070221143862
491. **King Abdullah University of Science and Technology**
da Silva, M.M.R., "A Computational Investigation of Turbulence, Combustion, and Geometry in a Narrow-Throat Pre-Chamber Engine," Ph.D. thesis, King Abdullah University of Science and Technology, Thuwal, Saudi Arabia, 2022.
492. **University of Wisconsin-Madison; Ford Motor Company**
Ross, T.W., Naser, N., Robarge, N., and Kokjohn, S.L., "An Experimental and Computational Study on Triple Injection Strategies to Reduce Cold Start Diesel Engine Emissions," *Journal of Engineering for Gas Turbines and Power*, 145(1), 2023. DOI: 10.1115/1.4055631
493. **King Abdullah University of Science and Technology; Umm Al-Qura University**
Liu, X., Al-lehaibi, M., and Im, H.G., "Investigation of the Engine Combustion Network Spray a Characteristics Using Eulerian and Lagrangian Models," SAE Paper 2022-01-0507, 2022. DOI: 10.4271/2022-01-0507
494. **Università degli Studi di Perugia; STEMS CNR**
Zembi, J., Battistoni, M., Mariani, F., Irimescu, A., Vaglieco, B.M., and Merola, S.S., "Investigations on the Impact of Port Water Injection on Soot Formation in a DISI Engine Through CFD Simulations and Optical Methods," *Fuel*, 337, 2023. DOI: 10.1016/j.fuel.2022.127170
495. **Argonne National Laboratory; Aramco Americas**
Torelli, R., Pei, Y., Zhang, Y., and Som, S., "End-to-End Modeling of Fuel Injection via Static Coupling of Internal Flow and Ensuing Spray," *Communications Engineering*, 2022. DOI: 10.1038/s44172-022-00038-z
496. **University of Central Florida; Embry-Riddle Aeronautical University**
Manikantachari, K.R.V., Martin, S., and Vasu, S., "Effect of Impurities in the Re-Cycled CO₂ Stream on a Supercritical CO₂ Combustor," *7th International Supercritical CO₂ Power Cycles Symposium*, San Antonio, TX, United States, Mar 30-Apr 2, 2020.
497. **Purdue University**
Srinivasan, L., "Analysis of Flame Blowout in Turbulent Premixed Ammonia/Hydrogen/Nitrogen-Air Combustion," M.S. thesis, Purdue University, West Lafayette, IN, United States, 2022.
498. **Convergent Science**
Cojocar, M.G., Sufrà, L., and Scienza, P., "Numerical Investigation of Hydrogen Self-Ignition and Deflagration-to-Detonation Phenomena Using Automated Meshing Approach and Detailed Chemistry," *ECCOMAS Congress 2022*, Oslo, Norway, Jun 5-9, 2022.
499. **IFP Energies nouvelles**
Mehl, C. and Aubagnac-Karkar, D., "Simulation of Reacting Flows Using Artificial Neural Networks: Ignition to Propagation Transition in Combustion Systems," *ECCOMAS Congress 2022*, Oslo, Norway, Jun 5-9, 2022.

500. **King Abdullah University of Science and Technology; Saudi Aramco; Aramco Research Center - Detroit**
Silva, M., Mohan, B., Badra, J., Zhang, A., Hlaing, P., Cenker, E., AlRamadan, A.S., and Im, H.G., "DoE-ML Guided Optimization of an Active Pre-Chamber Geometry Using CFD," *International Journal of Engine Research*, 2022. DOI: 10.1177/14680874221135278
501. **Beijing Institute of Technology; Collaborative Innovation Center of Electric Vehicles in Beijing**
Wang, H., Ji, C., Yang, J., Ge, Y., and Wang, S., "Implementation of a Novel Dual-Layer Machine Learning Structure for Predicting the Intake Characteristics of a Side-Ported Wankel Rotary Engine," *Aerospace Science and Technology*, 132, 2023. DOI: 10.1016/j.ast.2022.108042
502. **CVS Engineering GmbH; Hi-Bar Blowers, Inc.**
Willie, J., Yonkers, S.W., Huang, P.X., and Ganatra, R.B., "Use of CFD to Optimize the Design of a Shunt Pulsation Trap (SPT) Used for Noise and Vibration Mitigation in Oil Free Screw Compressors," *International Conference on Screw Machines 2022*, Dortmund, Germany, Sep 7–8, 2022. DOI: 10.1088/1757-899X/1267/1/012017
503. **Purdue University; Ingersoll Rand**
Saravana, A., Liu, H., Able, N., Collins, J., Groll, E.A., and Ziviani, D., "Conjugate Heat Transfer Analysis of a Twin-Screw Compressor With 4-6 Configuration and Internal Cooling Channels," *International Conference on Screw Machines 2022*, Dortmund, Germany, Sep 7–8, 2022. DOI: 10.1088/1757-899X/1267/1/012014
504. **University of Wisconsin-Madison**
Ravindran, A.C. and Kokjohn, S.L., "Evaluation of the Sample Size Requirements of Machine Learning Models Used in Engine Design and Research," *International Journal of Engine Research*, 2022. DOI: 10.1177/14680874221137185
505. **ETH Zurich**
Seddik, O., "Bridging the Gap Between Academic and Industrial Research: Development and Validation of a Micro-Piloted Dual Fuel Combustion Model Using Flamelet Generated Manifolds," Ph.D. thesis, ETH Zürich, Zürich, Switzerland, 2022 https://www.research-collection.ethz.ch/bitstream/handle/20.500.11850/581454/1/PhD_Manuscript_OS_Revised_final_print_NO_CV.pdf.
506. **Argonne National Laboratory; Sandia National Laboratories; University of Minnesota**
Kim, J., Scarcelli, R., Biswas, S., and Ekoto, I., "Numerical and Experimental Investigation of the Flame Kernel Growth in a Methane/Air Mixture Near the Lean Flammability Limit," *Combustion and Flame*, 247, 2023. DOI: 10.1016/j.combustflame.2022.112463
507. **Wuhan University of Technology; Benha University**
Wei, Y., Zhang, Z., Li, X., Li, G., Zhou, M., and Belal, B.Y., "The Ignition Characteristics of Dual-Fuel Spray at Different Ambient Methane Concentrations Under Engine-Like Conditions," *Applied Thermal Engineering*, 219, Part B, 2023. DOI: 10.1016/j.applthermaleng.2022.119634
508. **Universitat Politècnica de València; CMT-Motores Térmicos**
Khalid, U.B., "Development of CFD Model for the Study of the Potential of Oxymethylene Ethers for Soot Reduction in Medium Duty Compression Ignition Engines," M.S. thesis, Universitat Politècnica de València, Valencia, Spain, 2022 <https://riunet.upv.es/bitstream/handle/10251/188854/Khalid%20-%20Development%20of%20CFD%20model%20for%20the%20study%20of%20the%20potential%20of%20oxymethylene%20ethers%20for%20soot%20reduction%20in%20medium%20duty%20compression%20ignition%20engines%20-%20M.S.%20thesis%20-%20Universitat%20Polit%C3%A9cnica%20de%20Val%C3%A9ncia%20-%202022.pdf>
509. **Norwegian University of Science and Technology**
Gaucherand, J., Netzer, C., Lewandowski, M.T., and Løvås, T., "Modelling of Liquid Injection of Ammonia in a Direct Injector Using Reynolds-Averaged Navier–Stokes Simulation," *SIMS 2022: 63rd International Conference of Scandinavian Simulation Society*, Trondheim, Norway, Sep 20–21, 2022.
510. **Politecnico di Torino; CMT-Motores Térmicos; PUNCH Torino S.p.A.**
Piano, A., Roggio, S., Millo, F., García, A., Micó, C., Lewiski, F., Pesce, F.C., Vassallo, A., and Bianco, A., "Numerical and Optical Soot Characterization Through 2-Color Pyrometry Technique for an Innovative Diesel Piston Bowl Design," *Fuel*, 333, Part 1, 2023. DOI: 10.1016/j.fuel.2022.126347

511. **Argonne National Laboratory; Aramco Americas**
Addepalli, S.K., Pei, Y., Zhang, Y., and Scarcelli, R., "Multi-Dimensional Modeling of Mixture Preparation in a Direct Injection Engine Fueled With Gaseous Hydrogen," *International Journal of Hydrogen Energy*, 47(67), 29085-29101, 2022. DOI: 10.1016/j.ijhydene.2022.06.182
512. **King Abdullah University of Science and Technology; Saudi Aramco**
Alkhamis, G., Silva, M., Cenker, E., and Im, H.G., "A Computational Assessment of Flame Speed Correlation in an Ultra-Lean Pre-Chamber Engine," *International Journal of Engine Research*, 2022. DOI: 10.1177/14680874221125538
513. **Southwest Research Institute**
Moiz, A.A., Abidin, Z., Briggs, T., and Conway, G., "Advanced 1-D Ignition and Flame Growth Modeling for Ignition and Misfire Predictions in Spark Ignition Engines," SAE Paper 2021-01-0376, 2021. DOI: 10.4271/2021-01-0376
514. **Daikin Industries, Ltd.**
Kawabata, S., Deguchi, R., and Matsuura, H., "Calculation of Internal Flow in a Compressor With Valve Motion," *26th International Compressor Engineering Conference at Purdue*, West Lafayette, IN, United States, Jul 10–14, 2022.
515. **Oak Ridge National Laboratory**
Edwards, K.D., "Simulation of Spray, Wall-Film, and Charge Preparation for Light-Duty, Cold-Start Applications," *ASME 2022 ICE Forward Conference*, ICEF2022-91141, Indianapolis, IN, United States, Oct 16–19, 2022.
516. **Convergent Science**
Probst, D., Attal, N., Mandhapat, R., and Avanesian, O., "Predicting Combustion Variability Using Machine Learning From the Flow Field Data at Spark Timing for a Gasoline Direct Injection Engine," *ASME 2022 ICE Forward Conference*, ICEF2022-91016, Indianapolis, IN, United States, Oct 16–19, 2022.
517. **King Abdullah University of Science and Technology; Saudi Aramco**
Silva, M., Liu, X., Hlaing, P., Cenker, E., Turner, J., and Im, H.G., "A Computational Assessment of Combustion Submodels for Predictive Simulations of Pre-Chamber Combustion Engines," *ASME 2022 ICE Forward Conference*, ICEF2022-90917, Indianapolis, IN, United States, Oct 16–19, 2022. DOI: 10.1115/ICEF2022-90917
518. **Argonne National Laboratory; Wabtec Corporation**
Addepalli, S.K., Magnotti, G.M., Som, S., Sheth, P., Jayakar, V., Klingbeil, A., and Lavertu, T., "A CFD Study on Mixture Preparation and Combustion in a Heavy-Duty Locomotive Diesel Engine at High Load Condition," *ASME 2022 ICE Forward Conference*, ICEF2022-90293, Indianapolis, IN, United States, Oct 16–19, 2022.
519. **Argonne National Laboratory; ClearFlame Engines, Inc.**
Tekgul, B., Liu, I.-H., Vittal, M., Schanz, R., Johnson, B.H., Blumreiter, J., and Magnotti, G.M., "Design Optimization of an Ethanol Heavy-Duty Engine Using Design of Experiments and Bayesian Optimization," *ASME 2022 ICE Forward Conference*, ICEF2022-90257, Indianapolis, IN, United States, Oct 16–19, 2022.
520. **Argonne National Laboratory; Sandia National Laboratories**
Kim, J., Ameen, M., Scarcelli, R., Kim, N., Singh, E., and Sjöberg, M., "Evaluation of Spray and Combustion Models for Simulating Dilute Combustion in a Direct-Injection Spark-Ignition Engine," *ASME 2022 ICE Forward Conference*, ICEF2022-90213, Indianapolis, IN, United States, Oct 16–19, 2022.
521. **RWTH Aachen University**
Yadav, J., Pischinger, S., Schönfeld, S., and Deppenkemper, K., "An Experimental and Numerical Investigation to Improve the Efficiency of Combustion Systems for Heavy-Duty Applications," *ASME 2022 ICE Forward Conference*, ICEF2022-87445, Indianapolis, IN, United States, Oct 16–19, 2022.

522. **Indian Institute of Technology Delhi**
Ailaboina, A. and Saha, K., "Phenomenological Model Development of Flash Boiling Spray for Multihole Gasoline Direct Injection (GDI) Systems," *ASME 2022 ICE Forward Conference*, ICEF2022-90966, Indianapolis, IN, United States, Oct 16–19, 2022.
523. **Argonne National Laboratory; Aramco Research Center - Detroit; Cummins Inc.**
Asztalos, K.J., Torelli, R., Pei, Y., Zhang, Y., Tao, F., Garg, R., Langenderfer, D., Moon, C.Y., Sforzo, B.A., and Powell, C.F., "Application of Modal Decomposition Techniques to Characterize the Internal Nozzle Flow of a Medium-Duty Diesel Injector Operating With Gasoline-Like Fuels," *ASME 2022 ICE Forward Conference*, ICEF2022-89520, Indianapolis, IN, United States, Oct 16–19, 2022.
524. **University of Massachusetts Lowell**
Kumar, A. and Van Dam, N., "Study of Injector Geometry and Parcel Injection Location on Spray Simulation of the ECN Spray G Injector," *ASME 2022 ICE Forward Conference*, ICEF2022-89279, Indianapolis, IN, United States, Oct 16–19, 2022.
525. **CMT-Motores Térmicos**
Serrano, J.R., Díaz, J.M., Gomez-Soriano, J., and Raggi, R., "Exploring the Oxy-Fuel Combustion in Spark-Ignition Engines for Future Clean Powerplants," *ASME 2022 ICE Forward Conference*, ICEF2022-89167, Indianapolis, IN, United States, Oct 16–19, 2022.
526. **Woodward, Inc.**
Chiera, D., Wood, J., Jones, A., Buehner, M., Polley, N., and Hampson, G.J., "Method to Reach High Substitution of an Ammonia Fueled Engine Using Dual Fuel RCCI and Active Combustion Control," *ASME 2022 ICE Forward Conference*, ICEF2022-88759, Indianapolis, IN, United States, Oct 16–19, 2022.
527. **University of Minnesota; Carnegie Mellon University**
Swift, E., Wadkar, C., Lee, H., Singh, S., and Northrop, W., "Exploring the Benefits of Oxidative Coupling of Methane on Natural Gas Engine Efficiency Through One-Dimensional Simulation," *ASME 2022 ICE Forward Conference*, ICEF2022-91822, Indianapolis, IN, United States, Oct 16–19, 2022.
528. **North Carolina State University**
Vinod, K.N., Gore, M., and Fang, T., "Combustion and Flame Characteristics of CL-ODH Byproduct Fuel Mixture With High CO₂ Dilution," *ASME 2022 ICE Forward Conference*, ICEF2022-89770, Indianapolis, IN, United States, Oct 16–19, 2022.
529. **National Research Council, Canada; University of Manitoba**
Arslan, A., Dev, S., Yousefi, A., Stevenson, D., Liko, B., Butler, J., Guo, H., and Birouk, M., "Combustion and Emission Performance of a Syngas-Diesel Dual-Fuel Generator," *ASME 2022 ICE Forward Conference*, ICEF2022-90473, Indianapolis, IN, United States, Oct 16–19, 2022.
530. **University of Wisconsin-Madison; U.S. Army DEVCOM Army Research Laboratory**
Sapra, H.D., Hessel, R.P., Amezcua, E.R., Stafford, J., Miganakallu, N., Rothamer, D., Kim, K., Kweon, C.M., and Kokjohn, S., "Numerical Modeling and Analysis of Energy-Assisted Compression Ignition of Varying Cetane Number Jet Fuels for High-Altitude Operation," *ASME 2022 ICE Forward Conference*, ICEF2022-89329, Indianapolis, IN, United States, Oct 16–19, 2022.
531. **Marquette University; University of Wisconsin-Madison**
Dempsey, A., Chowdhury, M., Kokjohn, S., and Zeman, J., "Prechamber Enabled Mixing Controlled Combustion - A Fuel Agnostic Technology for Future Low Carbon Heavy-Duty Engines," SAE Paper 2022-01-0449, 2022. DOI: 10.4271/2022-01-0449
532. **Clemson University; University of Wisconsin-Madison; Achates Power**
O'Donnell, P.C., Gandolfo, J., Gainey, B., Vorwerk, E., Prucka, R., Filipi, Z., Lawler, B., Hessel, R., Kokjohn, S., Huo, M., and Salvi, A., "Effects of Port Angle on Scavenging of an Opposed Piston Two-Stroke Engine," SAE Paper 2022-01-0590, 2022. DOI: 10.4271/2022-01-0590

533. **Federal University of Uberlândia; Federal University of Minas Gerais**
de Lima, B.S., Vaz, M.G.J., Reis, L.M., and Valle, R.M., "Acquiring Reliable Boundary Conditions for Three-Dimensional Simulation of Internal Combustion Engines by Means of One-Dimensional Simulation: An Insight on Pre Chamber Design," *Journal of the Brazilian Society of Mechanical Sciences and Engineering*, 44, 2022. DOI: 10.1007/s40430-022-03824-0
534. **"Dunărea de Jos" University of Galați**
Fratita, M., Rusu, E., and Burciu, S.M., "Cold Flow Simulation for an Internal Combustion Engine With Swirl Flaps," *IOP Conf. Series: Materials Science and Engineering*, 1262, 2022. DOI: 10.1088/1757-899X/1262/1/012065
535. **"Dunărea de Jos" University of Galați**
Fratita, M. and Rusu, E., "Cold Flow Simulation for a S.I. Engine With Shrouded Intake Valve," *IOP Conf. Series: Materials Science and Engineering*, 1262, 2022. DOI: 10.1088/1757-899X/1262/1/012066
536. **Noble Thermodynamic Systems, Inc.; University of California, Berkeley**
Beardsell, G., Bestel, D., Kozarac, D., Aznar, M.S., Chen, J.-Y., and Dibble, R.W., "Impact of Oxygen and Carbon Dioxide Levels on Combustion Under Argon Power Cycle Conditions," *2022 WSSCI Spring Technical Meeting*, Stanford, CA, United States, Mar 21–22, 2022.
537. **Jiangsu University; Technische Universiteit Eindhoven; CMT-Motores Térmicos**
Xuan, T., Maes, N., García-Oliver, J.M., De León-Ceriani, D., Pachano, L., and He, Z., "Combined Experimental and Numerical Studies on Soot Characteristics of Diesel Sprays With Split Injection Strategies," *Combustion and Flame*, 246, 2022. DOI: 10.1016/j.combustflame.2022.112384
538. **Hyundai-Kia America Technical Center Inc**
Zhu, S. and Naber, J., "Co-Optimized Mixed-Mode Engine and Fuel Demonstrator for Improved Fuel Economy While Meeting Emissions Requirements," Hyundai-Kia America Technical Center, Inc. DE-EE0008478, Sep 12, 2022.
539. **Chongqing University**
Zhang, Z., Dai, X., and Zheng, Z., "Numerical Simulation Study on the Effect of Port Water Injector Position on the Gasoline Direct Injection Engine," *Processes*, 10(10), 2022. DOI: 10.3390/pr10101909
540. **Shanghai Jiao Tong University**
Steinberg, C., Liu, M., and Hung, D.L.S., "A Combined Experimental–Numerical Study Towards the Elucidation of Spray–Wall Interaction on Step Geometries," *Engineering Applications of Computational Fluid Mechanics*, 16(1), 2022. DOI: 10.1080/19942060.2022.2098828
541. **Argonne National Laboratory**
Guo, H. and Torelli, R., "On the Effect of Mixing-Driven Vaporization in a Homogeneous Relaxation Modeling Framework," *Physics of Fluids*, 34, 2022. DOI: 10.1063/5.0107074
542. **Federal University of Uberlândia**
de Lima, B.S., "Physical Experimentation and Numerical Simulation of Liquid Film: Comparison of Eulerian Methods," Ph.D. thesis, Federal University of Uberlândia, Federal University of Uberlândia, 2022 <https://repositorio.ufu.br/bitstream/123456789/35966/1/PhysicalExperimentationAnd.pdf>.
543. **General Motors; Argonne National Laboratory; Convergent Science**
Grover, R.O., Jr., Yang, X., Parrish, S., Nocivelli, L., Asztalos, K.J., Som, S., Li, Y., Burns, C., Van Gilder, J., Attal, N., and Avanesian, O., "CFD Simulations of Electric Motor End Ring Cooling for Improved Thermal Management," *Science and Technology for Energy Transition*, 77, 2022. DOI: 10.2516/stet/2022015
544. **King Abdullah University of Science and Technology; Umm Al-Qura University**
Al-Ishaibi, M., Liu, X., and Im, H.G., "Numerical Investigation of n-Dodecane ECN Spray and Combustion Characteristics Using the One-Way Coupled Eulerian-Lagrangian Approach," *Fuel*, 331, 2023. DOI: 10.1016/j.fuel.2022.125759

545. **Argonne National Laboratory**
Pal, P., Demir, S., and Som, S., "Numerical Analysis of Combustion Dynamics in a Full-Scale Rotating Detonation Rocket Engine Using Large Eddy Simulations," *Journal of Energy Resources Technology*, 145(2), 2023. DOI: 10.1115/1.4055206
546. **North Carolina State University**
Leff, J.E., "Numerical Simulation of Internal Effervescent Atomization of Salt Water," M.S. thesis, North Carolina State University, Raleigh, NC, United States, 2022
<https://repository.lib.ncsu.edu/bitstream/handle/1840.20/39922/etd.pdf?sequence=1>.
547. **Indian Institute of Technology Madras**
Bhaduri, S. and Mallikarjuna, J.M., "Comparison of Performance and Emission Characteristics of a Gasoline Engine With Laser and Spark Ignitions in Partially Stratified Mode—A Computational Fluid Dynamics Analysis," *SAE International Journal of Engines*, 16(3), 2023. DOI: 10.4271/03-16-03-0022
548. **Shanghai Jiao Tong University**
Han, D., Lyu, D., Sin, Z., Liang, X., and Huang, Z., "On Knocking Combustion Development of Oxygenated Gasoline Fuels in a Cooperative Fuel Research Engine," *International Journal of Engine Research*, 2022. DOI: 10.1177/14680874221118973
549. **University of Connecticut; SURVICE Engineering; Beihang University; CSTI Associates, LLC**
Ren, X., Brady, K.B., Xue, X., Sung, C.-J., and Mongia, H.C., "Swirl Rotation Direction Effects on Lean Direct Injection Pilot Mixer Performance: Experiments and LES Modeling," *Aerospace Science and Technology*, 129, 2022. DOI: 10.1016/j.ast.2022.107808
550. **Technische Universiteit Eindhoven**
van den Brink, H.S., "Exploring Injection Strategies for the Argon Power Cycle in CONVERGE CFD," B.S. thesis, Technische Universiteit Eindhoven, Eindhoven, Netherlands, 2022
https://pure.tue.nl/ws/portalfiles/portal/213824314/1456237_Exploring_injection_strategies_for_the_Argon_Power_Cycle.pdf.
551. **Clemson University; Aramco Research Center - Detroit**
Yan, Z., Levi, A., Zhang, Y., Sellnau, M., Filipi, Z., and Lawler, B., "A Numerical Evaluation and Guideline for Thermal Barrier Coatings on Gasoline Compression Ignition Engines," *International Journal of Engine Research*, 2022. DOI: 10.1177/14680874221114534
552. **King Abdullah University of Science and Technology; Convergent Science**
Oyinloye, M.A., Gubba, S.R., Cojocar, M.-G., Prabhudharwadkar, D., and Roberts, W.L., "Numerical Modeling of the Desublimation of CO₂," *CONV-22: 5th International Symposium on Convective Heat and Mass Transfer*, İzmir, Turkey, Jun 5–10, 2022. DOI: 10.1615/ICHMT.2022.CONV22.130
553. **Tianjin University**
Xu, L., Li, G., Yao, M., Zheng, Z., and Wang, H., "Numerical Investigation on the Jet Characteristics and Combustion Process of an Active Prechamber Combustion System Fueled With Natural Gas," *Energies*, 15(15), 2022. DOI: 10.3390/en15155356
554. **Chongqing University; SAIC Motor Corporation Ltd**
Fan, G., Zheng, Z., and Zhu, Z., "Combustion and Emission Characteristics of Gasoline Engine Blended Combustion Syngas," *ACS Omega*, 2022. DOI: 10.1021/acsomega.2c02218
555. **CMT-Motores Térmicos**
García-Oliver, J.M., Novella, R., Micó, C., and De Leon-Ceriani, D., "Numerical Analysis of the Combustion Process of Oxymethylene Ethers as Low-Carbon Fuels for Compression Ignition Engines," *International Journal of Engine Research*, 2022. DOI: 10.1177/14680874221113749
556. **RWTH Aachen University; FEV Europe GmbH**
Steeger, F., Raffius, T., Schulz, C., Ratz, F., Morcinkowski, B., Lehrheuer, B., Grünefeld, G., and Pischinger, S., "Investigation of the Chemical Effect of Pilot Injection on Main Combustion in a Gasoline Controlled Auto-Ignition Engine by In-Cylinder Measurements and Numerical Simulation of H₂O₂, HO₂, and OH Radicals," *Combustion and Flame*, 244, 2022. DOI: 10.1016/j.combustflame.2022.112283

557. **Indian Institute of Technology Kanpur**
Jena, A., Singh, A.P., and Agarwal, A.K., "Optical and Computational Investigations of the Effect of Spray-Swirl Interactions on Autoignition and Soot Formation in a Compression Ignition Engine Fuelled by Diesel, Dieseline and Diesohol," *Applied Energy*, 324, 2022. DOI: 10.1016/j.apenergy.2022.119677
558. **Université Paris-Saclay; IFP Energies nouvelles**
Jafari, S., "Numerical Modeling of Transcritical Turbulent Jets Using a Tabulated Real-Fluid Approach," Ph.D. thesis, Université Paris-Saclay, Gif-sur-Yvette, France, 2022
https://www.researchgate.net/profile/Sajad-Jafari-4/publication/361844036_Numerical_modeling_of_transcritical_turbulent_jets_using_a_tabulated_real-fluid_approach/links/62c7f0f5d7bd92231f9ff94f/Numerical-modeling-of-transcritical-turbulent-jets-using-a-tabulated-real-fluid-approach.pdf.
559. **Convergent Science; Argonne National Laboratory**
Wijeyakulasuriya, S., Kim, J., Probst, D., Srivastava, K., Yang, P., Scarcelli, R., and Senecal, P.K., "Enabling Powertrain Technologies for Euro 7/VII Vehicles With Computational Fluid Dynamics," *Transportation Engineering*, 9, 2022. DOI: 10.1016/j.treng.2022.100127
560. **Argonne National Laboratory**
Owoyele, O., Nunno, A.C., Pal, P., and Kundu, P., "Flamelet Modeling of Spray Flames With Mixture of Experts-Based Learning of Combustion Manifolds," *The 2nd International Conference on Energy and AI*, London, United Kingdom, Aug 9–13, 2021.
561. **Wayne State University**
Goyal, T. and Samimi-Abianeh, O., "Methane Laminar Flame Speed Measurement at High Gas Temperature Using Rapid Compression Machine-Flame (RCM-Flame)," *Industrial & Engineering Chemistry Research*, 61(28), 9981–9990, 2022. DOI: 10.1021/acs.iecr.2c01117
562. **University of Wisconsin-Madison**
Rutkowski, D.R., Roldán-Alzate, A., and Johnson, K.M., "Enhancement of Cerebrovascular 4D Flow MRI Velocity Fields Using Machine Learning and Computational Fluid Dynamics Simulation Data," *Scientific Reports*, 11, 2021. DOI: 10.1038/s41598-021-89636-z
563. **University of Wisconsin-Madison**
Pewowaruk, R., Rutkowski, D., Hernando, D., Kumapayi, B.B., Bushman, W., and Roldán-Alzate, A., "A Pilot Study of Bladder Voiding With Real-Time MRI and Computational Fluid Dynamics," *PLOS ONE*, 2020. DOI: 10.1371/journal.pone.0238404
564. **University of Wisconsin-Madison**
Pewowaruk, R., Lamers, L., and Roldán-Alzate, A., "Accelerated Estimation of Pulmonary Artery Stenosis Pressure Gradients With Distributed Lumped Parameter Modeling vs. 3D CFD With Instantaneous Adaptive Mesh Refinement: Experimental Validation in Swine," *Annals of Biomedical Engineering*, 49, 2365–2376, 2021. DOI: 10.1007/s10439-021-02780-5
565. **University of Wisconsin-Madison; Northwestern University Feinberg School of Medicine; Northwestern University; Ann & Robert H. Lurie Children's Hospital of Chicago**
Shahid, L., Rice, J., Berhane, H., Rigsby, C., Robinson, J., Griffin, L., Markl, M., and Roldán-Alzate, A., "Enhanced 4D Flow MRI-Based CFD With Adaptive Mesh Refinement for Flow Dynamics Assessment in Coarctation of the Aorta," *Annals of Biomedical Engineering*, 50, 1001–1016, 2022. DOI: 10.1007/s10439-022-02980-7
566. **Wayne State University**
Piehl, J.A., "Species Concentration Measurements Using the Filtered Natural Emission of Species," Ph.D. thesis, Wayne State University, Detroit, MI, United States, 2022
<https://www.proquest.com/openview/a68b86f3bd777c509f097862be8747ea/1?pq-origsite=gscholar&cbl=18750&diss=y>.

567. **Beijing Institute of Technology; China North Engine Research Institute**
Wu, H., Dong, X., Shi, Z., Li, H., Cao, W., Zhang, L., Bo, Y., and Li, X., "Effect of Injection Timing on Knock Combustion and Pollutant Emission of Heavy-Duty Diesel Engines at Low Temperatures," *Chemosphere*, 305, 2022. DOI: 10.1016/j.chemosphere.2022.135519
568. **Convergent Science; Torad Engineering; Oklahoma State University**
Waikar, A., Rowinski, D., Kemp, G., Orosz, J., and Bradshaw, C., "Modeling a Spool Compressor Using a Coupled Fluid and Solid Solver With Cut-Cell Based CFD Methodology With Adaptive Mesh Refinement," *26th International Compressor Engineering Conference at Purdue*, West Lafayette, IN, United States, Jul 10–14, 2022.
569. **Texas Tech University; Iowa State University**
Ahamed, S., Cho, Y., and Kong, S.-C., "Implementation of a Drop-Wall Interaction Model Considering High Ambient Pressure for Engine Simulations," *ILASS-Americas 32nd Annual Conference on Liquid Atomization and Spray Systems*, Madison, WI, United States, May 22–25, 2022.
570. **General Motors R&D; Argonne National Laboratory; Convergent Science**
Grover, R.O., Jr, Idicheria, C.A., Parrish, S.E., Nocivelli, L., Asztalos, K.J., Som, S., Li, Y., Attal, N., Burns, C., Van Gilder, J., and Avanesian, O., "A Comparison of Thermal Management Simulations of End Ring Oil Cooling With Experimental Measurements From an Optically Accessible Electric Motor," *ILASS-Americas 32nd Annual Conference on Liquid Atomization and Spray Systems*, Madison, WI, United States, May 22–25, 2022.
571. **Aramco Research Center - Detroit; Argonne National Laboratory**
Zhao, L., Pei, Y., Zhang, Y., and Ameen, M.M., "Evaluations of Spray/Combustion Characteristics and Fuel Effect With ECN Single-Hole Diesel Injectors," *ILASS-Americas 32nd Annual Conference on Liquid Atomization and Spray Systems*, Madison, WI, United States, May 22–25, 2022.
572. **Convergent Science**
Raju, M.P., Dahale, A.R., and Ge, X., "Improving Residual Convergence of Steady-State Non-Reacting and Reacting Spray Simulations," *ILASS-Americas 32nd Annual Conference on Liquid Atomization and Spray Systems*, Madison, WI, United States, May 22–25, 2022.
573. **IFP Energies nouvelles**
Gaballa, H., Habchi, C., and De Hemptinne, J.C., "A Tabulated Real-Fluid Model and Surface Density Approach for LES of Liquid Jets Primary Atomization," *ILASS-Americas 32nd Annual Conference on Liquid Atomization and Spray Systems*, Madison, WI, United States, May 22–25, 2022.
574. **Umm Al-Qura University; King Abdullah University of Science and Technology**
Al-lehaibi, M., Liu, X., Aljabri, H.H., Houidi, M.B., and Im, H.G., "Comparison of Transient Spray Characteristics of n-Dodecane and OME3 Using Large Eddy Simulation," *ILASS-Americas 32nd Annual Conference on Liquid Atomization and Spray Systems*, Madison, WI, United States, May 22–25, 2022.
575. **Texas Tech University; The University of Tennessee, Knoxville; Huazhong University of Science and Technology**
Ge, H., Zhao, P., Parameswaran, S., Feng, Y., and Cui, X., "Large-Eddy Simulation of a Two-Phase Cough Jet," *ILASS-Americas 32nd Annual Conference on Liquid Atomization and Spray Systems*, Madison, WI, United States, May 22–25, 2022.
576. **Texas Tech University; The University of Tennessee, Knoxville; Huazhong University of Science and Technology**
Ge, H., Zhao, P., Parameswaran, S., Feng, Y., and Cui, X., "Large-Eddy Simulation of Face Shield Effects on an Emitter During a Cough Process," *ILASS-Americas 32nd Annual Conference on Liquid Atomization and Spray Systems*, Madison, WI, United States, May 22–25, 2022.
577. **The University of Alabama**
Harris, Z., Agrawal, A., and Bittle, J., "Enabling High Order Fluid Property Models in CFD for Supercritical Fuel Mixing Through Neural Networks and Tabulation," *2022 Spring Technical Meeting of the Central States Section of the Combustion Institute*, Detroit, MI, United States, May 15–17, 2022.

578. **Dalian Maritime University; Beijing Institute of Technology**
 Cong, Y., Gan, H., and Wang, H., "Parameter Investigation of the Pilot Fuel Post-Injection Strategy on Performance and Emissions Characteristics of a Large Marine Two-Stroke Natural Gas-Diesel Dual-Fuel Engine," *Fuel*, 323, 2022. DOI: 10.1016/j.fuel.2022.124404

579. **Southwest Research Institute**
 Williams, Z., Moiz, A., Chung, K., Smith, M., Briggs, T., Bitsis, C., and Miwa, J., "Generation of Rate-of-Injection (ROI) Profile for Computational Fluid Dynamics (CFD) Model of Internal Combustion Engine (ICE) Using Machine Learning," *Energy and AI*, 8, 2022. DOI: 10.1016/j.egyai.2022.100148

580. **Oslo Metropolitan University**
 Sundsdal, O.M., "CFD Analysis of Human Respiratory Events in Indoor Environments," M.S. thesis, Oslo Metropolitan University, Oslo, Norway, 2022.

581. **Chang'an University**
 Cai, P., Zhang, C., Jing, Z., and Chen, Z., "Development and Validation of a Reduced Polyoxymethylene Dimethyl Ether 3 – Biodiesel Reaction Mechanism for Engine Application," *Fuel*, 291, 2021. DOI: 10.1016/j.fuel.2021.120144

582. **Universitat Politècnica de València**
 García-Oliver, J.M., Novella, R., Micó, C., and Bin-Khalid, U., "A Numerical Investigation of the Performance of Oxymethylene Ethers Blended With Fossil Diesel to Reduce Soot Emissions in Compression Ignition Engines," *Fuel*, 324, Part C, 2022. DOI: 10.1016/j.fuel.2022.124768

583. **Seoul National University**
 Kim, M., "Development of a Comprehensive 0D Model for an SI Engine Based on the Analysis of the Kinetic Energy of Tumble and the Critical Factors for Flame Wrinkling," Ph.D. thesis, Seoul National University, Seoul, South Korea, 2021 <https://space.snu.ac.kr/bitstream/10371/181164/1/000000169786.pdf>.

584. **Yanshan University; Beijing Institute of Technology**
 Bao, J., Qu, P., Wang, H., Zhou, C., Zhang, L., and Shi, C., "Implementation of Various Bowl Designs in an HPDI Natural Gas Engine Focused on Performance and Pollutant Emissions," *Chemosphere*, 303, Part 3, 2022. DOI: 10.1016/j.chemosphere.2022.135275

585. **Politecnico di Torino; EthosEnergy**
 Carusotto, S., Goel, P., Baratta, M., Misul, D.A., Salvadori, S., Cardile, F., Forno, L., Toppino, M., and Valsania, M., "Combustion Characterization in a Diffusive Gas Turbine Burner for Hydrogen-Compliant Applications," *Energies*, 15(11), 2022. DOI: 10.3390/en15114117

586. **IFP Energies nouvelles**
 Gaballa, H., Habchi, C., and De Hemptinne, J.C., "Real-Fluid Effects of Primary Methanol Fuel on Dual-Fuel Injection and Mixing," *ILASS-Americas 32nd Annual Conference on Liquid Atomization and Spray Systems*, Madison, WI, United States, May 22–25, 2022.

587. **Argonne National Laboratory; Convergent Science; Sandia National Laboratories**
 Kazmouz, S.J., Scarcelli, R., Cheng, Z., Dai, M., Pomraning, E., Senecal, P.K., and Sjöberg, M., "Coupling a Lagrangian–Eulerian Spark-Ignition (LESI) Model With LES Combustion Models for Engine Simulations," *Science and Technology for Energy Transition*, 77(10), 2022. DOI: 10.2516/stet/2022009

588. **Convergent Science; University of Central Florida; Embry-Riddle Aeronautical University**
 Kumar, G., Manikantachari, K.R.V., Drennan, S., Vasu, S.S., and Martin, S.M., "Study of the Effect of CO Addition in a Direct Fired Oxy-Fuel Combustor for SCO₂ Power Cycles Using Direct Detailed Chemistry and Adaptive Mesh Refinement," *7th International Supercritical CO₂ Power Cycles Symposium*, San Antonio, TX, United States, Feb 21–24, 2022.

589. **Politecnico di Torino; PUNCH Torino S.p.A.; POWERTECH Engineering**
 Millo, F., Piano, A., Roggio, S., Pesce, F.C., Vassallo, A., and Bianco, A., "Numerical Assessment on the Influence of Engine Calibration Parameters on Innovative Piston Bowls Designed for Light-Duty Diesel Engines," *Energies*, 15(10), 2022. DOI: 10.3390/en15103799

590. **Chalmers University of Technology; King Abdullah University of Science and Technology; Volvo Group Trucks Technology**
Babayev, R., Im, H.G., Andersson, A., and Johansson, B., "Hydrogen Double Compression-Expansion Engine (H2DCEE): A Sustainable Internal Combustion Engine With 60%+ Brake Thermal Efficiency Potential at 45 Bar BMEP," *Energy Conversion and Management*, 264, 2022. DOI: 10.1016/j.enconman.2022.115698
591. **Guangxi University; Beibu Gulf University**
Zhang, Z., Lv, J., Xie, G., Wang, S., Ye, Y., Huang, G., and Tan, D., "Effect of Assisted Hydrogen on Combustion and Emission Characteristics of a Diesel Engine Fueled With Biodiesel," *Energy*, 254, Part A, 2022. DOI: 10.1016/j.energy.2022.124269
592. **Convergent Science; FVT GmbH; Graz University of Technology**
Vångö, M., Scienza, P., Fößleitner, P., and Fruhwirt, D., "Numerical Investigation of the Koralm Tunnel Fires Tests Using an Autonomous Meshing Approach With Adaptive Mesh Refinement," *Tunnel Safety and Ventilation 2022*, Graz, Austria, May 9–11, 2022.
593. **University of Rome Tor Vergata; Argonne National Laboratory**
Bartolucci, L., Cordiner, S., Mulone, V., Scarcelli, R., Wallner, T., Swantek, A.B., Powell, C.F., and Kastengren, A.L., "Gaseous Jet Through an Outward Opening Injector: Details of Mixing Characteristic and Turbulence Scales," *International Journal of Heat and Fluid Flow*, 85, 2020. DOI: 10.1016/j.ijheatfluidflow.2020.108660
594. **University of Rome Tor Vergata; The University of Alabama**
Bartolucci, L., Cordiner, S., Mulone, V., Krishnan, S.R., and Srinivasan, K.K., "A Computational Investigation of the Impact of Multiple Injection Strategies on Combustion Efficiency in Diesel-Natural Gas Dual-Fuel Low-Temperature Combustion Engines," *Journal of Energy Resources Technology*, 143(2), 2021. DOI: 10.1115/1.4047887
595. **Texas Tech University; The University of Tennessee, Knoxville**
Ge, H., Parameswaran, S., and Zhao, P., "Numerical Simulations of Stratification and Charge Cooling Effects on a GDCI Engine," *ILASS-Americas 32nd Annual Conference on Liquid Atomization and Spray Systems*, Madison, WI, United States, May 22–25, 2022.
596. **Convergent Science**
Anumolu, C.R.L., Dahale, A.R., and Ganesh, M., "Dynamic Estimation of Turbulence Time Scale Factor for Sigma-Y Model (ELSA)," *ILASS-Americas 32nd Annual Conference on Liquid Atomization and Spray Systems*, Madison, WI, United States, May 22–25, 2022.
597. **University of Wisconsin-Madison; Combat Capabilities Development Command Army Research Laboratory**
Sapra, H.D., Hessel, R.P., Amezcua, E.R., Rothamer, D., Kim, K., Kweon, C.M., and Kokjohn, S., "Evaluating Energy-Assisted Compression Ignition for High-Altitude Operation Using Computational Fluid Dynamics," *2022 Spring Technical Meeting of the Central States Section of the Combustion Institute*, Detroit, MI, United States, May 15–17, 2022.
598. **Argonne National Laboratory; University of Illinois Urbana-Champaign; Combat Capabilities Development Command Army Research Laboratory**
Dasgupta, D., Som, S., Wood, E., Lee, T., Mayhew, E., Temme, J., and Kweon, C.-B., "Computational Fluid Dynamics Modeling of Lean Blowout Dependence on Operating Conditions in the ARC-M1 Gas Turbine Combustor," *2022 Spring Technical Meeting of the Central States Section of the Combustion Institute*, Detroit, MI, United States, May 15–17, 2022.
599. **Wayne State University**
Molana, M., Piehl, J.A., and Samimi-Abianeh, O., "Adiabatic Ignition Delay Measurement in a Rapid Compression Machine," *2022 Spring Technical Meeting of the Central States Section of the Combustion Institute*, Detroit, MI, United States, May 15–17, 2022.

600. **Wayne State University**
Goyal, T., Molana, M., and Samimi-Abianeh, O., "Numerical Modeling and Experimental Measurement of n-Heptane Autoignition at RCM Conditions," *2022 Spring Technical Meeting of the Central States Section of the Combustion Institute*, Detroit, MI, United States, May 15–17, 2022.
601. **University of Minnesota**
Thomas, D.E., Wadkar, C., Goertemiller, C.F.W., and Northrop, W.F., "Structure and Nitric Oxide Formation in Laminar Diffusion Flames of Ammonia-Hydrogen and Air," *2022 Spring Technical Meeting of the Central States Section of the Combustion Institute*, Detroit, MI, United States, May 15–17, 2022.
602. **Wayne State University**
Goyal, T. and Samimi-Abianeh, O., "Methane Laminar Flame Speed Measurement at High Gas Temperatures Using RCM-Flame," *2022 Spring Technical Meeting of the Central States Section of the Combustion Institute*, Detroit, MI, United States, May 15–17, 2022.
603. **Wayne State University**
Piehl, J.A. and Samimi-Abianeh, O., "Quantification of Three-Stage n-Pentane Autoignition Using Filtered Natural Emission of Species," *2022 Spring Technical Meeting of the Central States Section of the Combustion Institute*, Detroit, MI, United States, May 15–17, 2022.
604. **Wayne State University**
Piehl, J.A. and Samimi-Abianeh, O., "Species Quantification During n-Heptane Autoignition Using Filtered Natural Emission of Species," *2022 Spring Technical Meeting of the Central States Section of the Combustion Institute*, Detroit, MI, United States, May 15–17, 2021.
605. **Convergent Science; Los Angeles Dodgers; Southwest Research Institute; University of Oxford**
Burton, T., Powers, S., Burns, C., Conway, G., Leach, F., and Senecal, K., "A Data-Driven Greenhouse Gas Emission Rate Analysis for Vehicle Comparisons," *SAE International Journal of Electrified Vehicles*, 12(1), 2023. DOI: 10.4271/14-12-01-0006
606. **IFP Energies nouvelles**
Habchi, C., "About the 3D Simulation of the Boiling of Liquid Films and Spray Droplets During Their Contact With Hot Substrates," *Heat and Mass Transfer*, 2022. DOI: 10.1007/s00231-022-03222-1
607. **Beijing Institute of Technology**
Qui, T., Deng, Y., Lei, Y., Wu, Y., Qin, Y., and Wang, Y., "Numerical Simulation of the Influence of High-Pressure Methane Jet on the Premixed Ignition Flame of Constant Volume Bomb," *Fuel*, 321, 2022. DOI: 10.1016/j.fuel.2022.124003
608. **Texas Tech University; The University of Tennessee, Knoxville; Kyungpook National University; Huazhong University of Science and Technology**
Ge, H., Zhao, P., Choi, S., Deng, T., Feng, Y., and Cui, X., "Effects of Face Shield on an Emitter During a Cough Process: A Large-Eddy Simulation Study," *Science of the Total Environment*, 831, 2022. DOI: 10.1016/j.scitotenv.2022.154856
609. **IFP Energies nouvelles**
Jafari, S., Gaballa, H., Habchi, C., De Hemptinne, J.-C., and Mougin, P., "Exploring the Interaction Between Phase Separation and Turbulent Fluid Dynamics in Multi-Species Supercritical Jets Using a Tabulated Real-Fluid Model," *The Journal of Supercritical Fluids*, 184, 2022. DOI: 10.1016/j.supflu.2022.105557
610. **Colorado State University; Argonne National Laboratory**
Windell, B., Sharma, M., Nocivelli, L., Asztalos, K., Zdanowicz, A., Kar, T., Olsen, D., Marchese, A., and Windom, B., "Bulk Spray and Individual Plume Characterization of LPG and iso-Octane Sprays at Engine-Like Conditions," *SAE Paper 2022-01-0497*, 2022. DOI: 10.4271/2022-01-0497
611. **Indian Institute of Technology Mandi**
Sahu, S., Kumar, P., and Dhar, A., "Effect of Injection Timing on Combustion, Performance and Emissions Characteristics of Methanol Fuelled DISI Engine: A Numerical Study," *Fuel*, 322, 2022. DOI: 10.1016/j.fuel.2022.124167

612. **Stony Brook University; LiquidPiston Inc.**
Nikiforakis, I., Guleria, G., Koraiem, M., Assanis, D., Collie, C., Costa, T., Kute, P., and Shkolnik, A., "Understanding Pre-Chamber Combustion Performance in a Closed-Cycle Model of a Novel Rotary Engine," SAE Paper 2022-01-0396, 2022. DOI: 10.4271/2022-01-0396
613. **Argonne National Laboratory**
Dasgupta, D., Pal, P., Torelli, R., Som, S., and Libera, J., "Effect of Process Parameters on Silica Nanoparticle Formation Using Flame Spray Pyrolysis," *12th U.S. National Combustion Meeting*, College Station, TX, United States, May 24–26, 2021.
614. **Università degli Studi dell'Aquila; CITraMS; STEMS CNR**
Duronio, F., Di Mascio, A., Villante, C., Anatone, M., and De Vita, A., "ECN Spray G: Coupled Eulerian Internal Nozzle Flow and Lagrangian Spray Simulation in Flash Boiling Conditions," *International Journal of Engine Research*, 2022. DOI: 10.1177/14680874221090732
615. **Northumbria University**
Manning, A., "Mathematical Modelling of the Selective Catalytic Reduction of Nitrogen Oxides in Combustion Products," Ph.D. thesis, Northumbria University, Newcastle upon Tyne, England, 2022.
616. **Volvo Group Trucks Technology; Chalmers University of Technology**
Hemdal, S. and Lipatnikov, A.N., "Investigation of Charge Mixing and Stratified Fuel Distribution in a DISI Engine Using Raleigh Scattering and Numerical Simulations," *Advances in Engine and Powertrain Research and Technology*, ed. Parikyan, T., Springer Cham, 2022. DOI: 10.1007/978-3-030-91869-9_8
617. **Centre for Excellence for Automotive Technology; MIT Campus; Anna University**
Raju, P. and Masimalai, S., "Numerical Study on a Diesel-Hydrogen Dual-Fuel Engine With Water Injection and Variable Compression Ratio," *Energy Technology*, 2022. DOI: 10.1002/ente.202100626
618. **"Dunărea de Jos" University of Galați**
Frățița, M., "Assessment of Water Injection on Internal Combustion Engines Performances," Ph.D. thesis, "Dunărea de Jos" University of Galați, Galați, Romania, 2022
http://193.226.56.236/bitstream/handle/123456789/8651/Rezumat_teza_doctorat_Fratita%20Michael_2022.pdf?sequence=1&isAllowed=y.
619. **National Research Council, Canada**
Dev, S., Yousefi, A., Lafrance, S., Missaghian, R., and Guo, H., "A Study on the Use of Intake Flow Path Modification to Reduce Methane Slip of a Natural Gas-Diesel Dual-Fuel Engine," SAE Paper 2022-01-0467, 2022. DOI: 10.4271/2022-01-0467
620. **LEC GmbH; Know-Center GmbH; Graz University of Technology**
Posch, S., Gößnitzer, C., Ofner, A.B., Pirker, G., and Wimmer, A., "Modeling Cycle-to-Cycle Variations of a Spark-Ignited Gas Engine Using Artificial Flow Fields Generated by a Variational Autoencoder," *Energies*, 15(7), 2022. DOI: 10.3390/en15072325
621. **Embry-Riddle Aeronautical University; University of Central Florida**
Martin, S. and Ahmed, K., "Improving NOx Entitlement With Axial Staging," Embry-Riddle Aeronautical University DOE_ERAU_0031227, 2022.
622. **Jiangsu University; University of Portsmouth**
Liu, J., Liu, Z., Wang, L., Wang, P., Sun, P., Ma, H., and Wu, P., "Numerical Simulation and Experimental Investigation on Pollutant Emissions Characteristics of PODE/Methanol Dual-Fuel Combustion," *Fuel Processing Technology*, 231, 2022. DOI: 10.1016/j.fuproc.2022.107228
623. **Caterpillar Inc.; University of Wisconsin–Madison; Marquette University**
Kavuri, C., Koci, C., Anders, J., Svensson, K., Fitzgerald, R., Martin, G., Zellers, R., Kokjohn, S., and Dempsey, A., "Experimental and Computational Study Comparing Conventional Diesel Injectors and Diverging Group Hole Nozzle Injectors in a High Temperature Pressure Vessel and a Heavy-Duty Diesel Engine," *International Journal of Engine Research*, 2022. DOI: 10.1177/14680874221083371

624. **University Center of Nâama; University of Abou Bekr Belkaid Tlemcen; University of Medea; University of Parma; University of Engineering and Technology, Peshawar**
Naima, K., Menni, Y., Alliche, M., Lorenzini, G., Ahmad, H., and Liaqid, A., "Effect of EGR on Performances and Emissions of DI Diesel Engine Fueled With Waste Plastic Oil: CDF Approach," *Annales De Chimie - Science Des Matériaux*, 45(3), 217-223, 2021. DOI: 10.18280/acsm.450304
625. **IFP Energies nouvelles**
Gaballa, H., Jafari, S., Habchi, C., and de Hemptinne, J.-C., "Numerical Investigation of Droplet Evaporation in High-Pressure Dual-Fuel Conditions Using a Tabulated Real-Fluid Model," *International Journal of Heat and Mass Transfer*, 189, 2022. DOI: 10.1016/j.ijheatmasstransfer.2022.122671
626. **Sakarya University; Batman University**
Koç, M.A. and Şener, R., "Prediction of Emission and Performance Characteristics of Reactivity-Controlled Compression Ignition Engine With the Intelligent Software Based on Adaptive Neural-Fuzzy and Neural-Network," *Journal of Cleaner Production*, 318, 2021. DOI: 10.1016/j.jclepro.2021.128642
627. **Hanyang University**
Kim, H. and Park, S., "Effects of Hole Drilling Angle on Internal Flow of Gasoline Direct Injection Injector," *Journal of ILASS-Korea*, 26(4), 197-203, 2021. DOI: 10.15435/JILASSKR.2021.26.4.197
628. **CMT-Motores Térmicos; Swiss Federal Institute of Technology; Combustion and Flow Solutions GmbH**
María, M., Altantzis, C., Wright, Y.M., Martí-Aldaraví, P., and Boulouchos, K., "Computational Study of the Premixed Charge Compression Ignition Combustion in a Rapid Compression Expansion Machine: Impact of Multiple Injection Strategy on Mixing, Ignition and Combustion Processes," *Fuel*, 318, 2022. DOI: 10.1016/j.fuel.2022.123388
629. **University of Applied Sciences and Arts Northwestern Switzerland**
Hoffmann, J., "Modelling and Optimisation of the Flow Inside an Oil Flooded Rotary Sliding Vane Compressor," M.S. thesis, University of Applied Sciences and Arts Northwestern Switzerland, Windisch, Switzerland, 2022.
630. **Texas Tech University; The University of Tennessee, Knoxville**
Ge, H. and Zhao, P., "Effects of Stratification and Charge Cooling on Combustion in a Gasoline Direct-Injection Compression Ignition (GDCI) Engine," *International Journal of Engine Research*, 2022. DOI: 10.1177/14680874221077333
631. **Indian Institute of Technology Delhi**
Ailaboina, A. and Saha, K., "Numerical Study of Combustion and Emission Performance on a Multi-Holed Gasoline Direct Injection Engine With and Without Flash Boiling Spray," *26th National and 4th International ISHMT-ASTFE Heat and Mass Transfer Conference, IHMTC2021-132*, Chennai, India, Dec 17-20, 2021.
632. **Carnegie Mellon University; University of Minnesota**
Biwalkar, R., Desmornes, N., Singh, S., Dasrath, D., and Northrop, W., "Effect of Piston Geometry on In-Cylinder Fluid Mechanics, Heat Transfer, and Ignition Delay in Rapid Compression Machines," SAE Paper 2021-01-0509, 2021. DOI: 10.4271/2021-01-0509
633. **Bucknell University; Carnegie Mellon University**
Brahma, I. and Singh, S., "Data-Based Estimation and Simulation of Compressible Pulsating Flow With Reverse-Flow Through an Orifice," *Flow Measurement and Instrumentation*, 82, 2021. DOI: 10.1016/j.flowmeasinst.2021.102069
634. **Politecnico di Torino; POWERTECH Engineering; Università degli Studi di Perugia; Shot To Shot Engineering; Cornaglia Group**
Millo, F., Sapio, F., Paradisi, B.P., Bianco, A., Postrioti, L., Buitoni, G., Tabarrini, M., and Robino, C., "Experimental and Numerical Analysis of an Innovative Mixer Geometry for Urea Injection in SCR Applications," *Emission Control Science and Technology*, 2022. DOI: 10.1007/s40825-022-00207-8

635. **Technische Universität München**
Frankl, S.G., "Numerische Simulation Von Kraftstoffflexiblen, Direkteinspritzenden Schiffsmotoren," Ph.D. thesis, Technische Universität München, Munich, Germany, 2021
<https://mediatum.ub.tum.de/doc/1610655/1610655.pdf>.
636. **Batman University**
Şener, R., "Numerical Investigation of Ducted Fuel Injection Strategy for Soot Reduction in Compression Ignition Engine," *Journal of Applied Fluid Mechanics*, 15(2), 475-489, 2022. DOI: 10.47176/JAFM.15.02.33088
637. **Aramco Research Center - Detroit; Cummins Inc.**
Zhang, Y., Kumar, P., Pei, Y., Traver, M., and Popuri, S., "An Experimental and Computational Investigation of Tailor-Developed Combustion and Air-Handling System Concepts in a Heavy-Duty Gasoline Compression Ignition Engine," *Energies*, 15(3), 2022. DOI: 10.3390/en15031087
638. **University of Strathclyde**
Xiang, L., "Marine Dual Fuel Engines Modelling and Optimisation Employing : A Novel Combustion Characterisation Method," Ph.D. thesis, University of Strathclyde, Glasgow, Scotland, 2021
<https://doi.org/10.48730/an5y-m545>.
639. **Hitit University**
Polat, S., Bulut, A., Akbulut, F., and Eroğlu, T.N., "Comparison of Maximum Pressure Rise Rate of Full and Direct Injection HCCI Engine Under Different Supercharger Pressures," *International Symposium on Automotive Science and Technology*, Ankara, Turkey, Sep 8–10, 2021.
640. **Technische Universität München**
Eicheldinger, S., Karmann, S., Prager, M., and Wachtmeister, G., "Optical Screening Investigations of Backfire in a Large Bore Medium Speed Hydrogen Engine," *International Journal of Engine Research*, 2021. DOI: 10.1177/14680874211053171
641. **University of Florence; Convergent Science**
Papi, F., Melani, P.F., Xie, S., Perrone, C., Scienza, P., Baduzzi, F., and Bianchini, A., "Development and Validation of an Advanced Actuator Line Model for Wind Turbines," *E3S Web of Conferences*, 312, 2021. DOI: 10.1051/e3sconf/202131208004
642. **FH Dortmund**
Rajamani, V., Rosefort, Y., and Bagchi, I., "Technology Enablers for the Hydrogen Combustion Engine," *30th Aachen Colloquium Sustainable Mobility*, Aachen, Germany, Oct 4–6, 2021.
643. **Politecnico di Torino; PUNCH Torino S.p.A.**
Millo, F., Piano, A., Roggio, S., Bianco, A., and Pesce, F.C., "Numerical Investigation on Mixture Formation and Combustion Process of Innovative Piston Bowl Geometries in a Swirl-Supported Light-Duty Diesel Engine," *SAE International Journal of Engines*, 14(2), 247-262, 2021. DOI: 10.4271/03-14-02-0015
644. **Politecnico di Torino; STEMS CNR; POWERTECH Engineering**
Millo, F., Rolando, L., Piano, A., Sementa, P., Catapano, F., Di Iorio, S., and Bianco, A., "Experimental and Numerical Investigation of a Passive Pre-Chamber Jet Ignition Single-Cylinder Engine," *SAE Paper* 2021-24-0010, 2021. DOI: 10.4271/2021-24-0010
645. **Politecnico di Torino; POWERTECH Engineering**
Millo, F., Segatori, C., Piano, A., Paradisi, B.P., and Bianco, A., "An Engine Parameters Sensitivity Analysis on Ducted Fuel Injection in Constant-Volume Vessel Using Numerical Modeling," *SAE Paper* 2021-24-0015, 2021. DOI: 10.4271/2021-24-0015
646. **RWTH Aachen University**
Chu, H., Davidovic, M., Elmestikawy, H., Welch, C., Böhm, B., Dreizler, A., and Pitsch, H., "Investigation of Residual Gas Effects on Early Flame Kernel Development Under Engine Conditions," *Proceedings of the European Combustion Meeting*, Online, Apr 14–15, 2021.

647. **Georgia Institute of Technology**
Milan, P.J., "Deep-Learning-Enhanced Multiphysics Flow Computations for Propulsion Applications," Ph.D. thesis, Georgia Institute of Technology, Atlanta, GA, United States, 2021
<https://smartech.gatech.edu/handle/1853/66184>.
648. **Michigan Technological University**
Zhao, Z., "High Injection Pressure Impinging Diesel Spray Characteristics and Subsequent Soot Formation in Reacting Conditions," Ph.D. thesis, Michigan Technological University, Houghton, MI, United States, 2021 <https://digitalcommons.mtu.edu/cgi/viewcontent.cgi?article=2459&context=etdr>.
649. **Hyundai-Kia America Technical Center Inc; Hyundai Motor Europe Technical Center**
Zhu, S., Shirley, M., Joo, N.R., Ha, K.P., Hollowell, J., Fantin, N., Revidat, S., and Ullrich, J., "Technology Enablers for Advanced Gasoline Compression Ignition Engines," *Gasoline Compression Ignition Technology*, eds. Kalghatgi, G., Agarwal, A.K., Goyal, H., and Houidi, M.B., Springer, Singapore, 2022. DOI: 10.1007/978-981-16-8735-8_2
650. **Saudi Aramco; Aramco Research Center - Detroit**
Raman, V., Chang, J., Engineer, N., Tzanetakis, T., Yoann, V., Sim, J., and Badra, J., "Spark Assisted Gasoline Compression Ignition (SAGCI) Engine Strategies," *Gasoline Compression Ignition Technology*, eds. Kalghatgi, G., Agarwal, A.K., Goyal, H., and Houidi, M.B., Springer, Singapore, 2022. DOI: 10.1007/978-981-16-8735-8_5
651. **Central South University of Forestry and Technology; Hunan University of Science and Technology**
Wang, Z. and Li, L., "Effects of Different Ethanol/Diesel Blending Ratios on Combustion and Emission Characteristics of a Medium-Speed Diesel Engine," *Processes*, 10(1), 2022. DOI: 10.3390/pr10010173
652. **Politecnico di Torino**
Di Battista, M., "CNG-H2 Engine Model in CONVERGE," M.S. thesis, Politecnico di Torino, Turin, Italy, 2021 <https://webthesis.biblio.polito.it/21472/1/tesi.pdf>.
653. **University of Ulsan**
Wahono, B., "A Study on the Effect of Intake Port Modification to Improve the In-Cylinder Flow Characteristics of Small Motorcycle Engine," Ph.D. thesis, University of Ulsan, Ulsan, South Korea, 2020
<http://oak.ulsan.ac.kr/bitstream/2021.oak/5670/2/200000370363.pdf>.
654. **Clemson University**
Moser, S., "Coupled Thermal Mechanical Analysis Methodology for Thermal Performance Evaluation and Failure Mode Identification of Thermal Barrier Coatings for Heavy Duty Diesel Engines," Ph.D. thesis, Clemson University, Clemson, SC, United States, 2021
https://tigerprints.clemson.edu/cgi/viewcontent.cgi?article=3955&context=all_dissertations.
655. **The University of Alabama; Convergent Science**
Jha, P.R., Wijeyakulasuriya, S., Krishnan, S.R., and Srinivasan, K.K., "Numerical Investigations of Low Load Diesel-Methane Dual Fuel Combustion at Early Diesel Injection Timings," *Fuel*, 315, 2022. DOI: 10.1016/j.fuel.2021.123077
656. **Batman University**
Şener, R., "Ducted Fuel Injection: Numerical Study of Soot Formation and Oxidation Using Detailed Soot Modeling Approach in a Compression Ignition Engine at Different Loads," *Journal of the Brazilian Society of Mechanical Sciences and Engineering*, 44, 2022. DOI: 10.1007/s40430-021-03356-z
657. **Guangxi University of Science and Technology**
Zhang, Z., Tian, J., Xie, G., Li, J., Xu, W., Jiang, F., Huang, Y., and Tan, D., "Investigation on the Combustion and Emission Characteristics of Diesel Engine Fueled With Diesel/Methanol/n-Butanol Blends," *Fuel*, 314, 2022. DOI: 10.1016/j.fuel.2021.123088
658. **Bauman Moscow State Technical University; South Ural State University**
Markov, V., Sa, B., Kamaltdinov, V., Neverov, V., and Zherdev, A., "Investigation on the Effect of the Flow Passage Geometry of Diesel Injector Nozzle on Injection Process Parameters and Engine Performances," *Energy Science & Engineering*, 2022. DOI: 10.1002/ese3.1051

659. **Argonne National Laboratory; University of Illinois Urbana-Champaign; Combat Capabilities Development Command Army Research Laboratory**
Dasgupta, D., Som, S., Wood, E.J., Lee, T., Mayhew, E., Temme, J.E., and Kweon, C.-B.M., "X-Ray Data Enabled Improved Near Nozzle Spray Validation for ARC-M1 Combustor," *AIAA SciTech 2022 Forum*, AIAA 2022-2059, San Diego, CA, United States, Jan 3–7, 2022. DOI: 10.2514/6.2022-2059
660. **Convergent Science**
Attal, N. and Kumar, G., "Deflagration to Detonation Transition in Two-Dimensional Obstructed Channels," *AIAA SciTech 2022 Forum*, AIAA 2022-0392, San Diego, CA, United States, Jan 3–7, 2022. DOI: 10.2514/6.2022-0392
661. **Purdue University**
Hasti, V.R. and Gore, J.P., "Chemical Reaction Pathway Analysis of Lean Blowout in a Gas Turbine Combustor," *AIAA SciTech 2022 Forum*, AIAA 2022-0775, San Diego, CA, United States, Jan 3–7, 2022. DOI: 10.2514/6.2022-0775
662. **Purdue University; Convergent Science**
Hasti, V.R., Attal, N., and Kumar, G., "Analysis of Mode Transition in a Rotating Detonation Engine Combustor," *AIAA SciTech 2022 Forum*, AIAA 2022-1111, San Diego, CA, United States, Jan 3–7, 2022. DOI: 10.2514/6.2022-1111
663. **University of Central Florida**
Stiehl, B., Genova, T., Newmyer, M., Fortin, M., Tonarely, M., Rezzag, T., and Ahmed, K., "Exploration of Large Eddy Simulation With Adaptive Mesh Refinement for a HighPressure Staged Combustion System," *AIAA SciTech 2022 Forum*, AIAA 2022-1721, San Diego, CA, United States, Jan 3–7, 2022. DOI: 10.2514/6.2022-1721
664. **Convergent Science**
Kumar, G. and Attal, N., "Accurate Predictions of Flashback in a Swirling Combustor With Detailed Chemistry and Adaptive Mesh Refinement," *AIAA SciTech 2022 Forum*, AIAA 2022-1722, San Diego, CA, United States, Jan 3–7, 2022. DOI: 10.2514/6.2022-1722
665. **Purdue University; University of Tennessee at Chattanooga**
Hasti, V.R. and Ranjan, R., "Computational Study of Longitudinal Combustion Instability in a High-Pressure Combustor," *AIAA SciTech 2022 Forum*, AIAA 2022-2087, San Diego, CA, United States, Jan 3–7, 2022. DOI: 10.2514/6.2022-2087
666. **Colorado State University; Cummins Inc.; Woodward, Inc.**
Zdanowicz, A., Mohr, J., Bestel, D.B., Rueda, J.F.R., Marchese, A., Windom, B., Olsen, D.B., Bremmer, R., Xu, H., and Hampson, G., "Expanding the Knock/Emissions/Misfire Limits for the Realization of Ultra-Low Emissions, High Efficiency Heavy Duty Natural Gas Engines," Colorado State University DE-EE0008331, 2021.
667. **Sandia National Laboratories; ExxonMobil Research & Engineering**
Nguyen, T.M., Dahms, R.N., Pickett, L.M., and Tagliante, F., "The Corrected Distortion Model for Lagrangian Spray Simulation of Transcritical Fuel Injection," *International Journal of Multiphase Flow*, 148, 2022. DOI: 10.1016/j.ijmultiphaseflow.2021.103927
668. **Purdue University; Argonne National Laboratory**
Hasti, V.R., Kundu, P., Som, S., and Gore, J.P., "Numerical Simulations and Analysis of the Turbulent Flow Field in a Practical Gas Turbine Engine Combustor," *Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy*, 2021. DOI: 10.1177/09576509211063255
669. **Chalmers University of Technology; Volvo Group Trucks Technology; King Abdullah University of Science and Technology**
Babayev, R., Andersson, A., Dalmau, A.S., Im, H.G., and Johansson, B., "Computational Optimization of a Hydrogen Direct-Injection Compression-Ignition Engine for Jet Mixing Dominated Nonpremixed Combustion," *International Journal of Engine Research*, 2021. DOI: 10.1177/14680874211053556

670. **National University of Ireland, Galway; Lawrence Livermore National Laboratory; Politecnico di Milano; RWTH Aachen University; Convergent Science**
Dong, S., Wagnon, S.W., Maffei, L.P., Kukkadapu, G., Nobili, A., Mao, Q., Pelucchi, M., Cai, L., Zhang, K., Raju, M., Chatterjee, T., Pitz, W.J., Faravelli, T., Pitsch, H., Senecal, P.K., and Curran, H.J., "A New Detailed Kinetic Model for Surrogate Fuels: C3MechV3.3," *Applications in Energy and Combustion Science*, 9, 2022. DOI: 10.1016/j.jaecs.2021.100043
671. **Shanghai Marine Diesel Engine Research Institute**
Lan, J., Gu, G., Lu, T., Jin, X., Lin, G., and Zhu, T., "Effects of Initial Conditions on MILD Combustion for Diesel in a Constant Pressure Combustion Bomb," *Energy Reports*, 7(7), 1015-1024, 2021. DOI: 10.1016/j.egyr.2021.09.171
672. **National Research Council, Canada**
Yousefi, A., Guo, H., Dev, S., Liko, B., and Lafrance, S., "Effects of Ammonia Energy Fraction and Diesel Injection Timing on Combustion and Emissions of an Ammonia/Diesel Dual-Fuel Engine," *Fuel*, 314, 2021. DOI: 10.1016/j.fuel.2021.122723
673. **Aramco Americas; Aramco Research Center - Detroit; Argonne National Laboratory**
Zhao, L., Zhang, Y., Pei, Y., Zhang, A., and Ameen, M.M., "CFD-Guided Evaluation of Spark-Assisted Gasoline Compression Ignition for Cold Idle Operation," *Sustainability*, 13(23), 2021. DOI: 10.3390/su132313096
674. **King Abdullah University of Science and Technology; Umm Al-Qura University; Saudi Aramco**
Liu, X., Aljabri, H., Al-lehaibi, M., AlRamadan, A.S., Badra, J., and Im, H.G., "Numerical Investigation of the Effect of Injection Strategy on a High-Pressure Isobaric Combustion Engine," *International Journal of Engine Research*, 2021. DOI: 10.1177/14680874211060156
675. **University of Cambridge**
Trivedi, S., Gkantonas, S., Mesquita, L.C.C., Iavarone, S., de Oliveira, P.M., and Mastorakos, E., "Estimates of the Stochasticity of Droplet Dispersion by a Cough," *Physics of Fluids*, 33(11), 2021. DOI: 10.1063/5.0070528
676. **U.S. Army Research Laboratory**
Bravo, L.G. and Acosta, W.A., "Comparison of CFD Predictions of Hydrogen/Methane Lean Direct Injection Gas Turbine Flame Tube - Temperature and Species," *53rd AIAA/SAE/ASEE Joint Propulsion Conference*, AIAA 2017-5016, Atlanta, GA, United States, Jul 10-12, 2017. DOI: 10.2514/6.2017-5016
677. **Sandia National Laboratories; Agency for Defense Development**
Tagliante, F., Nguyen, T.M., Pickett, L.M., and Sim, H.S., "Large-Eddy Simulation of Laser-Ignited Direct Injection Gasoline Spray for Emission Control," *Energies*, 14(21), 2021. DOI: 10.3390/en14217276
678. **RWTH Aachen University; Tongji University**
Deshmukh, A.Y., Davidovic, M., Grenga, T., Lakshmanan, R., Cai, L., and Pitsch, H., "A Reduced-Order Model for Turbulent Reactive Sprays in Compression Ignition Engines," *Combustion and Flame*, 236, 2022. DOI: 10.1016/j.combustflame.2021.111751
679. **Chalmers University of Technology**
Revadal, N. and Kumar, S.R., "CFD Simulations of Mixing Processes in Direct Injection SI Engines," M.S. thesis, Chalmers University of Technology, Gothenburg, Sweden, 2021
https://odr.chalmers.se/bitstream/20.500.12380/304294/1/Thesis_Report%20Nithin_Subhash.pdf.
680. **RWTH Aachen University**
Deshmukh, A.Y., Grenga, T., Davidovic, M., Schumacher, L., Palmer, J., Reddemann, M.A., Kneer, R., and Pitsch, H., "A Reduced-Order Model for Multiphase Simulation of Transient Inert Sprays in the Context of Compression Ignition Engines," *International Journal of Multiphase Flow*, 147, 2022. DOI: 10.1016/j.ijmultiphaseflow.2021.103872

681. **Technische Universiteit Eindhoven; TNO**
Diepstraten, N., Seykens, X.L.J., and Somers, L.M.T., "The Interaction Between the Pilot Diesel and Main NG Injection in an HPDI Engine," *ASME 2021 Internal Combustion Engine Division Fall Technical Conference*, ICEF2021-74466, Online, Oct 13–15, 2021.
682. **Argonne National Laboratory; University of Minnesota; Sandia National Laboratories**
Gururajan, V., Scarcelli, R., Biswas, S., and Ekoto, I., "CFD Modeling of Low Temperature Ignition Processes From a Nanosecond Pulsed Discharge at Quiescent Conditions," *ASME 2021 Internal Combustion Engine Division Fall Technical Conference*, ICEF2021-67902, Online, Oct 13–15, 2021.
683. **Argonne National Laboratory**
Mondal, S., Magnotti, G.M., Lusch, B., Maulik, R., and Torelli, R., "Machine Learning-Enabled Prediction of Transient Injection Map in Automotive Injectors With Uncertainty Quantification," *ASME 2021 Internal Combustion Engine Division Fall Technical Conference*, ICEF2021-67888, Online, Oct 13–15, 2021.
684. **U.S. Army Research Laboratory; University of Illinois Urbana-Champaign**
Kang, S.-G., Ryu, J.I., Motily, A.H., Numkiatsakul, P., Lee, T., Kriven, W.M., Kim, K.S., and Kweon, C.-B.M., "Transient Thermo-Mechanical Stress Analysis of Hot Surface Probe Using Sequentially Coupled CFD-FEA Approach," *ASME 2021 Internal Combustion Engine Division Fall Technical Conference*, ICEF2021-67858, Online, Oct 13–15, 2021.
685. **Argonne National Laboratory**
Addepalli, S.K., Pamminger, M., Scarcelli, R., and Wallner, T., "Numerical Investigation of the Impact of Spray – Bowl Interaction on Thermal Efficiency of a Gasoline Compression Ignition Engine," *ASME 2021 Internal Combustion Engine Division Fall Technical Conference*, ICEF2021-67851, Online, Oct 13–15, 2021.
686. **Argonne National Laboratory**
Chinnathambi, P., Kim, J., Scarcelli, R., Som, S., Shah, A., Biruduganti, M.S., and Longman, D.E., "A Numerical Study on the Effects of EGR Dilution in a Pre-Chamber Ignited Natural Gas Engine," *ASME 2021 Internal Combustion Engine Division Fall Technical Conference*, ICEF2021-67836, Online, Oct 13–15, 2021.
687. **Argonne National Laboratory**
Magnotti, G.M., Nunno, A.C., Kundu, P., Tekawade, A., Sforzo, B.A., Kastengren, A.L., Powell, C.F., and Som, S., "A Comparison of Injection, Spray, and Combustion Characteristics for Non-Eroded and Eroded Multi-Hole Fuel Injectors," *ASME 2021 Internal Combustion Engine Division Fall Technical Conference*, ICEF2021-67775, Online, Oct 13–15, 2021.
688. **Harbin Engineering University; China Shipbuilding Power Engineering Institute Co., Ltd.**
Liu, L., Dai, T., Xiong, Q., Qian, Y., and Liu, B., "A Numerical Investigation on Mixing Characteristics of Natural Gas Jets With High-Pressure Injection," *ASME 2021 Internal Combustion Engine Division Fall Technical Conference*, ICEF2021-67717, Online, Oct 13–15, 2021.
689. **Argonne National Laboratory; Convergent Science; Michigan Technological University**
Kazmouz, S.J., Scarcelli, R., Kim, J., Cheng, Z., Liu, S., Dai, M., Pomraning, E., Senecal, P.K., and Lee, S.-Y., "High-Fidelity Energy Deposition Ignition Model Coupled With Flame Propagation Models at Engine-Like Flow Conditions," *ASME 2021 Internal Combustion Engine Division Fall Technical Conference*, ICEF2021-67598, Online, Oct 13–15, 2021.
690. **National Research Council, Canada**
Dev, S., Stevenson, D., Yousefi, A., Guo, H., and Butler, J., "An Experimental Study on a Dual-Fuel Generator Fueled With Diesel and Simulated Biogas," *ASME 2021 Internal Combustion Engine Division Fall Technical Conference*, ICEF2021-67429, Online, Oct 13–15, 2021.
691. **University of Massachusetts Amherst**
Johlas, H., "Simulating the Effects of Floating Platforms, Tilted Rotors, and Breaking Waves for Offshore Wind Turbines," Ph.D. thesis, University of Massachusetts Amherst, Amherst, MA, United States, 2021 <https://doi.org/10.7275/24291287>.

692. **University of Wisconsin–Madison**
Mason, M., Hessel, R., Ravindran, A., Kokjohn, S., and Trujillo, M.F., "Evaluating the Importance of Drop Size and Spreading Angle in Near-Field Spray Calculations," *Atomization and Sprays*, 30(9), 651-674, 2020. DOI: 10.1615/AtomizSpr.2020034832
693. **University of Wisconsin–Madison; Ford Motor Company**
Ravindran, A.C., Kokjohn, S.L., and Petersen, B., "G-Equation Based Ignition Model for Direct Injection Spark Ignition Engines," *International Journal of Engine Research*, 2021. DOI: 10.1177/14680874211013990
694. **The University of Alabama; Nikola Corporation; Clemson University**
Hariharan, D., Boldaji, M.R., Yan, Z., Gainey, B., and Lawler, B., "Exploring the Effects of Piston Bowl Geometry and Injector Included Angle on Dual-Fuel and Single-Fuel RCCI," *Journal of Engineering for Gas Turbines and Power*, 143(11), 2021. DOI: 10.1115/1.4052203
695. **Wayne State University**
Piehl, J.A. and Samimi-Abianeh, O., "Species Quantification During n-Heptane Autoignition Using Filtered Natural Emission of Species," *Fuel*, 305, 2021. DOI: 10.1016/j.fuel.2021.121563
696. **The Pennsylvania State University**
Jhun, C.-S., Newswanger, R., Cysyk, J.P., Ponnaluri, S., Good, B., Manning, K.B., and Rosenberg, G., "Dynamics of Blood Flows in Aortic Stenosis: Mild, Moderate, and Severe," *ASAIO Journal*, 67(6), 666-674, 2021. DOI: 10.1097/MAT.0000000000001296
697. **Texas Tech University; The University of Tennessee, Knoxville**
Freeman, C., Endres, J., Robinson, J., Parameswaran, S., Ge, H., and Zhao, P., "CFD-Guided Development of a Pre-Chamber Ignition System for Internal Combustion Engines," *International Journal of Powertrains*, 10(1), 79-103, 2021. DOI: 10.1504/IJPT.2021.114746
698. **Politecnico di Torino**
Sapio, F., "Diesel After-Treatment Systems Modeling Optimization Techniques," Ph.D. thesis, Politecnico di Torino, Turin, Italy, 2020 <https://iris.polito.it/handle/11583/2842513>.
699. **Convergent Science**
Yang, P. and Drennan, S., "Predictions of Urea Deposit Formation With CFD Using Autonomous Meshing and Detailed Urea Decomposition," SAE Paper 2021-01-0590, 2021. DOI: 10.4271/2021-01-0590
700. **University of Wisconsin–Madison**
Ravindran, A.C. and Kokjohn, S.L., "The Challenges of Using Detailed Chemistry Model for Simulating Direct Injection Spark Ignition Engine Combustion During Cold-Start," *International Journal of Engine Research*, 2021. DOI: 10.1177/14680874211045968
701. **University of Oxford**
Sekularac, N., Fang, X.H., Shankar, V., Baker, S.J., Leach, F.C.P., and Davy, M.H., "Development of a Laminar Burning Velocity Empirical Correlation for Combustion of iso-Octane/Ethanol Blends in Air," *Fuel*, 307, 2022. DOI: 10.1016/j.fuel.2021.121880
702. **Chalmers University of Technology; Volvo Group; King Abdullah University of Science and Technology**
Babayev, R., Andersson, A., Dalmau, A.S., Im, H.G., and Johansson, B., "Computational Comparison of the Conventional Diesel and Hydrogen Direct-Injection Compression-Ignition Combustion Engines," *Fuel*, 307, 2022. DOI: 10.1016/j.fuel.2021.121909
703. **Hunan University; Peng Cheng Laboratory; Shanghai Maritime University**
Xingyu, S., Liu, H., Duan, X., Guo, H., Li, Y., Qiao, J., Liu, Q., and Liu, J., "Effect of Hydrogen Enrichment on the Flame Propagation, Emissions Formation and Energy Balance of the Natural Gas Spark Ignition Engine," *Fuel*, 307, 2022. DOI: 10.1016/j.fuel.2021.121843

704. **IFP Energies nouvelles**
Jafari, S., Gaballa, H., Habchi, C., and de Hemptinne, J.-C., "Towards Understanding the Structure of Subcritical and Transcritical Liquid-Gas Interfaces Using a Tabulated Real Fluid Modeling Approach," *Energies*, 14(18), 2021. DOI: 10.3390/en14185621

705. **Purdue University**
Hasti, V.R., Navarkar, A., and Gore, J.P., "A Data-Driven Approach Using Machine Learning for Early Detection of the Lean Blowout," *Energy and AI*, 5, 2021. DOI: 10.1016/j.egyai.2021.100099

706. **Indiana University – Purdue University Indianapolis; Purdue University**
Feyz, M.E., Hasti, V.R., Gore, J.P., Chowdhury, A., and Nalim, M.R., "Scalar Predictors of Premixed Gas Ignition by a Suddenly-Starting Hot Jet," *International Journal of Hydrogen Energy*, 44(42), 2019. DOI: 10.1016/j.ijhydene.2019.07.066

707. **Beijing Institute of Technology**
Zhu, Z., Li, Y., and Shi, C., "Effect of Natural Gas Energy Fractions on Combustion Performance and Emission Characteristics in an Optical CI Engine Fueled With Natural Gas/Diesel Dual-Fuel," *Fuel*, 307, 2022. DOI: 10.1016/j.fuel.2021.121842

708. **Tsinghua University**
Yang, S., Li, Y., Zhang, J., Zhao, Z., and Shuai, S., "On Understanding the Transition From Internal to External Flash Boiling," *ICLASS 2021: 15th Triennial International Conference on Liquid Atomization and Spray Systems*, Online, Aug 30–Sep 2, 2021.

709. **Batman University**
Şener, R., "Experimental and Numerical Analysis of a Waste Cooking Oil Biodiesel Blend Used in a CI Engine," *International Journal of Advances in Engineering and Pure Sciences*, 33(2), 2021. DOI: 10.7240/jeps.829006

710. **Argonne National Laboratory; Oak Ridge National Laboratory**
Guo, H., Torelli, R., Szybist, J.P., and Som, S., "CFD Modeling of Pre-Spark Heat Release in a Boosted Direct-Injection Spark-Ignition Engine," *International Journal of Engine Research*, 2021. DOI: 10.1177/14680874211044110

711. **IFP Energies nouvelles; CORIA**
Chemak, M.A., Aubagnac-Karkar, D., Colin, O., Vervisch, L., and Habchi, C., "Assessment of Liquid Film Evaporation Modeling in a Turbulent Channel Flow," *ICLASS 2021: 15th Triennial International Conference on Liquid Atomization and Spray Systems*, Online, Aug 30–Sep 2, 2021.

712. **IFP Energies nouvelles**
Jafari, S., Gaballa, H., Di Lella, A., Habchi, C., and De Hemptinne, J.-C., "A Tabulated Real-Fluid Modeling Approach Applied to Cryogenic LN₂-H₂ Jets Evaporation and Mixing at Transcritical Regime," *ICLASS 2021: 15th Triennial International Conference on Liquid Atomization and Spray Systems*, Online, Aug 30–Sep 2, 2021.

713. **Argonne National Laboratory**
Magnotti, G.M., Kundu, P., Nunno, A.C., and Som, S., "Linking Cavitation Erosion in a Multi-Hole Injector With Spray and Combustion Development," *ICLASS 2021: 15th Triennial International Conference on Liquid Atomization and Spray Systems*, Online, Aug 30–Sep 2, 2021.

714. **Indian Institute of Technology Kanpur**
Jena, A., Singh, H., and Agarwal, A.K., "Effect of Swirl Ratio and Piston Geometry on the Late-Compression Mean Air-Flow in a Diesel Engine," SAE Paper 2021-01-0647, 2021. DOI: 10.4271/2021-01-0647

715. **Indian Institute of Technology Kanpur**
Kalwar, A., Chintagunti, S., and Agarwal, A.K., "Gasohol Sprays Simulations of a Multi-Hole GDI Injector in Engine-Like Conditions," SAE Paper 2021-01-0549, 2021. DOI: 10.4271/2021-01-0549

716. **Indian Institute of Technology Kanpur**
Kumar, D., Valera, H., and Agarwal, A.K., "Numerical Predictions of In-Cylinder Phenomenon in Methanol Fueled Locomotive Engine Using High Pressure Direct Injection Technique," SAE Paper 2021-01-0492, 2021. DOI: 10.4271/2021-01-0492
717. **Brunel University London**
Peethambaram, M.R., "Modelling of Gasoline Injection Process and Its Application to the Development of a New GDI Engine," Ph.D. thesis, Brunel University London, London, England, 2021
<http://bura.brunel.ac.uk/handle/2438/23079>.
718. **LEC GmbH; INNIO Waukesha Gas Engines Inc.**
Gößnitzer, C. and Givler, S., "A New Method to Determine the Impact of Individual Field Quantities on Cycle-to-Cycle Variations in a Spark-Ignited Gas Engine," *Energies*, 14(14), 2021. DOI: 10.3390/en14144136
719. **Guangxi University**
Guo, X., Chen, Y., Huang, H., Chen, Y., Liu, M., Lei, H., Deng, B., and Chen, C., "Development of a Diesel/Natural Gas Mechanism Model for the CFD Simulation of Dual-Fuel Engine," *ACS Omega*, 6, 2021. DOI: 10.1021/acsomega.1c02514
720. **Politecnico di Torino**
Siragusa, S., "CFD Modelling for the Characterization of Fast-Pyrolysis Bio-Oil (FPBO) Atomization," M.S. thesis, Politecnico di Torino, Turin, Italy, 2021 <https://webthesis.biblio.polito.it/18827/1/tesi.pdf>.
721. **Indian Institute of Technology Kanpur**
Jena, A., Singh, H., and Agarwal, A.K., "Effect of Swirl Ratio on Charge Convection, Temperature Stratification, and Combustion in Gasoline Compression Ignition Engine," *Physics of Fluids*, 33, 2021. DOI: 10.1063/5.0059579
722. **CMT-Motores Térmicos**
Broatch, A., Carreres, M., García-Tíscar, J., and Belmar-Gil, M., "Spectral Analysis and Modelling of the Spray Liquid Injection in a Lean Direct Injection (LDI) Gas Turbine Combustor Through Eulerian-Lagrangian Large Eddy Simulations," *Aerospace Science and Technology*, 118, 2021. DOI: 10.1016/j.ast.2021.106992
723. **Gudlavalleru Engineering College; National Institute of Technology, Warangal**
Ganji, P.R., Vysyaraju, R.K.R., Surapaneni, S.R., and Kumar, B.K., "Enhancement of Combustion Characteristics of VCR Diesel Engine by Optimizing Engine Parameters," *SN Applied Sciences*, 3, 2021. DOI: 10.1007/s42452-021-04739-6
724. **Argonne National Laboratory**
Liu, I.-H. and Torelli, R., "Numerical Characterization of a Multi-Copter Using Moving Boundaries and Cut-Cell Grids," *AIAA Aviation 2021 Forum*, AIAA 2021-2619, Online, Aug 2–6, 2021. DOI: 10.2514/6.2021-2619
725. **Argonne National Laboratory**
Pal, P., Demir, S., Kundu, P., and Som, S., "Large-Eddy Simulations of Methane-Oxygen Combustion in a Rotating Detonation Rocket Engine," *AIAA Propulsion and Energy 2021 Forum*, AIAA 2021-3642, Online, Aug 9–11, 2021. DOI: 10.2514/6.2021-3642
726. **Embry-Riddle Aeronautical University; Convergent Science**
Martin, S.M. and Jacobsohn, G., "Simulation of Reacting Jet in Vitiated Crossflow at 5 Atmospheres Using Adaptive Mesh Refinement," *AIAA Propulsion and Energy 2021 Forum*, AIAA 2021-3486, Online, Aug 9–11, 2021. DOI: 10.2514/6.2021-3486
727. **Argonne National Laboratory; Convergent Science; Air Force Research Laboratory**
Pal, P., Kumar, G., Drennan, S.A., Rankin, B.A., and Som, S., "Multidimensional Numerical Modeling of Combustion Dynamics in a Non-Premixed Rotating Detonation Engine With Adaptive Mesh Refinement," *Journal of Energy Resources Technology*, 143(11), 2021. DOI: 10.1115/1.4050590

728. **Stony Brook University; Lawrence Livermore National Laboratory**
Guleria, G., Lopez-Pintor, D., Dec, J.E., and Assanis, D., "A Comparative Study of Gasoline Skeletal Mechanisms Under Partial Fuel Stratification Conditions Using Large Eddy Simulations," *International Journal of Engine Research*, 2021.
729. **Texas Tech University; Zhejiang University; China University of Petroleum; Huazhong University of Science and Technology**
Ge, H., Chen, L., Xu, C., and Cui, X., "Large-Eddy Simulation of Droplet-Laden Cough Jets With a Realistic Manikin Model," *Indoor and Built Environment*, 2021. DOI: 10.1177/1420326X211032247
730. **Argonne National Laboratory; Parallel Works Inc.; Convergent Science**
Owoyele, O., Pal, P., Torreira, A.V., Probst, D., Shaxted, M., Wilde, M., and Senecal, P.K., "Application of an Automated Machine Learning-Genetic Algorithm (AutoML-GA) Coupled With Computational Fluid Dynamics Simulations for Rapid Engine Design Optimization," *International Journal of Engine Research*, 2021. DOI: 10.1177/14680874211023466
731. **RWTH Aachen University**
Metin, K., "Experimental Investigation of Advanced Low-Temperature Combustion Concepts for Compression Ignition Engines," Ph.D. thesis, RWTH Aachen University, Aachen, Germany, 2020 https://web.archive.org/web/20210407031739id_/https://publications.rwth-aachen.de/record/814150/files/814150.pdf.
732. **Batman University; Marmara University**
Şener, R. and Gül, M.Z., "Optimization of the Combustion Chamber Geometry and Injection Parameters on a Light-Duty Diesel Engine for Emission Minimization Using Multi-Objective Genetic Algorithm," *Fuel*, 304, 2021. DOI: 10.1016/j.fuel.2021.121379
733. **General Motors**
Warey, A., Gao, J., and Grover, R., "Prediction of Engine-Out Emissions Using Deep Convolutional Neural Networks," SAE Paper 2021-01-0414, 2021. DOI: 10.4271/2021-01-0414
734. **ETH Zurich**
Geringer, S., "Influence of Radiative Heat Transfer on NOx and Soot Formation in Large Two-Stroke Marine Diesel Engines," Ph.D. thesis, ETH Zurich, Zürich, Switzerland, 2021 <https://doi.org/10.3929/ethz-b-000489745>.
735. **Argonne National Laboratory**
Guo, H., Nocivelli, L., and Torelli, R., "Numerical Study on Spray Collapse Process of ECN Spray G Injector Under Flash Boiling Conditions," *Fuel*, 290, 2021. DOI: 10.1016/j.fuel.2020.119961
736. **Indian Institute of Technology Madras**
Bhaduri, S. and Mallikarjuna, J.M., "Effect of Fuel Injection Mode on Performance and Emission Characteristics of a Spark-Ignition Engine—A Computational Fluid Dynamics Analysis," SAE Paper 2021-01-5065, 2021. DOI: 10.4271/2021-01-5065
737. **Convergent Science**
Sukheswalla, P., Raju, M., Wang, C., Attal, N., and Srivastava, K., "Application of Nonlinear Krylov Solvers for Conjugate Heat Transfer Simulations of Electrical Battery Packs," *Journal of Thermal Science and Engineering Applications*, 14(2), 2022. DOI: 10.1115/1.4051372
738. **National Research Council, Canada; University of Manitoba**
Yousefi, A., Guo, H., Birouk, M., Liko, B., and Lafrance, S., "Effect of Post-Injection Strategy on Greenhouse Gas Emissions of Natural Gas/Diesel Dual-Fuel Engine at High Load Conditions," *Fuel*, 290, 2021. DOI: 10.1016/j.fuel.2020.120071
739. **Michigan State University**
Chowdhury, S.S., Kharazmi, A., Atis, C., and Schock, H., "Three-Dimensional Multi-Phase Physics-Based Modeling Methodology to Study Engine Cylinder-Kit Assembly Tribology and Design Considerations-Part I," SAE Paper 2020-01-2230, 2020. DOI: 10.4271/2020-01-2230

740. **Michigan State University**
Chowdhury, S.S., Schock, H., and Kharazmi, A., "The Effect of Ring-Groove Geometry on Engine Cylinder-Kit Assembly Using Three-Dimensional Multiphase Physics-Based Modeling Methodology - Part II," SAE Paper 2021-01-0645, 2021. DOI: 10.4271/2021-01-0645
741. **University of Massachusetts Amherst; Convergent Science; Sandia National Laboratories**
Haghshenas, M., Mitra, P.P., Wang, C., Tagliante, F., Pickett, L., and Schmidt, D.P., "Improved Methods for Mixing-Limited Spray Modeling," *ILASS-Americas 31st Annual Conference on Liquid Atomization and Spray Systems*, Online, May 17–19, 2021.
742. **Convergent Science; Munzur University**
Anumolu, C.R. and Akkurt, N., "Towards Scalable Framework for Photo-Realistic Rendering of CFD Results," *ILASS-Americas 31st Annual Conference on Liquid Atomization and Spray Systems*, Online, May 17–19, 2021.
743. **Argonne National Laboratory**
Mondal, S., Lusch, B., Maulik, R., Torelli, R., and Magnotti, G.M., "Exploration of Transfer Learning for Prediction of Transient Injection Maps," *ILASS-Americas 31st Annual Conference on Liquid Atomization and Spray Systems*, Online, May 17–19, 2021.
744. **Argonne National Laboratory**
Rachakonda, S.K. and Magnotti, G.M., "Cavitation Erosion Modeling of Multi-Component Diesel Surrogates," *ILASS-Americas 31st Annual Conference on Liquid Atomization and Spray Systems*, Online, May 17–19, 2021.
745. **Università degli Studi di Perugia; Istituto Motori CNR**
Zembi, J., Mariani, F., Battistoni, M., Irimescu, A., and Merola, S., "Numerical Investigation of Water Injection Effects on Flame Wrinkling and Combustion Development in a GDI Spark Ignition Optical Engine," SAE Paper 2021-01-0465, 2021. DOI: 10.4271/2021-01-0465
746. **Politecnico di Torino**
Goel, P., Baratta, M., Misul, D., Christou, P., and Ravet, F., "Mixture Formation and Combustion Behaviour Analysis in a DI NG Engine With Centrally Mounted Injector Under Different Injection Timings," *International Journal of Mechanics and Control*, 21(1), 167-178, 2020.
747. **King Abdullah University of Science and Technology; Saudi Aramco**
Tang, Q., Liu, X., Raman, V., Shi, H., Chang, J., Im, H.G., and Johansson, B., "Effects of Fuel Trapping in Piston Crevice on Unburned Hydrocarbon Emissions in Early-Injection Compression Ignition Engines," *Combustion and Flame*, 231, 2021. DOI: 10.1016/j.combustflame.2021.111496
748. **King Abdullah University of Science and Technology; Saudi Aramco**
Silva, M., Sanal, S., Hlaing, P., Cenker, E., Johansson, B., and Im, H.G., "A Computational Investigation of Fuel Enrichment in the Pre-Chamber on the Ignition of the Main Chamber Charge," SAE Paper 2021-01-0523, 2021. DOI: 10.4271/2021-01-0523
749. **King Abdullah University of Science and Technology; Volvo Group**
Goyal, H., Nyrenstedt, G., Cabezas, K.M., Panthi, N., Im, H.G., Andersson, A., and Johansson, B., "A Simulation Study to Understand the Efficiency Analysis of Multiple Injectors for the Double Compression Expansion Engine (DCEE) Concept," SAE Paper 2021-01-0444, 2021. DOI: 10.4271/2021-01-0444
750. **King Abdullah University of Science and Technology**
Goyal, H., Jimenez, C.A., Gustav, N., Im, H.G., and Johansson, B., "Energy Distribution Analysis of Multiple Injectors for the Double Compression Expansion Engine Concept," *SAE International Journal of Engines*, 14(6), 2021. DOI: 10.4271/03-14-06-0048
751. **King Abdullah University of Science and Technology; Saudi Aramco**
Silva, M., Sanal, S., Hlaing, P., Cenker, E., Johansson, B., and Im, H.G., "Effects of Geometry on Passive Pre-Chamber Combustion Characteristics," SAE Paper 2020-01-0821, 2020. DOI: 10.4271/2020-01-0821

752. **King Abdullah University of Science and Technology; Saudi Aramco**
Sanal, S., Silva, M., Hlaing, P., Cenker, E., Johansson, B., and Im, H.G., "A Numerical Study on the Ignition of Lean CH₄/Air Mixture by a Pre-Chamber-Initiated Turbulent Jet," SAE Paper 2020-01-0820, 2020. DOI: 10.4271/2020-01-0820
753. **King Abdullah University of Science and Technology**
Babayev, R., Nyrenstedt, G., and Johansson, B., "Computational Study of a Multiple Fuel Injector Concept Under High-Load and High-EGR Conditions," SAE Paper 2020-01-2034, 2020. DOI: 10.4271/2020-01-2034
754. **Texas Tech University; The University of Tennessee, Knoxville**
Ge, H., He, R., and Zhao, P., "A Binary Soot Model for Engine Combustion," *12th U.S. National Combustion Meeting*, Online, May 24–26, 2021.
755. **ClearFlame Engines, Inc.**
Blumreiter, J. and Johnson, B., "Heavy Duty Diesel Engines Operating on 100% Methanol for Lower Cost and Cleaner Emissions," *Methanol: A Sustainable Transport Fuel for CI Engines*, eds. Agarwal, A.K., Valera, H., Pexa, M., and Čedík, J., Springer, 2021. DOI: 10.1007/978-981-16-1280-0_8
756. **Argonne National Laboratory**
Kim, J., Scarcelli, R., Som, S., Shah, A., Biruduganti, M.S., and Longman, D.E., "Numerical Investigation of a Fueled Pre-Chamber Spark-Ignition Natural Gas Engine," *International Journal of Engine Research*, 2021. DOI: 10.1177/14680874211020180
757. **Texas Tech University; The University of Tennessee, Knoxville**
Ge, H., Lee, B., Parameswaran, S., and Zhao, P., "Combustion, Knock and Emissions in a Port-Fueled Spark-Ignition Hydrogen Engine: A CFD Study," *12th U.S. National Combustion Meeting*, Online, May 24–26, 2021.
758. **Texas Tech University; The University of Tennessee, Knoxville**
Ge, H., Bakir, A.H., Parameswaran, S., and Zhao, P., "Optimization of Pre-Chamber Geometry Using CFD, Machine Learning, Bayesian Updating, and Genetic Algorithm," *12th U.S. National Combustion Meeting*, Online, May 24–26, 2021.
759. **Ganpat University; National Institute of Technology, Surat; Gdhyana Sanshodhana Nagari Foundation**
Dave, H., Sutaria, B., and Patel, B., "An Approach to Improve Smoke–Fuel Consumption Trade-Off Under Pilot Injection Mode in a Diesel Engine—Experimental and Numerical Study," *Alternative Fuels and Advanced Combustion Techniques as Sustainable Solutions for Internal Combustion Engines*, eds. Singh, A.P., Kumar, D., and Agarwal, A.K., Springer, 2021. DOI: 10.1007/978-981-16-1513-9_15
760. **Shandong Jiaotong University; Harbin Engineering University**
Li, Y., Liu, B., Wang, M., Liu, G., and Dong, Q., "Experimental and Numerical Investigation of the Shock Wave Induced by a High-Pressure Diesel Spray," *IEEE Access*, 9, 70472–70478, 2021. DOI: 10.1109/ACCESS.2021.3077978
761. **Cummins Inc.; Indian Institute of Technology Bombay**
Duvvuri, P.P., Shrivastava, R.K., and Sreedhara, S., "Comparison of Soot Models for Reacting Sprays in Diesel Engine-Like Conditions," *Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering*, 2021. DOI: 10.1177/09544070211015490
762. **Argonne National Laboratory**
Owoyele, O., Nunno, A.C., Pal, P., and Kundu, P., "A Posteriori Validation of a Data-Driven Mixture of Experts Approach for Tabulation of Combustion Manifolds," *12th U.S. National Combustion Meeting*, Online, May 24–26, 2021.

763. **IAV GmbH; Technische Universität Berlin**
Wöbke, M., Auger, K., Rieß, M., and Sens, M., "Numerical Investigations of the Early Flame Propagation of a Pre-Chamber Ignition System in a High Pressure Combustion Cell," *Spannungsfeld Fahrzeugantriebe – Gedenkschrift Für Prof. Dr.-Ing. Roland Baar*, eds. Salomon, A., Jander, B., Savic, B., Gern, M.S., Brodbeck, P., Nett, O., Werner, M., Winkler, H., Kauf, M., Inci, F., Krebs, S., and Biet, C., Universitätsverlag der TU Berlin, 2020. DOI: 10.14279/depositonce-9822
764. **The University of Texas at Austin**
Kim, K., Tambasco, C., Hall, M., and Matthews, R., "Experimental and Modeling Study of Spark Plug Electrode Heat Transfer and Thermal Energy Deposition," SAE Paper 2021-01-0480, 2021. DOI: 10.4271/2021-01-0480
765. **The University of Texas at Austin; Cummins Inc.**
Kim, K., Tambasco, C., Hall, M., Matthews, R., Joshi, S., Sprunger, D.L., and O'Connor, D., "Multi-Dimensional Spark Ignition Model With Distributed Energy Input and Integrated Circuit Model," SAE Paper 2021-01-0405, 2021. DOI: 10.4271/2021-01-0405
766. **Argonne National Laboratory; Convergent Science; Air Force Research Laboratory**
Pal, P., Kumar, G., Drennan, S.A., Rankin, B.A., and Som, S., "Multidimensional Numerical Simulations of Reacting Flow in a Non-Premixed Rotating Detonation Engine," *ASME Turbo Expo 2019: Turbomachinery Conference and Exposition*, GT2019-91931, Phoenix, AZ, United States, Jun 17–21, 2019. DOI: 10.1115/GT2019-91931
767. **Argonne National Laboratory**
Milan, P.J., Mondal, S., Torelli, R., Lusch, B., Maulik, R., and Magnotti, G.M., "Data-Driven Modeling of Large-Eddy Simulations for Fuel Injector Design," *AIAA SciTech 2021 Forum*, AIAA 2021-1016, Online, Jan 11–21, 2021. DOI: 10.2514/6.2021-1016
768. **The University of Melbourne; Continental; KU Leuven**
Yosri, M.R., Ho, J.Z., Meulemans, M., Talei, M., Gordon, R.L., Brear, M.J., Cosby, D., and Lacey, J.S., "Large-Eddy Simulation of Methane Direct Injection Using the Full Injector Geometry," *Fuel*, 290, 2021. DOI: 10.1016/j.fuel.2020.120019
769. **Tsinghua University; Aramco Americas; FAWDE; WFIERI FAW; Shandong Chambroad Petrochemicals**
Guo, Z., He, X., Pei, Y., Chang, C.-T., Wang, P., Sun, X., Wang, B., Liu, S., Wang, Z., and Shuai, S., "Optimization of Piston Bowl Geometry for a Low Emission Heavy-Duty Diesel Engine," SAE Paper 2020-01-2056, 2020. DOI: 10.4271/2020-01-2056
770. **Shanghai Jiao Tong University**
He, R., Yi, P., Li, T., Zhou, X., and Gu, Y., "Evaluations of the KH-RT Breakup and Dynamic Structure SGS Models for Evaporating Sprays Under Diesel Engine-Like Conditions," *Atomization and Sprays*, 30(3), 189-212, 2020. DOI: 10.1615/AtomizSpr.2020033585
771. **CMT-Motores Térmicos; Groupe Renault**
López, J.J., Novella, R., Gomez-Soriano, J., Martinez-Henandiz, P.J., Rampanarivo, F., Libert, C., and Dabiri, M., "Advantages of the Unscavenged Pre-Chamber Ignition System in Turbocharged Natural Gas Engines for Automotive Applications," *Energy*, 218, 2021. DOI: 10.1016/j.energy.2020.119466
772. **Southwest Research Institute**
Moiz, A.A., Cung, K., Briggs, T., and Bitsis, D.C., "Investigation of Gasoline Compression Ignition in a Heavy-Duty Diesel Engine Using Computational Fluid Dynamics," SAE Paper 2021-01-0493, 2021. DOI: 10.4271/2021-01-0493
773. **Southwest Research Institute; Convergent Science**
Abidin, Z., Morris, A., Miwa, J., Sadique, J., and Wang, Y., "FSI - MRF Coupling Approach for Faster Turbocharger 3D Simulation," SAE Paper 2019-01-0007, 2019. DOI: 10.4271/2019-01-0007

774. IFP Energies nouvelles

Ding, Z., Truffin, K., Jay, S., and Sinoquet, D., "Uncertainty and Sensitivity Analysis in Turbulent Pipe Flow Simulation," *14th World Congress on Computational Mechanics*, Online, Jan 11–15, 2021.

775. Universitat Politècnica de València

Cornejo, J.E.E., "Modelling of Heat Losses Through Coated Cylinder Walls and Their Impact on Engine Performance," Ph.D. thesis, Universitat Politècnica de València, Valencia, Spain, 2021

[https://riunet.upv.es/bitstream/handle/10251/165244/Escalona%20-](https://riunet.upv.es/bitstream/handle/10251/165244/Escalona%20-%20Modelling%20of%20heat%20losses%20through%20coated%20cylinder%20walls%20and%20their%20impact%20on%20engine%20performance%20sequence=1)

[%20Modelling%20of%20heat%20losses%20through%20coated%20cylinder%20walls%20and%20their%20impact%20on%20engine%20performance%20sequence=1](https://riunet.upv.es/bitstream/handle/10251/165244/Escalona%20-%20Modelling%20of%20heat%20losses%20through%20coated%20cylinder%20walls%20and%20their%20impact%20on%20engine%20performance%20sequence=1).

776. Seoul National University

Kim, M. and Song, H.H., "The Study of the Fundamental Characteristics of Tumble in a Spark-Ignition Engine via Numerical Analysis," SAE Paper 2021-01-0408, 2021. DOI: 10.4271/2021-01-0408

777. Seoul National University; Hyundai Motor Company

Lee, S., Ko, I., Kim, W., Song, S., Min, K., Lee, J., Oh, H., Son, J., and Kim, Y., "Analysis of the Correlation Between Flow and Combustion Characteristics in Spark-Ignited Engine," SAE Paper 2021-01-0463, 2021. DOI: 10.4271/2021-01-0463

778. IFP Energies nouvelles; Convergent Science

Mehl, C., Liu, S., and Colin, O., "A Strategy to Couple Thickened Flame Model and Adaptive Mesh Refinement for the LES of Turbulent Premixed Combustion," *Flow, Turbulence and Combustion*, 2021. DOI: 10.1007/s10494-021-00261-2

779. Clemson University; Oak Ridge National Laboratory; Daimler Trucks North America

Moser, S., Edwards, K.D., Schoeffler, T., and Filipi, Z., "CFD/FEA Co-Simulation Framework for Analysis of the Thermal Barrier Coating Design and Its Impact on the HD Diesel Engine Performance," *Energies*, 14(8), 2021. DOI: doi.org/10.3390/en14082044

780. King Abdullah University of Science and Technology; Volvo Group

Jiménez, C.D.A., Nyrenstedt, G., Goyal, H., Andersson, A., Im, H.G., and Johansson, B., "Effects of Multiple Injectors on Spray Characteristics and Efficiency in Internal Combustion Engines," SAE Paper 2021-01-0501, 2021. DOI: 10.4271/2021-01-0501

781. University of Wisconsin–Madison

Ravindran, A.C. and Kokjohn, S.L., "Combining Machine Learning With 3D-CFD Modeling for Optimizing a DISI Engine Performance During Cold-Start," *Energy and AI*, 5, 2021. DOI: 10.1016/j.egyai.2021.100072

782. King Abdullah University of Science and Technology; Volvo Group; Chalmers University of Technology

Babayev, R., Andersson, A., Dalmau, A.S., Im, H.G., and Johansson, B., "Computational Characterization of Hydrogen Direct Injection and Nonpremixed Combustion in a Compression-Ignition Engine," *International Journal of Hydrogen Energy*, 2021. DOI: 10.1016/j.ijhydene.2021.02.223

783. Universitat Politècnica de València; POWERTECH Engineering

Margot, X., Escalona, J., and Bianco, A., "Development of a Novel Numerical Methodology for the Assessment of Insulating Coating Performance in Internal Combustion Engines," SAE Paper 2021-01-0413, 2021. DOI: 10.4271/2021-01-0413

784. Tianjin University

Jin, S., Li, J., Deng, L., and Wu, B., "Effect of the HPDI and PPCI Combustion Modes of Direct-Injection Natural Gas Engine on Combustion and Emissions," *Energies*, 14(7), 2021. DOI: 10.3390/en14071957

785. Gamma Technologies

Paes, P.L.K., Vijay, D., Kanani, Y., Framke, N.-H., Harnish, S., and Spasov, M., "Development and Validation of an Accurate 1D Model for Pressure Drop in Complex Coolant Piping Systems of Hybrid and Electric Vehicles," SAE Paper 2021-01-0390, 2021. DOI: 10.4271/2021-01-0390

786. **Aramco Research Center**
Zhang, Y. and Sellnau, M., "A Computational Investigation of PPCI-Diffusion Combustion Strategy at Full Load in a Light-Duty GCI Engine," SAE Paper 2021-01-0514, 2021. DOI: 10.4271/2021-01-0514
787. **Università degli Studi di Perugia; Convergent Science; Universidad de Oviedo; IFP Energies nouvelles**
Zembi, J., Battistoni, M., Nambully, S.K., Pandal, A., Mehl, C., and Colin, O., "LES Investigation of Cycle-to-Cycle Variation in a SI Optical Access Engine Using TFM-AMR Combustion Model," *International Journal of Engine Research*, 2021. DOI: 10.1177/14680874211005050
788. **Saudi Aramco**
Badra, J., Alhussaini, A., Sim, J., Viollet, Y., and Amer, A., "Parametric Study to Optimize Gasoline Compression Ignition Operation Under Low Load Condition Using CFD," SAE Paper 2021-01-0440, 2021. DOI: 10.4271/2021-01-0440
789. **Texas Tech University; Virtual Thermal Fluids, LLC; Oakland University**
Ge, H. and Zhao, P., "A Comprehensive Ignition System Model for Spark Ignition Engine Combustion Simulations," *2018 Spring Technical Meeting of the Central States Section of the Combustion Institute*, Minneapolis, MN, United States, May 20–22, 2018.
790. **Marmara University**
Sener, R., Yangaz, M.U., and Gul, M.Z., "Effects of Injection Strategy and Combustion Chamber Modification on a Single-Cylinder Diesel Engine," *Fuel*, 266, 2020. DOI: 10.1016/j.fuel.2020.117122
791. **Technische Universität München**
Fankl, S., Gleis, S., Karmann, S., Prager, M., and Wachtmeister, G., "Investigation of Ammonia and Hydrogen as CO₂-Free Fuels for Heavy Duty Engines Using a High Pressure Dual Fuel Combustion Process," *International Journal of Engine Research*, 2020. DOI: 10.1177/1468087420967873
792. **Technische Universität München**
Frankl, S. and Gleis, S., "Development of a 3D-Computational Fluid Dynamics Model for a Full Optical High-Pressure Dual-Fuel Engine," *SAE International Journal of Engines*, 13(2), 241-252, 2020. DOI: 10.4271/03-13-02-0017
793. **Technische Universität München**
Frankl, S.G., Gelner, A.D., Gleis, S., Härtl, M., and Wachtmeister, G., "Numerical Study on Renewable and Sustainable Fuels for HPDF Engines," *ASME 2020 Power Conference*, POWER2020-16438, Online, Aug 4–5, 2020. DOI: 10.1115/POWER2020-16438
794. **RWTH Aachen University; University of Stuttgart**
Pischinger, S., Pitsch, H., Heufer, K.A., and Bargende, M., "Further Development of Knock Models for the 0D/1D Simulation for Today and Future Requirements," *FVV Spring Conference 2021*, No. 1313, Online, Mar 22–26, 2021.
795. **RWTH Aachen University; FEV Europe GmbH**
Esposito, S., Mally, M., Cai, L., Pitsch, H., and Pischinger, S., "Validation of a RANS 3D-CFD Gaseous Emission Model With Space-, Species-, and Cycle-Resolved Measurements From an SI DI Engine," *Energies*, 13(17), 2020. DOI: 10.3390/en13174287
796. **RWTH Aachen University**
Deshmukh, A.Y., Davidovic, M., Grenga, T., Schumacher, L., Kirsch, V., Palmer, J., Reddemann, M.A., Hofmeister, M., Wildenberg, A., Jacobs, S., vom Lehn, F., Cai, L., Ottenwälder, T., Pischinger, S., Leonhard, K., Heufer, K.A., Schmitz, K., Kneer, R., and Pitsch, H., "Bio-Hybrid Fuels: From Molecular Structure to Combustion and Emissions," *8th International Conference: Fuel Science – From Production to Propulsion*, Aachen, Germany, Jun 23–25, 2020.
797. **Aristotle University of Thessaloniki**
Savvakis, S., Mertzis, D., Nassiopoulou, E., and Samaras, Z., "A Design of the Compression Chamber and Optimization of the Sealing of a Novel Rotary Internal Combustion Engine Using CFD," *Energies*, 13(9), 2020. DOI: 10.3390/en13092362

798. **General Motors R&D**
Yang, X., Gupta, S., Kuo, T.-W., and Gopalakrishnan, V., "RANS and Large Eddy Simulation of Internal Combustion Engine Flows—A Comparative Study," *Journal of Engineering for Gas Turbines and Power*, 136(5), 2014. DOI: 10.1115/1.4026165
799. **Tsinghua University**
Wang, Y., Qi, Y., Xiang, S., Mével, R., and Wang, Z., "Shock Wave and Flame Front Induced Detonation in a Rapid Compression Machine," *Shock Waves*, 28, 1109–1116, 2018. DOI: 10.1007/s00193-018-0832-2
800. **University of California, Berkeley; University of Zagreb; Lawrence Berkeley National Laboratory**
Vuilleumier, D., Taritas, I., Wolk, B., Kozarac, D., Saxena, S., and Dibble, R.W., "Multi-Level Computational Exploration of Advanced Combustion Engine Operating Strategies," *Applied Energy*, 184, 1273-1283, 2016. DOI: 10.1016/j.apenergy.2016.05.043
801. **Oakland University; Texas Tech University**
Tao, M., Ge, H., and Zhao, P., "Near Wall Flame Quenching by a Liquid Fuel Film," *2018 Spring Technical Meeting of the Central States Section of the Combustion Institute*, Minneapolis, MN, United States, May 20–22, 2018.
802. **Argonne National Laboratory; University of Illinois at Chicago**
Som, S., Ramirez, A.I., Longman, D.E., and Aggarwal, S.K., "Effect of Nozzle Orifice Geometry on Spray, Combustion, and Emission Characteristics Under Diesel Engine Conditions," *Fuel*, 90(3), 1267-1276, 2011. DOI: 10.1016/j.fuel.2010.10.048
803. **Wayne State University**
Seyedi, S.H., Antony, H., and Eagle, W.E., "Numerical Study of Cone-Angle Effect on Spray "A" Ignition Delay," *2018 Spring Technical Meeting of the Central States Section of the Combustion Institute*, Minneapolis, MN, United States, May 20–22, 2018.
804. **Wayne State University; Army Research Laboratory**
Piehl, J.A., Bravo, L., and Abianeh, O.S., "Effects of Reaction Rates Uncertainties on Turbulent Spray Combustion Simulation," *2018 Spring Technical Meeting of the Central States Section of the Combustion Institute*, Minneapolis, MN, United States, May 20, 2018.
805. **King Abdullah University of Science and Technology; Saudi Aramco**
Mohan, B., Jaasim, M., Perez, F.H., Sim, J., Roberts, W., and Im, H., "Internal and Near Nozzle Flow Simulations of Gasoline Multi-Hole Injector (ECN Spray G) With Transient Needle Motion," *10th International Symposium on Cavitation*, CAV18-05120, Baltimore, MD, United States, May 14–16, 2018. DOI: 10.1115/1.861851_ch112
806. **Argonne National Laboratory; North Carolina State University**
Kundu, P., Scroggins, J., and Ameen, M.M., "A Novel In Situ Flamelet Tabulation Methodology for the Representative Interactive Flamelet Model," *Combustion Science and Technology*, 192(1), 2018. DOI: 10.1080/00102202.2018.1539715
807. **RWTH Aachen University**
Kruse, S., Kerschgens, B., Berger, L., Varea, E., and Pitsch, H., "Experimental and Numerical Study of MILD Combustion for Gas Turbine Applications," *Applied Energy*, 148, 456-465, 2015. DOI: 10.1016/j.apenergy.2015.03.054
808. **Purdue University; Convergent Science**
Hasti, V.R., Lucht, R.P., Gore, J.P., Kumar, G., and Liu, S., "Large Eddy Simulation of Pilot Stabilized Turbulent Premixed CH₄+Air Jet Flames," *2018 AIAA Aerospace Sciences Meeting*, AIAA 2018-0675, Kissimmee, FL, United States, Jan 8–12, 2018. DOI: 10.2514/6.2018-0675
809. **FEV**
Dahodwala, M., Joshi, S., Koehler, E., Franke, M., and Tomazic, D., "Experimental and Computational Analysis of Diesel-Natural Gas RCCI Combustion in Heavy-Duty Engines," *SAE Paper 2015-01-0849*, 2015. DOI: 10.4271/2015-01-0849

810. **Sepuluh Nopember Institute of Technology**
Felayati, F.M., Semin, and Cahyono, B., "Methane Emissions Evaluation on Natural Gas/Diesel Dual-Fuel Engine During Scavenging Process," *IOP Conference Series: Earth and Environmental Science*, 698, 2021. DOI: 10.1088/1755-1315/698/1/012036
811. **Marquette University**
Dempsey, A.B., Zeman, J., and Wall, M., "A System to Enable Mixing Controlled Combustion With High Octane Fuels Using a Prechamber and High-Pressure Direct Injector," *Frontiers in Mechanical Engineering*, 2021. DOI: 10.3389/fmech.2021.637665
812. **Guangxi University; Guangxi Yuchai Machinery Group Co., Ltd.; Zhengzhou Yutong Bus Co., Ltd.**
Chen, Y., Huang, H., Li, Z., Wang, H., Hao, B., Chen, Y., Huang, G., and Guo, X., "Study of Reducing Deposits Formation in the Urea-SCR System: Mechanism of Urea Decomposition and Assessment of Influential Parameters," *Chemical Engineering Research and Design*, 164, 311-323, 2020. DOI: 10.1016/j.cherd.2020.10.010
813. **Southwest Research Institute**
Cung, K., Moiz, A., Smith, M., Bitsis, C., Briggs, T., and Miwa, J., "Gasoline Compression Ignition (GCI) Combustion of Pump-Grade Gasoline Fuel Under High Compression Ratio Diesel Engine," *Transportation Engineering*, 2021. DOI: 10.1016/j.treng.2021.100066
814. **Shanghai Jiao Tong University**
Yang, T., Yi, R., Wang, Q., and Chen, C.-P., "Modeling Spray Combustion Using Multi-Component Surrogate Fuels," *Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy*, 2021. DOI: 10.1177/09576509211002575
815. **Alexandria University; Coventry University; Saudi Aramco; Arab Academy for Science, Technology & Maritime Transport; University of Brighton; King Abdullah University of Science and Technology; Egypt-Japan University of Science and Technology**
Kabil, I., Al Qubeissi, M., Badra, J., Abdelghaffar, W., Eldrainy, Y., Sazhin, S.S., Im, H.G., and Elwardany, A., "An Improved Prediction of Pre-Combustion Processes, Using the Discrete Multicomponent Model," *Sustainability*, 13(5), 2021. DOI: 10.3390/su13052937
816. **Texas Tech University; Oakland University**
Ge, H., Bakir, A.H., Yadav, S., Kang, Y., Parameswaran, S., and Zhao, P., "CFD Optimization of the Pre-Chamber Geometry for a Gasoline Spark Ignition Engine," *Frontiers in Mechanical Engineering*, 2021. DOI: 10.3389/fmech.2020.599752
817. **Southwest Research Institute; Michigan Technological University**
Cung, K.D., Moiz, A.A., Zhu, X., and Lee, S.-Y., "Ignition Process and Flame Lift-Off Characteristics of Dimethyl Ether (DME) Reacting Spray," *Frontiers in Mechanical Engineering*, 2021. DOI: 10.3389/fmech.2021.547204
818. **State Key Laboratory of Power System of Tractor; Xi'an Jiaotong University; Wuhan University of Technology**
Wang, M., Liu, X., Bao, J., Li, Z., and Hu, J., "Simulation Study on Prediction of Urea Crystallization of a Diesel Engine Integrated After-Treatment Device," *ACS Omega*, 6(10), 6747-6756, 2021. DOI: 10.1021/acsomega.0c05785
819. **Amrita Vishwa Vidyapeetham; Renault Nissan Technology and Business Centre India**
Srujan, V.G., Subramanian, D., Nagaraja, S.R., Rathinam, B., and Ravet, F., "Validation of Eulerian-Lagrangian Spray Atomization Modeling Against Gasoline Fuel," *SAE Paper 2021-01-5027*, 2021. DOI: 10.4271/2021-01-5027
820. **Beijing Institute of Technology; Collaborative Innovation Center of Electric Vehicles in Beijing**
Wang, H., Ji, C., Shi, C., Wang, S., Yang, J., and Ge, Y., "Investigation of the Gas Injection Rate Shape on Combustion, Knock and Emissions Behavior of a Rotary Engine With Hydrogen Direct-Injection Enrichment," *International Journal of Hydrogen Energy*, 2021. DOI: 10.1016/j.ijhydene.2021.01.234

821. **University of Minnesota**
Narayanan, S.R. and Yang, S., "Airborne Transmission of Virus-Laden Aerosols Inside a Music Classroom: Effects of Portable Purifiers and Aerosol Injection Rates," *Physics of Fluids*, 33, 2021. DOI: 10.1063/5.0042474
822. **CMT-Motores Térmicos**
Broatch, A., Novella, R., García-Tíscar, J., and Gomez-Soriano, J., "On the Shift of Acoustic Characteristics of Compression-Ignited Engines When Operating With Gasoline Partially Premixed Combustion," *Applied Thermal Engineering*, 146, 223-231, 2019. DOI: 10.1016/j.applthermaleng.2018.09.089
823. **Technion – Israel Institute of Technology**
Pisnoy, S. and Tartakovsky, L., "Numerical Investigation of the Combined Influence of Three-Plug Arrangement and Slot Positioning on Wankel Engine Performance," *Energies*, 14(4), 2021. DOI: 10.3390/en14041130
824. **King Abdullah University of Science and Technology**
Babayev, R., "Hydrogen Combustion Versus Diesel Isobaric Combustion in the Double Compression-Expansion Engine," Ph.D. thesis, King Abdullah University of Science and Technology, Thuwal, Saudi Arabia, 2020 <https://doi.org/10.25781/KAUST-2R534>.
825. **Huazhong University of Science and Technology; Texas Tech University; Shanghai Jiao Tong University**
Cui, X., Ge, H., Wu, W., Feng, Y., and Wang, J., "LES Study of the Respiratory Airflow Field in a Whole-Lung Airway Model Considering Steady Respiration," *Journal of the Brazilian Society of Mechanical Sciences and Engineering*, 43, 2021. DOI: 10.1007/s40430-021-02871-3
826. **Tongji University; Smapow Engine Company; Xi'an Jiaotong University**
Wu, Z., Han, Z., Shi, Y., Liu, W., Zhang, J., Huang, Y., and Meng, S., "Combustion Optimization for Fuel Economy Improvement of a Dedicated Range-Extender Engine," *Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering*, 2021. DOI: 10.1177/0954407021993620
827. **Hebei University of Technology; Shandong University; China Automotive Technology & Research Center Co., Ltd.**
Li, M., Zhang, Y., Liu, X., Zhang, Q., and Li, Z., "Numerical Investigation on the Urea Deposit Formation Process in a Selective Catalytic Reduction System of a Diesel Engine Based on a Fluid-Solid Coupling Method," *ACS Omega*, 2021. DOI: 10.1021/acsomega.1c00021
828. **Université de Pau et des Pays de l'Adour**
Afailal, A.H., "Numerical Simulation of Non-Reactive Aerodynamics in Internal Combustion Engines Using a Hybrid RANS/LES Approach," Ph.D. thesis, Université de Pau et des Pays de l'Adour, Pau, France, 2020.
829. **Colorado State University**
Castro, M.V., "Computer-Aided Engineering and Design of Internal Combustion Engines to Support Operation on Non-Traditional Fuels," M.S. thesis, Colorado State University, Fort Collins, CO, United States, 2020 <https://search.proquest.com/openview/624ad3b9d1f3502abccf0b6249a631f2/1?pq-origsite=gscholar&cbl=18750&diss=y>.
830. **Convergent Science**
Xie, S., "An Actuator-Line Model With Lagrangian-Averaged Velocity Sampling and Piecewise Projection for Wind Turbine Simulations," *Wind Energy*, 2021. DOI: 10.1002/we.2619
831. **Inha University**
Lee, C.-E., Kim, D.-H., Yu, H., and Yoon, A.-S., "Validation of CFD Analysis and Combustion Characteristics of GP3 Rotary Engine at Firing Condition," *Journal of the Korean Society Combustion*, 25(3), 21-30, 2020. DOI: 10.15231/jksc.2020.25.3.021

832. **Universiti Kebangsaan Malaysia**
Zulkurnai, F.F., Mahmood, W.M.F.W., Taib, N.M., and Mansor, M.R.A., "Simulation of Combustion Process of Diesel and Ethanol Fuel in Reactivity Controlled Compression Ignition Engine," *CFD Letters*, 13(2), 1-11, 2021. DOI: 10.37934/cfdl.13.2.111
833. **CMT-Motores Térmicos; Argonne National Laboratory**
Broatch, A., Novella, R., García-Tíscar, J., Gomez-Soriano, J., and Pal, P., "Investigation of the Effects of Turbulence Modeling on the Prediction of Compression-Ignition Combustion Unsteadiness," *International Journal of Engine Research*, 2021. DOI: 10.1177/1468087421990478
834. **Inha University**
Lee, C.-E., Yu, H., Kim, D.-H., and Park, T., "Validation of CFD Analysis and Flow Characteristics of GP3 Rotary Engine at Motoring Condition," *Journal of the Korean Society Combustion*, 25(3), 11-20, 2020. DOI: 10.15231/jksc.2020.25.3.011
835. **Chalmers University of Technology; Winterthur Gas & Diesel Ltd.; National Technical University of Athens**
Balz, R., Nagy, I.G., Weisser, G., and Sedarsky, D., "Experimental and Numerical Investigation of Cavitation in Marine Diesel Injectors," *International Journal of Heat and Mass Transfer*, 169, 2021. DOI: 10.1016/j.jheatmasstransfer.2021.120933
836. **Argonne National Laboratory; Convergent Science; Air Force Research Laboratory**
Pal, P., Xu, C., Kumar, G., Drennan, S.A., Rankin, B.A., and Som, S., "Large-Eddy Simulation and Chemical Explosive Mode Analysis of Non-Ideal Combustion in a Non-Premixed Rotating Detonation Engine," *AIAA SciTech 2020 Forum*, AIAA 2020-2161, Orlando, FL, United States, Jan 6-10, 2020. DOI: 10.2514/6.2020-2161
837. **King Abdullah University of Science and Technology; Saudi Aramco**
Liu, X., Mohan, B., and Im, H.G., "Numerical Investigation of the Free and Ducted Fuel Injections Under Compression Ignition Conditions," *Energy Fuels*, 34(11), 14832-14842, 2020. DOI: 10.1021/acs.energyfuels.0c02757
838. **Tianjin University**
Wang, B., Yao, A., Yao, C., Chen, C., and Wang, H., "In-Depth Comparison Between Pure Diesel and Diesel Methanol Dual Fuel Combustion Mode," *Applied Energy*, 278, 2020. DOI: 10.1016/j.apenergy.2020.115664
839. **Tianjin University**
Zhu, H., Wei, J., Wang, H., and Yao, M., "Combined Effects of Fuel Reactivity and Intake Thermodynamic Conditions on Heat Release and Emissions of Compression Ignition Combustion," *Fuel*, 282, 2020. DOI: 10.1016/j.fuel.2020.118859
840. **Tianjin University; China Shipbuilding Power Engineering Institute Co., Ltd.**
Liang, X., Liu, Z., Wang, K., Wang, X., Zhu, Z., Xu, C., and Liu, B., "Impact of Pilot Injection on Combustion and Emission Characteristics of a Low-Speed Two-Stroke Marine Diesel Engine," *Energies*, 14(2), 2021. DOI: 10.3390/en14020417
841. **Argonne National Laboratory**
Owoyele, O. and Pal, P., "A Novel Machine Learning-Based Optimization Algorithm (ActivO) for Accelerating Simulation-Driven Engine Design," *Applied Energy*, 285, 2021. DOI: 10.1016/j.apenergy.2021.116455
842. **Tianjin University; King Abdullah University of Science and Technology; Brunel University London**
Li, J., Liu, H., Liu, X., Ye, Y., Wang, H., Wang, X., Zhao, H., and Yao, M., "Development of a Simplified n-Heptane/Methane Model for High-Pressure Direct-Injection Natural Gas Marine Engines," *Frontiers in Energy*, 2021. DOI: 10.1007/s11708-021-0718-3

843. **Ford Motor Company**
Yang, S., "Development of a Mechanism-Dynamic-Selection Turbulent Premixed Combustion Model With Application to Gasoline Engine Combustion and Emissions Simulation," *Combustion Theory and Modelling*, 2021. DOI: 10.1080/13647830.2020.1869309
844. **Argonne National Laboratory; U.S. Army Research Laboratory; Lawrence Livermore National Laboratory**
Kundu, P., Xu, C., Som, S., Temme, J., Kweon, C.-B.M., Lapointe, S., Kukkadapu, G., and Pitz, W.J., "Implementation of Multi-Component Diesel Fuel Surrogates and Chemical Kinetic Mechanisms for Engine Combustion Simulations," *Transportation Engineering*, 3, 2021. DOI: 10.1016/j.treng.2020.100042
845. **Convergent Science; Argonne National Laboratory; University of California, Irvine**
Jacobsohn, G.L., Sforzo, B., Kastengren, A., Tekawade, A., Powell, C.F., Leask, S.B., Li, A.K., and McDonell, V.G., "An Experimental and Numerical Investigation of Research Simplex Atomizer Sprays," *AIAA SciTech 2021 Forum*, AIAA 2021-1095, Online, Jan 11–21, 2021. DOI: 10.2514/6.2021-1095
846. **Argonne National Laboratory; Sandia National Laboratories**
Kim, J., Gururajan, V., Scarcelli, R., Biswas, S., and Ekoto, I., "Modeling Nanosecond-Pulsed Spark Discharge and Flame Kernel Evolution," *ASME 2020 Internal Combustion Engine Division Fall Technical Conference*, ICEF2020-3006, Online, Nov 4–6, 2020. DOI: 10.1115/ICEF2020-3006
847. **Argonne National Laboratory; Sandia National Laboratories**
Xu, C., Som, S., and Sjöberg, M., "Large Eddy Simulation of Lean Mixed-Mode Combustion Assisted by Partial Fuel Stratification in a Spark-Ignition Engine," *ASME 2020 Internal Combustion Engine Division Fall Technical Conference*, ICEF2020-3003, Online, Nov 4–6, 2020. DOI: 10.1115/ICEF2020-3003
848. **Aramco Services Company**
Zhang, A., Yu, X., Engineer, N., Zhang, Y., and Pei, Y., "Numerical Investigation of Pre-Chamber Jet Combustion in a Light-Duty Gasoline Engine," *ASME 2020 Internal Combustion Engine Division Fall Technical Conference*, ICEF2020-2997, Online, Nov 4–6, 2020. DOI: 10.1115/ICEF2020-2997
849. **Colorado State University; Cummins Inc.**
Bestel, D., Bayliff, S., Marchese, A., Olsen, D., Windom, B., and Xu, H., "Multi-Dimensional Modeling of the CFR Engine for the Investigation of SI Natural Gas Combustion and Controlled End-Gas Autoignition," *ASME 2020 Internal Combustion Engine Division Fall Technical Conference*, ICEF2020-2992, Online, Nov 4–6, 2020. DOI: 10.1115/ICEF2020-2992
850. **Argonne National Laboratory; Aramco Services Company; Convergent Science; FRIENDSHIP SYSTEMS AG**
Tang, M., Pei, Y., Guo, H., Zhang, Y., Torelli, R., Probst, D., Fütterer, C., and Traver, M., "Piston Bowl Geometry Effects on Gasoline Compression Ignition in a Heavy-Duty Diesel Engine," *ASME 2020 Internal Combustion Engine Division Fall Technical Conference*, ICEF2020-2990, Online, Nov 4–6, 2020. DOI: 10.1115/ICEF2020-2990
851. **Argonne National Laboratory; Aramco Services Company**
Zhao, L., Pei, Y., Zhang, Y., Kumar, P., Tzanetakis, T., Traver, M., and Ameen, M., "Numerical Evaluation of Spray-Guided Glow Plug Assistance on Gasoline Compression Ignition During Cold Idle Operation in a Heavy-Duty Diesel Engine," *ASME 2020 Internal Combustion Engine Division Fall Technical Conference*, ICEF2020-2959, Online, Nov 4–6, 2020. DOI: 10.1115/ICEF2020-2959
852. **Argonne National Laboratory; Convergent Science; ClearFlame Engines, Inc.**
Magnotti, G.M., Mohapatra, C.K., Mashayekh, A., Wijeyakulasuriya, S., Schanz, R., Blumreiter, J., Johnson, B.H., El-Hannouny, E.M., Longman, D.E., and Som, S., "Development of an Efficient Conjugate Heat Transfer Modeling Framework to Optimize Mixing-Limited Combustion of Ethanol in a Diesel Engine," *ASME 2020 Internal Combustion Engine Division Fall Technical Conference*, ICEF2020-2946, Online, Nov 4–6, 2020. DOI: 10.1115/ICEF2020-2946

853. **Convergent Science; IFP Energies nouvelles**
See, Y.C., Wang, M., Bohbot, J., and Colin, O., "Validation of Species-Based Extended Coherent Flamelet Model in a Large Eddy Simulation of a Homogeneous Charge Spark Ignition Engine," *ASME 2020 Internal Combustion Engine Division Fall Technical Conference*, ICEF2020-2942, Online, Nov 4–6, 2020. DOI: 10.1115/ICEF2020-2942
854. **Argonne National Laboratory; University of Connecticut**
Kim, S., Scarcelli, R., Wu, Y., Rohwer, J., Shah, A., Rockstroh, T., and Lu, T., "Simulations of Multi-Mode Combustion Regimes Realizable in a Gasoline Direct Injection Engine," *ASME 2020 Internal Combustion Engine Division Fall Technical Conference*, ICEF2020-2940, Online, Nov 4–6, 2020. DOI: 10.1115/ICEF2020-2940
855. **Esgee Technologies; Cummins Inc.; Convergent Science; The University of Texas at Austin**
Karpatne, A., Subramaniam, V., Joshi, S., Qin, X., Breden, D., Sofianopoulos, A., and Raja, L., "Towards Integrated Spark and Combustion Modeling for Engines," *ASME 2020 Internal Combustion Engine Division Fall Technical Conference*, ICEF2020-2934, Online, Nov 4–6, 2020. DOI: 10.1115/ICEF2020-2934
856. **University of Oxford**
Fang, X., Sekularac, N., and Davy, M.H., "Parametric Studies of a Novel Combustion Modelling Approach for Low Temperature Diesel Spray Simulation," *ASME 2020 Internal Combustion Engine Division Fall Technical Conference*, ICEF2020-2924, Online, Nov 4–6, 2020. DOI: 10.1115/ICEF2020-2924
857. **Argonne National Laboratory; Oak Ridge National Laboratory; Lawrence Livermore National Laboratory**
Yue, Z., Xu, C., Som, S., Sluder, C.S., Edwards, K.D., Whitesides, R., and Mcnenly, M.J., "A Transported Livengood-Wu Integral Model for Knock Prediction in CFD Simulation," *ASME 2020 Internal Combustion Engine Division Fall Technical Conference*, ICEF2020-2922, Online, Nov 4–6, 2020. DOI: 10.1115/ICEF2020-2922
858. **University of Michigan; Shanghai Jiao Tong University**
Liu, M., Zhao, F., Li, X., Xu, M., and Hung, D.L.S., "Dynamic Mode Decomposition for Extracting Cycle-to-Cycle Variation of SIDI Engine In-Cylinder Flow Under Motoring Condition," *ASME 2020 Internal Combustion Engine Division Fall Technical Conference*, ICEF2020-2917, Online, Nov 4–6, 2020. DOI: 10.1115/ICEF2020-2917
859. **Argonne National Laboratory; Aramco Services Company**
Torelli, R., Pei, Y., Zhang, Y., Traver, M., and Som, S., "Cavitation-Suppressing Orifice Design Applied to a Heavy-Duty Diesel Engine Injector Operating With Gasoline," *ASME 2020 Internal Combustion Engine Division Fall Technical Conference*, ICEF2020-2994, Online, Nov 4–6, 2020. DOI: 10.1115/ICEF2020-2994
860. **Argonne National Laboratory; Aramco Services Company**
Nocivelli, L., Zhang, A., Sforzo, B.A., Tekawade, A., Voice, A.K., Tang, M., Powell, C.F., Som, S., Pei, Y., and Levy, R.S., "Comparison Between a Center-Mounted and a Side-Mounted Injector for Gasoline Applications: A Computational Study," *ASME 2020 Internal Combustion Engine Division Fall Technical Conference*, ICEF2020-2991, Online, Nov 4–6, 2020. DOI: 10.1115/ICEF2020-2991
861. **Texas Tech University**
Muthukumar, R.R., Parameswaran, S., and Ge, H., "Assessment of Primary Atomization Models for Spray Simulation," *ASME 2020 Internal Combustion Engine Division Fall Technical Conference*, ICEF2020-2945, Online, Nov 4–6, 2020. DOI: 10.1115/ICEF2020-2945
862. **Michigan Technological University**
Zhao, Z., Zhao, L., and Lee, S.-Y., "Evaluation of Soot Production Near a Cold Surface for an Impinged Diesel Spray Combustion," *ASME 2020 Internal Combustion Engine Division Fall Technical Conference*, ICEF2020-2938, Online, Nov 4–6, 2020. DOI: 10.1115/ICEF2020-2938

863. **Aramco Services Company; Cummins Inc.**
Zhang, Y., Kumar, P., Tang, M., Pei, Y., Merritt, B., Traver, M., and Popuri, S., "Impact of Geometric Compression Ratio and Variable Valve Actuation on Gasoline Compression Ignition in a Heavy-Duty Diesel Engine," *ASME 2020 Internal Combustion Engine Division Fall Technical Conference*, ICEF2020-3035, Online, Nov 4–6, 2020. DOI: 10.1115/ICEF2020-3035
864. **King Abdullah University of Science and Technology**
Nyrenstedt, G., Houidi, M.B., Babayev, R., Im, H., and Johansson, B., "Computational Fluid Dynamics Investigation on Multiple Injector Concepts at Different Swirl Ratios in a Heavy Duty Engine," *ASME 2020 Internal Combustion Engine Division Fall Technical Conference*, ICEF2020-2933, Online, Nov 4–6, 2020. DOI: 10.1115/ICEF2020-2933
865. **Indian Institute of Technology Bombay; Cummins Inc.**
Krishnamoorthi, M., Sreedhara, S., and Duvvuri, P.P., "Modelling of Soot Formation and Experimental Study for Different Octane Number Fuels in Dual Fuel Combustion Engine With Diesel," *ASME 2020 Internal Combustion Engine Division Fall Technical Conference*, ICEF2020-2914, Online, Nov 4–6, 2020. DOI: 10.1115/ICEF2020-2914
866. **Colorado State University; Colorado School of Mines**
Balu, A., Castro, M., Padhi, G., Bandhauer, T., Windom, B., Garland, S., Olsen, D., and Braun, R., "Optimization and Simulation of a CFR Engine Fueled by Dilute Anode Tail-Gas," *ASME 2020 Internal Combustion Engine Division Fall Technical Conference*, ICEF2020-2971, Online, Nov 4–6, 2020. DOI: 10.1115/ICEF2020-2971
867. **University of Illinois at Chicago; Argonne National Laboratory; University of Connecticut; Lawrence Livermore National Laboratory**
Kalvakala, K.C., Pal, P., Wu, Y., Kukkadapu, G., Kolodziej, C., Gonzalez, J.P., Waqas, M.U., Lu, T., Aggarwal, S.K., and Som, S., "Numerical Analysis of Fuel Effects on Advanced Compression Ignition Using a Virtual Cooperative Fuel Research Engine Model," *ASME 2020 Internal Combustion Engine Division Fall Technical Conference*, ICEF2020-2939, Online, Nov 4–6, 2020. DOI: 10.1115/ICEF2020-2939
868. **Carnegie Mellon University**
Biwalkar, R.M., Singh, S., Sharma, N., and Talabi, S.M., "Development of a Parametric Computational Fluid Dynamics Model to Estimate Passive Aerosol Decontamination," *18th International Topical Meeting on Nuclear Reactor Thermal Hydraulics (NURETH-18)*, Portland, OR, United States, Aug 18–22, 2019.
869. **Perto Gestão de Tecnologia S.A.; University of São Paulo**
Marques, C.S.T. and da Silva, J.R.M., "Reduced Reaction Mechanisms for Ethanol Under Ultra-Lean Conditions in Internal Combustion Engines," *ACS Omega*, 2020. DOI: 10.1021/acsomega.0c04170
870. **Politecnico di Torino; Università degli Studi di Perugia; POWERTECH Engineering; PUNCH Torino S.p.A.**
Millo, F., Piano, A., Paradisi, B.P., Postrioti, L., Pieracci, L., Bianco, A., Pesce, F.C., and Vassallo, A., "Ducted Fuel Injection: Experimental and Numerical Investigation on Fuel Spray Characteristics, Air/Fuel Mixing and Soot Mitigation Potential," *Fuel*, 289, 2021. DOI: 10.1016/j.fuel.2020.119835
871. **Politecnico di Torino**
Scalambro, A., "High-Performance Gasoline Direct Injection Engine - 3D-CFD Spray and Combustion Simulation," M.S. thesis, Politecnico di Torino, Turin, Italy, 2020
<https://webthesis.biblio.polito.it/16279/1/tesi.pdf>.
872. **Convergent Science; Argonne National Laboratory**
Probst, D., Wijeyakulasuriya, S., Pal, P., Kolodziej, C., and Pomraning, E., "Accelerating Computational Fluid Dynamics Simulations of Engine Knock Using a Concurrent Cycles Approach," *ASME 2020 Internal Combustion Engine Division Fall Technical Conference*, ICEF2020-2916, Online, Nov 4–6, 2020. DOI: 10.1115/ICEF2020-2916

873. **Norwegian University of Science and Technology**
Lewandowski, M.T., Netzer, C., Emberson, D.R., and Løvås, T., "Numerical Investigation of Optimal Flow Conditions in an Optically Accessed Compression Ignition Engine," *Transportation Engineering*, 2, 2020. DOI: 10.1016/j.treng.2020.100036
874. **FEV Europe GmbH; Tongji University; RWTH Aachen University**
Wick, M., Zhu, D., Deng, J., Li, L., and Andert, J., "Analysis of Ion Current Signal During Negative Valve Overlap of HCCI Combustion With High Compression Ratio," *International Journal of Engine Research*, 2020. DOI: 10.1177/1468087420972899
875. **The Ohio State University**
Wang, W., "Conditional Moment Closure Model for Ignition of Homogeneous Fuel/Air Mixtures in Internal Combustion Engines," Ph.D. thesis, The Ohio State University, Columbus, OH, United States, 2020 https://etd.ohiolink.edu/apexprod/rws_etd/send_file/send?accession=osu1577882100318004&disposition=inline.
876. **IFP Energies nouvelles**
Giuffrida, V., Bardi, M., Matrat, M., Robert, A., and Pilla, G., "Numerical Assessment of Ozone Addition Potential in Direct Injection Compression Ignition Engines," *International Journal of Engine Research*, 2020. DOI: 10.1177/1468087420973553
877. **Purdue University; Convergent Science**
Hasti, V.R., Liu, S., Kumar, G., and Gore, J.P., "Comparison of Premixed Flamelet Generated Manifold Model and Thickened Flame Model for Bluff Body Stabilized Turbulent Premixed Flame," *2018 AIAA Aerospace Sciences Meeting*, AIAA 2018-0150, Kissimmee, FL, United States, Jan 8–12, 2018. DOI: 10.2514/6.2018-0150
878. **IFP Energies nouvelles; Convergent Science**
Rezchikova, A., Mehl, C., Drennan, S., and Colin, O., "Large Eddy Simulation of a Turbulent Spray Burner Using Thickened Flame Model and Adaptive Mesh Refinement," *ASME 2020 Turbo Expo*, GT2020-16243, Online, Sep 21–25, 2020.
879. **North Carolina State University; Argonne National Laboratory**
Owoyele, O., Kundu, P., Ameen, M.M., Echehki, T., and Som, S., "Application of Deep Artificial Neural Networks to Multi-Dimensional Flamelet Libraries and Spray Flames," *International Journal of Engine Research*, 21(1), 151-168, 2020. DOI: 10.1177/1468087419837770
880. **Beijing Institute of Technology; China North Engine Research Institute; Université d'Orléans**
Bo, Y., Liu, F., Wu, H., Li, H., and Shi, Z., "A Numerical Investigation of Injection Pressure Effects on Wall-Impinging Ignition at Low-Temperatures for Heavy-Duty Diesel Engine," *Applied Thermal Engineering*, 2020. DOI: 10.1016/j.applthermaleng.2020.116366
881. **King Abdullah University of Science and Technology; Saudi Aramco**
Liu, X., Aljabri, H., Mohan, B., Babayev, R., Badra, J., Johansson, B., and Im, H.G., "A Numerical Investigation of Isobaric Combustion Strategy in a Compression Ignition Engine," *International Journal of Engine Research*, 2020. DOI: 10.1177/1468087420970376
882. **Indian Institute of Technology Bombay; Cummins Inc.**
Muniappan, K., Sheshadri, S., and Duvvuri, P.P., "Numerical Analysis of the Effects of Direct Dual Fuel Injection on the Compression Ignition Engine," *ACS Omega*, 5(46), 30047-30058, 2020. DOI: 10.1021/acsomega.0c04434
883. **Argonne National Laboratory; Parallel Works Inc.**
Owoyele, O., Pal, P., and Torreira, A.V., "An Automated Machine Learning-Genetic Algorithm (AutoML-GA) Framework With Active Learning for Design Optimization," *ASME 2020 Internal Combustion Engine Division Fall Technical Conference*, ICEF2020-3000, Online, Nov 1–4, 2020. DOI: 10.1115/ICEF2020-3000
884. **FEV Europe GmbH**
Graziano, B., Schönfeld, S., Heuser, B., and Pelerin, D., "1-Octanol as CO₂-Neutral Fuel for Commercial Vehicle Applications," *ATZ Heavy Duty Worldwide*, 13, 36-41, 2020. DOI: 10.1007/s41321-020-0114-7

885. **Oakland University; Texas Tech University**
Lin, H., Zhao, P., and Ge, H., "A Computational Study on Laminar Flame Propagation in Mixtures With Non-Zero Reaction Progress," SAE Paper 2019-01-0946, 2019. DOI: 10.4271/2019-01-0946
886. **Texas Tech University; Oakland University**
Ge, H., He, R., and Zhao, P., "A Two-Layer Soot Model for Hydrocarbon Fuel Combustion," SAE Paper 2020-01-0243, 2020. DOI: 10.4271/2020-01-0243
887. **Oakland University; Texas Tech University; Ford Motor Company**
Tao, M., Ge, H., VanDerWege, B., and Zhao, P., "Fuel Wall Film Effects on Premixed Flame Propagation, Quenching and Emission," *International Journal of Engine Research*, 21(6), 1055-1066, 2018. DOI: 10.1177/1468087418799565
888. **POWERTECH Engineering; Politecnico di Torino**
Bianco, A., Millo, F., and Piano, A., "Modelling of Combustion and Knock Onset Risk in a High-Performance Turbulent Jet Ignition Engine," *Transportation Engineering*, 2, 2020. DOI: 10.1016/j.treng.2020.100037
889. **University of Ulsan**
Wahono, B., Setiawan, A., and Lim, O., "Study on the Effect of Intake Flow by Various Intake Port Design on Small Motorcycles Engine," *5th International Conference on Smart and Sustainable Technologies*, Online, Sep 23–26, 2020. DOI: 10.23919/SpliTech49282.2020.9243783
890. **University of Manitoba; National Research Council, Canada**
Yousefi, A., Birouk, M., and Guo, H., "On the Variation of the Effect of Natural Gas Fraction on Dual-Fuel Combustion of Diesel Engine Under Low-to-High Load Conditions," *Frontiers in Mechanical Engineering*, 2020. DOI: 10.3389/fmech.2020.555136
891. **Jiangsu University; Wayne State University**
Guo, G., He, Z., Wang, Q., Lai, M.-C., Zhong, W., Guan, W., and Wang, J., "Numerical Investigation of Transient Hole-to-Hole Variation in Cavitation Regimes Inside a Multi-Hole Diesel Nozzle," *Fuel*, 2020. DOI: 10.1016/j.fuel.2020.119457
892. **University of Minnesota; Carnegie Mellon University**
Dasrath, D., Biwalkar, R., Singh, S., and Northrop, W.F., "Bowl Piston Geometry as an Alternative to Enlarged Crevice Pistons for Rapid Compression Machines," *Proceedings of the Combustion Institute*, 38(4), 5723-5731, 2020. DOI: 10.1016/j.proci.2020.10.005
893. **Argonne National Laboratory; Università degli Studi di Perugia; Indian Institute of Technology Delhi**
Magnotti, G.M., Battistoni, M., Saha, K., and Som, S., "Development and Validation of the Cavitation-Induced Erosion Risk Assessment Tool," *Transportation Engineering*, 2020. DOI: 10.1016/j.treng.2020.100034
894. **Beijing Institute of Technology; Collaborative Innovation Center of Electric Vehicles in Beijing**
Shi, C., Ji, C., Ge, Y., Wang, S., Wang, H., and Yang, J., "Parametric Analysis of Hydrogen Two-Stage Direct-Injection on Combustion Characteristics, Knock Propensity, and Emissions Formation in a Rotary Engine," *Fuel*, 2020. DOI: 10.1016/j.fuel.2020.119418
895. **Beijing Institute of Technology; Collaborative Innovation Center of Electric Vehicles in Beijing**
Shi, C., Ji, C., Ge, Y., Wang, S., Yang, J., and Wang, H., "Effects of Split Direct-Injected Hydrogen Strategies on Combustion and Emissions Performance of a Small-Scale Rotary Engine," *Energy*, 215(A), 2021. DOI: 10.1016/j.energy.2020.119124
896. **University of Wisconsin-Madison; Ford Motor Company**
Ravindran, A.C., Kokjohn, S.L., and Petersen, B., "Improving Computational Fluid Dynamics Modeling of Direct Injection Spark Ignition Cold-Start," *International Journal of Engine Research*, 2020. DOI: 10.1177/1468087420963982

897. **Indian Institute of Technology Madras**
Raut, A.A. and Mallikarjuna, J.M., "Effect of In-Cylinder Air-Water Interaction on Water Evaporation and Performance Characteristics of a Direct Water Injected GDI Engine," *Engineering Science and Technology, an International Journal*, 2020. DOI: 10.1016/j.jestch.2020.09.003
898. **University of Michigan**
Alzuabi, M.K., Wu, A., and Sick, V., "Experimental and Numerical Investigation of Temperature Fluctuations in the Near-Wall Region of an Optical Reciprocating Engine," *Proceedings of the Combustion Institute*, 2020. DOI: 10.1016/j.proci.2020.08.062
899. **The Ohio State University; Oak Ridge National Laboratory**
Su, Y., Splitter, D., and Kim, S.H., "Laminar-to-Turbulent Flame Transition and Cycle-to-Cycle Variations in Large Eddy Simulation of Spark-Ignition Engines," *International Journal of Engine Research*, 2020. DOI: 10.1177/1468087420962346
900. **Hunan University; University of Canterbury; Guizhou University**
Fu, J., Zhong, L., Zhao, D., Liu, Q., Shu, J., Zhou, F., and Liu, J., "Effects of Hydrogen Addition on Combustion, Thermodynamics and Emission Performance of High Compression Ratio Liquid Methane Gas Engine," *Fuel*, 283, 2021. DOI: 10.1016/j.fuel.2020.119348
901. **Shanghai Jiao Tong University; China Liaohe Petroleum Engineering Co., Ltd.**
Ju, D., Deng, J., Huang, Z., Xia, J., Qin, H., and Jiang, F., "Large Eddy Simulation With Dense Fluid Approximation and Experimental Study on the Commercial Diesel Trans-Critical Injections," *Applied Thermal Engineering*, 183(1), 2021. DOI: 10.1016/j.applthermaleng.2020.116181
902. **Saudi Aramco; King Abdullah University of Science and Technology**
Mohan, B., Badra, J., Sim, J., and Im, H.G., "Coupled In-Nozzle Flow and Spray Simulation of Engine Combustion Network Spray-G Injector," *International Journal of Engine Research*, 2020. DOI: 10.1177/1468087420960612
903. **CMT-Motores Térmicos**
García-Oliver, J.M., Novella, R., Pastor, J.M., and Pachano, L., "Computational Study of ECN Spray A and Spray D Combustion at Different Ambient Temperature Conditions," *Transportation Engineering*, 2, 2020. DOI: 10.1016/j.treng.2020.100027
904. **Politecnico di Torino; POWERTECH Engineering; Università degli Studi di Perugia**
Millo, F., Mirzaei, M., Rolando, L., Bianco, A., and Postrioti, L., "A Methodology for the Assessment of the Knock Mitigation Potential of a Port Water Injection System," *Fuel*, 283, 2020. DOI: 10.1016/j.fuel.2020.119251
905. **CMT-Motores Térmicos**
Broatch, A., Olmeda, P., Margo, X., and Escalona, J., "Conjugate Heat Transfer Study of the Impact of 'Thermo-Swing' Coatings on Internal Combustion Engines Heat Losses," *International Journal of Engine Research*, 2020. DOI: 10.1177/1468087420960617
906. **Tongji University; Oakland University; Texas Tech University**
Chen, H., Tao, M., Yang, Q., Ge, H., and Zhao, P., "Two-Stage Autoignition and Combustion Mode Evolution in Boundary Layer Flows Above a Cold Flat Plate," *Proceedings of the Combustion Institute*, 2020. DOI: 10.1016/j.proci.2020.08.050
907. **Shanghai Jiao Tong University**
Liang, X., Zhang, J., Li, Z., Zhang, J., Huang, Z., and Han, D., "Effects of Fuel Combination and IVO Timing on Combustion and Emissions of a Dual-Fuel HCCI Combustion Engine," *Frontiers in Energy*, 2020. DOI: 10.1007/s11708-020-0698-8
908. **Colorado State University; Cummins Inc.**
Bestel, D., Bayliff, S., Marchese, A., Olsen, D., and Windom, B., "Investigation of the End-Gas Autoignition Process in Natural Gas Engines and Evaluation of the Methane Number Index," *Proceedings of the Combustion Institute*, 2020. DOI: 10.1016/j.proci.2020.07.106

909. **IFP Energies nouvelles**
Ritter, M., Malbec, L., and Laget, O., "Assessment and Validation of Internal Aerodynamics and Mixture Preparation in Spark-Ignition Engine Using LES Approach," SAE Paper 2020-01-2009, 2020. DOI: 10.4271/2020-01-2009
910. **Argonne National Laboratory**
Milan, P.J., Torelli, R., Lusch, B., and Magnotti, G.M., "Data-Driven Model Reduction of Multiphase Flow in a Single-Hole Automotive Injector," *Atomization and Sprays*, 30(6), 401-429, 2020. DOI: 10.1615/AtomizSpr.2020034830
911. **IFP Energies nouvelles; Université d'Orléans**
Jikadia, D., Dulbecco, A., Mehl, C., and Foucher, F., "DNS and Experimental Investigation of Ignition and Transition to Premixed Flame Propagation in Operating Conditions Representative of Modern High Efficiency Spark Ignition Engines," *THIESEL 2020*, Online, Sep 8–11, 2020.
912. **General Motors Global Research and Development**
Durrett, R. and Potter, M., "Renewable Energy to Power Through Net-Zero-Carbon Methanol," *THIESEL 2020*, Online, Sep 8–11, 2020.
913. **Politecnico di Torino**
Baratta, M., Chiriches, S., Goel, P., and Misul, D., "CFD Modelling of Natural Gas Combustion in IC Engines Under Different EGR Dilution and H₂-Doping Conditions," *Transportation Engineering*, 2, 2020. DOI: 10.1016/j.treng.2020.100018
914. **Xi'an Jiaotong University; National University of Ireland, Galway**
Huang, W., Zhao, Q., Huang, Z., Curran, H.J., and Zhang, Y., "A Kinetics and Dynamics Study on the Auto-Ignition of Dimethyl Ether at Low Temperatures and Low Pressures," *Proceedings of the Combustion Institute*, 2020. DOI: 10.1016/j.proci.2020.07.050
915. **University of Manitoba; National Research Council, Canada**
Yousefi, A., Guo, H., and Birouk, M., "Split Diesel Injection Effect on Knocking of Natural Gas/Diesel Dual-Fuel Engine at High Load Conditions," *Applied Energy*, 279, 2020. DOI: 10.1016/j.apenergy.2020.115828
916. **RWTH Aachen University; FEV Europe GmbH; OWI Oel-Waerme-Institut gGmbH**
Yadav, J., Betgeri, V., Graziano, B., Dhongde, A., Heuser, B., Schönen, M., and Sittinger, N., "Renewable Drop-In Fuels as an Immediate Measure to Reduce CO₂ Emissions of Heavy-Duty Applications," *Internationaler Motorenkongress 2020*, eds. Liebl, J., Beidl, C., and Maus, W., Springer Vieweg, Wiesbaden, 2020. DOI: 10.1007/978-3-658-30500-0_24
917. **Politecnico di Bari; Istituto Motori CNR**
Distaso, E., Amirante, R., Cassone, E., De Palma, P., Sementa, P., Tamburrano, P., and Vaglieco, B.M., "Analysis of the Combustion Process in a Lean-Burning Turbulent Jet Ignition Engine Fueled With Methane," *Energy Conversion and Management*, 223, 2020. DOI: 10.1016/j.enconman.2020.113257
918. **Tohoku University; Keihin Corp.; Institute of F-Tech**
Ochiai, N., Ishimoto, J., Arioka, A., Yamaguchi, N., Sasaki, Y., Komatsu, Y., Ouchi, N., and Furukawa, N., "Development of a Computing Procedure for the Sequential Atomization Process of a Multiaperture Injector and a Swirl Injector," *Atomization and Sprays*, 29(9), 799-820, 2019. DOI: 10.1615/AtomizSpr.2020031965
919. **Argonne National Laboratory**
Ren, X. and Kundu, P., "Modeling Non-Premixed Jets in Vitiated Cross Flows Using Unsteady Flamelets and In-Situ Tabulation," *AIAA SciTech 2020 Forum*, AIAA 2020-2089, Orlando, FL, United States, Jan 6–10, 2020. DOI: 10.2514/6.2020-2089
920. **Wayne State University**
Molana, M., Piehl, J.A., and Samimi-Abianeh, O., "Rapid Compression Machine Ignition Delay Time Measurements Under Near-Constant Pressure Conditions," *Energy Fuels*, 2020. DOI: 10.1021/acs.energyfuels.0c01950

921. **Argonne National Laboratory; Taitech, Inc.; Air Force Research Laboratory**
Magnotti, G.M., Lin, K.-C., Carter, C.D., Kastengren, A., and Som, S., "A Computational Investigation of the Effect of Surface Roughness on the Development of a Liquid Jet in Subsonic Crossflow," *AIAA Propulsion and Energy 2020 Forum*, AIAA 2020-3880, Online, Aug 24–28, 2020. DOI: 10.2514/6.2020-3880
922. **Università degli Studi dell'Aquila; Istituto Motori CNR**
Duronio, F., De Vita, A., Allocca, L., Montanaro, A., Ranieri, S., and Villante, C., "CFD Numerical Reconstruction of the Flash Boiling Gasoline Spray Morphology," *SAE Paper 2020-24-0010*, 2020.
923. **Istituto Motori CNR; Università degli Studi dell'Aquila**
Allocca, L., Montanaro, A., Meccariello, G., Duronio, F., Ranieri, S., and De Vita, A., "Under-Expanded Gaseous Jets Characterization for Application in Direct Injection Engines: Experimental and Numerical Approach," *SAE Paper 2020-01-0325*, 2020. DOI: 10.4271/2020-01-0325
924. **CMT-Motores Térmicos; Argonne National Laboratory**
Broatch, A., Novella, R., García-Tíscar, J., Gomez-Soriano, J., and Pal, P., "Analysis of Combustion Acoustic Phenomena in Compression-ignition Engines Using Large Eddy Simulation," *Physics of Fluids*, 32, 2020. DOI: 10.1063/5.0011929
925. **Argonne National Laboratory; Convergent Science; Air Force Research Laboratory**
Pal, P., Xu, C., Kumar, G., Drennan, S.A., Rankin, B.A., and Som, S., "Large-Eddy Simulations and Mode Analysis of Ethylene/Air Combustion in a Non-Premixed Rotating Detonation Engine," *AIAA Propulsion and Energy 2020 Forum*, AIAA 2020-3876, Online, Aug 24–28, 2020. DOI: 10.2514/6.2020-3876
926. **King Abdullah University of Science and Technology**
da Silva, M.M.R., "A Numerical Investigation of Pre-Chamber Combustion Engines," M.S. thesis, King Abdullah University of Science and Technology, Thuwal, Saudi Arabia, 2020
<https://repository.kaust.edu.sa/bitstream/handle/10754/664493/MickaelSilvaThesis.pdf?sequence=2&isAllowed=y>.
927. **Dalian Maritime University; University of Strathclyde**
Wang, H., Gan, H., and Theotokatos, G., "Parametric Investigation of Pre-Injection on the Combustion, Knocking and Emissions Behaviour of a Large Marine Four-Stroke Dual-Fuel Engine," *Fuel*, 281, 2020. DOI: 10.1016/j.fuel.2020.118744
928. **London South Bank University**
Palakunnimal, M.F., Sahu, P., Ellis, M., and Nazha, M., "Simulation-Aided Development of Prechamber Ignition System for a Lean-Burn Gasoline Direct Injection Motor-Sport Engine," *Journal of Engineering for Gas Turbines and Power*, 142(8), 2020. DOI: 10.1115/1.4047767
929. **Politecnico di Bari; University of Wisconsin–Madison**
Distaso, E., Amirante, R., Calò, G., De Palma, P., Tamburrano, P., and Reitz, R.D., "Predicting Lubricant Oil Induced Pre-Ignition Phenomena in Modern Gasoline Engines: The Reduced GasLube Reaction Mechanism," *Fuel*, 281, 2020. DOI: 10.1016/j.fuel.2020.118709
930. **LTE Laboratory; Ecole Militaire Polytechnique, Algeria; University Center of Nâama**
Bousbaa, H., Tarabet, L., Khatir, N., and Liazid, A., "Numerical Study on a Diesel Engine Fueled by Eucalyptus Biofuel Using CONVERGE CFD Software," *Journal of Science and Technology*, 2(1), 106-119, 2020.
931. **Tianjin University; Brunel University London**
Li, X., He, B.-Q., and Zhao, H., "Numerical Study of the Effect of Split Direct Injection on the Lean-Burn Combustion Characteristics in a Poppet-Valve Two-Stroke Gasoline Engine at High Loads," *International Journal of Engine Research*, 2020. DOI: 10.1177/1468087420932409
932. **Indian Institute of Technology Madras**
Jain, A., Krishnasamy, A., and V, P., "Computational Optimization of Reactivity Controlled Compression Ignition Combustion to Achieve High Efficiency and Clean Combustion," *International Journal of Engine Research*, 2020. DOI: 10.1177/1468087420931730

933. **University of Perugia**
Ricci, F., Zembi, J., Battstoni, M., Grimaldi, C., Discepoli, G., and Petrucci, L., "Experimental and Numerical Investigations of the Early Flame Development Produced by a Corona Igniter," SAE Paper 2019-24-0231, 2019. DOI: 10.4271/2019-24-0231
934. **University of Perugia; University of Bologna; Magneti Marelli**
Zembi, J., Battstoni, M., Ranuzzi, F., Cavina, N., and De Cesare, M., "CFD Analysis of Port Water Injection in a GDI Engine Under Incipient Knock Conditions," *Energies*, 12(18), 2019. DOI: 10.3390/en12183409
935. **University of Massachusetts Amherst; Argonne National Laboratory; King Abdullah University of Science and Technology; Saudi Aramco; RWTH Aachen University; Siemens Industry Software Computational Dynamics Ltd; Siemens Industry Software GmbH; CMT-Motores Térmicos**
Mohapatra, C.K., Schmidt, D.P., Sforozo, B.A., Matusik, K.E., Yue, Z., Powell, C.F., Som, S., Mohan, B., Im, H.G., Badra, J., Bode, M., Pitsch, H., Papoulias, D., Neeroorkar, K., Muzaferija, S., Martí-Aldaraví, P., and María, M., "Collaborative Investigation of the Internal Flow and Near-Nozzle Flow of an Eight-Hole Gasoline Injector (Engine Combustion Network Spray G)," *International Journal of Engine Research*, 2020. DOI: 10.1177/1468087420918449
936. **Hunan University; Wayne State University; Shenzhen University**
Zhang, S., Duan, X., Liu, Y., Li, Y., Liu, J., Lai, M.-C., and Deng, B., "Numerical Investigation the Effects of the Twin-Spark Plugs Coupled With EGR on the Combustion Process and Emissions Characteristics in a Lean Burn Natural Gas SI Engine," *Energy*, 2020. DOI: 10.1016/j.energy.2020.118181
937. **Indiana University – Purdue University Indianapolis; Purdue University**
Feyz, M.E., Hasti, V.R., Gore, J.P., and Nalim, M.R., "Analytical and Numerical Study of Near-Field Ignition of H₂/Air by Injection of Hot Gas," *Combustion and Flame*, 219, 373-383, 2020. DOI: 10.1016/j.combustflame.2020.05.016
938. **Universidad de Antioquia**
Cardozo, S.D., "Kinetic and Fluid-Dynamic Modeling of a CFR Engine Fueled by Oxygenated Gasoline," M.S. thesis, Universidad de Antioquia, Antioquia, Colombia, 2019
http://bibliotecadigital.udea.edu.co/bitstream/10495/15039/1/DominguezSara_2020_KineticFluidDynamic.pdf.
939. **Tianjin University**
Wang, Y., Wei, H., Zhou, L., Zhang, X., and Zhong, L., "Effects of Reactivity Inhomogeneities on Knock Combustion in a Downsized Spark-Ignition Engine," *Fuel*, 278, 2020. DOI: 10.1016/j.fuel.2020.118317
940. **Stony Brook University; Clemson University; Sandia National Laboratories**
Priyadarshini, P., Sofianopoulos, A., Mamalis, S., Lawler, B., Lopez-Pintor, D., and Dec, J.E., "Understanding Partial Fuel Stratification for Low Temperature Gasoline Combustion Using Large Eddy Simulations," *International Journal of Engine Research*, 2020. DOI: 10.1177/1468087420921042
941. **Shenzhen University; Chongqing University of Technology; Hunan University**
Chen, Y., Xu, Z., Deng, B., Hou, K., and Fu, J., "Effects of Intake Fluctuation and Chemical Reaction on Operating Stability of a Small Displacement Gasoline Engine: An Experimental and Numerical Study," *Fuel*, 277, 2020. DOI: 10.1016/j.fuel.2020.118189
942. **Federal University of Uberlândia**
de Lima, B.S., de Souza Meira, L., and de Souza, F.J., "Numerical Simulation of a Water Droplet Splash: Comparison Between PLIC and HRIC Schemes for the VoF Transport Equation," *European Journal of Mechanics - B/Fluids*, 84, 63-70, 2020. DOI: 10.1016/j.euromechflu.2020.05.016
943. **Beijing University of Civil Engineering and Architecture; Beijing Polytechnic College; Beijing Institute of Technology**
Liu, Y., Xiang, Q., Wei, P., Zhang, L., Yao, S., He, X., and Sun, H., "Effects of Carbon Dioxide Addition on Diesel Spray Flame Characteristics in Oxygen-Carbon Dioxide Atmospheres," *Fuel*, 276, 2020. DOI: 10.1016/j.fuel.2020.118039

944. **Huazhong University of Science and Technology; Shanghai Jiao Tong University; Texas Tech University**
Cui, X., Wu, W., and Ge, H., "Investigation of Airflow Field in the Upper Airway Under Unsteady Respiration Pattern Using Large Eddy Simulation Method," *Respiratory Physiology & Neurobiology*, 279, 2020. DOI: 10.1016/j.resp.2020.103468
945. **Shanghai Jiao Tong University**
Fang, X., Huang, X., Chen, W., Qiao, X., and Ju, D., "Development of a Skeletal Surrogate Mechanism for Emulating Combustion Characteristics of Diesel From Direct Coal Liquefaction," *Combustion and Flame*, 218, 2020. DOI: 10.1016/j.combustflame.2020.03.022
946. **CMT-Motores Térmicos**
Salvador, F.J., Pastor, J.M., De la Morena, J., and Martínez-Miracle, E.C., "Computational Study on the Influence of Nozzle Eccentricity in Spray Formation by Means of Eulerian Σ - Y Coupled Simulations in Diesel Injection Nozzles," *International Journal of Multiphase Flow*, 129, 2020. DOI: 10.1016/j.ijmultiphaseflow.2020.103338
947. **King Abdullah University of Science and Technology; Tianjin University**
Tang, Q., Liu, X., Liu, H., Wang, H., and Yao, M., "Investigation on the Dual-Fuel Active-Thermal Atmosphere Combustion Strategy Based on Optical Diagnostics and Numerical Simulations," *Fuel*, 276, 2020. DOI: 10.1016/j.fuel.2020.118023
948. **Shenzhen University; Chongqing University of Technology; Hunan University**
Deng, B., Chen, Y., Hou, K., Fu, J., and Feng, R., "An Experimental and Numerical Investigation on Cycle-to-Cycle Variation of Three Different Displacements Single-Cylinder Motorcycle Engines: The Sequential Analysis From Intake to Flame Propagation Process," *Fuel*, 275, 2020. DOI: 10.1016/j.fuel.2020.117945
949. **National Institute of Technology, Surat; Gdhyana Sanshodhana Nagari Foundation**
Dave, H., Sutaria, B., and Patel, B., "Influence of Nozzle Hole Diameter on Combustion and Emission Characteristics of Diesel Engine Under Pilot Injection Mode," *IOP Conference Series: Materials Science and Engineering*, 810, 2020. DOI: 10.1088/1757-899X/810/1/012041
950. **National Institute of Technology Meghalaya**
Chandekar, A.C. and Debnath, B.K., "Design and Optimization of Air-Biogas Mixing Device for Dual Fuel Diesel Engines," *Advances in Energy Research*, Vol. 2, eds. Singh, S. and Ramadesigan, V., Springer, Singapore, 2020. DOI: 10.1007/978-981-15-2662-6_47
951. **Politecnico di Torino; POWERTECH Engineering; General Motors Global Propulsion Systems**
Millo, F., Piano, A., Paradisi, B.P., Marzano, M.R., Bianco, A., and C, F.P., "Development and Assessment of an Integrated 1D-3D CFD Codes Coupling Methodology for Diesel Engine Combustion Simulation and Optimization," *Energies*, 13(7), 2020. DOI: 10.3390/en13071612
952. **University of Oxford; The University of British Columbia**
Fang, X.H., Ismail, R., Bushe, K., and Davy, M., "Simulation of ECN Diesel Spray A Using Conditional Source-Term Estimation," *Combustion Theory and Modelling*, 2020. DOI: 10.1080/13647830.2020.1752942
953. **Wuhan University of Science and Technology**
Xiao, G., "A Novel Integrated Strategy for Construction of a 96-Species N-Decane Skeletal Mechanism With Application to Ignition Delay Tester," *Energy Fuels*, 2020. DOI: 10.1021/acs.energyfuels.0c00519
954. **CMT-Motores Térmicos**
Payri, R., Novella, R., Carreres, M., and Belmar-Gil, M., "Modeling Gaseous Non-Reactive Flow in a Lean Direct Injection Gas Turbine Combustor Through an Advanced Mesh Control Strategy," *Journal of Aerospace Engineering*, 2020. DOI: 10.1177/0954410020919619

955. **Michigan Technological University; University of Massachusetts Dartmouth; Argonne National Laboratory**
Seong-Young, L., Naber, J., Raessi, M., Torelli, R., Scarcelli, R., and Som, S., "Evaporation Submodel Development for Volume of Fluid (eVOF) Method Applicable to Spray-Wall Interaction Including Film Characteristics With Validation at High Pressure and Temperature Conditions," Michigan Technological University DOE-MTU-EE0007292, 2020. DOI: 10.2172/1608768
956. **King Abdullah University of Science and Technology; Saudi Aramco**
Aljabri, H.H., Babayev, R., Liu, X., Badra, J., Johansson, B., and Im, H.G., "Validation of Computational Models for Isobaric Combustion Engines," SAE Paper 2020-01-0806, 2020. DOI: 10.4271/2020-01-0806
957. **Argonne National Laboratory**
Kim, S., Kim, J., Shah, A., Scarcelli, R., and Rockstroh, T., "Numerical Analysis of Fuel Impacts on Advanced Compression Ignition Strategies for Multi-Mode Internal Combustion Engines," SAE Paper 2020-01-1124, 2020. DOI: 10.4271/2020-01-1124
958. **Argonne National Laboratory**
Guo, H., Torelli, R., Rodriguez, A.B., Tekawade, A., Sforzo, B., Powell, C., and Som, S., "Internal Nozzle Flow Simulations of the ECN Spray C Injector Under Realistic Operating Conditions," SAE Paper 2020-01-1154, 2020. DOI: 10.4271/2020-01-1154
959. **Argonne National Laboratory; Aramco Research Center**
Zhao, L., Ameen, M., Pei, Y., Zhang, Y., Kumar, P., Tzanetakis, T., and Traver, M., "Numerical Evaluation of Gasoline Compression Ignition at Cold Conditions in a Heavy-Duty Diesel Engine," SAE Paper 2020-01-0778, 2020. DOI: 10.4271/2020-01-0778
960. **Hino Motors, Ltd.; Sandia National Laboratories; Argonne National Laboratory**
Yasutomi, K., Hwang, J., Pickett, L.M., Sforzo, B., Matusik, K., and Powell, C.F., "Transient Internal Nozzle Flow in Transparent Multi-Hole Diesel Injector," SAE Paper 2020-01-0830, 2020. DOI: 10.4271/2020-01-0830
961. **Saudi Aramco; Doosan Infracore**
Sim, J., Han, Y., Yoo, D., Lee, W.G., and Chang, J., "A Demonstration of High Efficiency, High Reactivity Gasoline Compression Ignition Fuel in an on & Off Road Diesel Engine Application," SAE Paper 2020-01-1311, 2020. DOI: 10.4271/2020-01-1311
962. **University of Oxford**
Fang, X., Ismail, R., Sekularac, N., and Davy, M., "On the Prediction of Spray A End of Injection Phenomenon Using Conditional Source-Term Estimation," SAE Paper 2020-01-0779, 2020. DOI: 10.4271/2020-01-0779
963. **Convergent Science**
Liu, Z., Wijeyakulasuriya, S., Mashayekh, A., and Chai, X., "Investigation of Reynolds Stress Model for Complex Flow Using CONVERGE," SAE Paper 2020-01-1104, 2020. DOI: 10.4271/2020-01-1104
964. **University of Michigan**
Wu, A., Alzuabi, M.K., and Sick, V., "Spatial Correlation and Length Scale Analysis of the Near-Wall Flow and Temperature Distribution of an Internal Combustion Engine," SAE Paper 2020-01-1106, 2020. DOI: 10.4271/2020-01-1106
965. **Clemson University**
O'Donnell, P.C., Boldaji, M.R., Gainey, B., and Lawler, B., "Varying Intake Stroke Injection Timing of Wet Ethanol in LTC," SAE Paper 2020-01-0237, 2020. DOI: 10.4271/2020-01-0237
966. **Sandia National Laboratories; Hino Motors, Ltd.**
Hwang, J., Yasutomi, K., Arienti, M., and Pickett, L.M., "Numerical Investigation of Near Nozzle Flash-Boiling Spray in an Axial-Hole Transparent Nozzle," SAE Paper 2020-01-0828, 2020. DOI: 10.4271/2020-01-0828

967. **Sandia National Laboratories**
Tagliante, F., Sim, H.S., Pickett, L.M., Nguyen, T., and Skeen, S., "Combined Experimental/Numerical Study of the Soot Formation Process in a Gasoline Direct-Injection Spray in the Presence of Laser-Induced Plasma Ignition," SAE Paper 2020-01-0291, 2020. DOI: 10.4271/2020-01-0291

968. **Saudi Aramco; King Abdullah University of Science and Technology; Aramco Research Center; Argonne National Laboratory; FRIENDSHIP SYSTEMS AG**
Badra, J., Khaled, F., Sim, J., Pei, Y., Viollet, Y., Pal, P., Futterer, C., Brenner, M., Som, S., Farooq, A., and Chang, J., "Combustion System Optimization of a Light-Duty GCI Engine Using CFD and Machine Learning," SAE Paper 2020-01-1313, 2020. DOI: 10.4271/2020-01-1313

969. **Tianjin University; BAIC Motor Powertrain Co., Ltd.**
Wang, Y., Wei, H., Zhou, L., Li, Y., and Liang, J., "Effect of Injection Strategy on the Combustion and Knock in a Downsized Gasoline Engine With Large Eddy Simulation," SAE Paper 2020-01-0244, 2020. DOI: 10.4271/2020-01-0244

970. **Tianjin University**
Liu, X., Wang, H., and Yao, M., "Investigation of the Chemical Kinetics Process of Diesel Combustion in a Compression Ignition Engine Using the Large Eddy Simulation Approach," *Fuel*, 270, 2020. DOI: 10.1016/j.fuel.2020.117544

971. **Tianjin University**
Wang, H., Zhu, H., Ma, T., and Yao, M., "Numerical Investigation on Low Octane Gasoline-Like Fuel Compression Ignition Combustion at High Load," *Fuel*, 270, 2020. DOI: 10.1016/j.fuel.2020.117532

972. **University of Massachusetts Lowell**
Shahsavan, M., "Fundamental Investigation of the Jet Development and Combustion of Lightweight Gaseous Fuels Injected Into the Heavy Working Fluids," Ph.D. thesis, University of Massachusetts Lowell, Lowell, MA, United States, 2020.

973. **Politecnico di Torino; POWERTECH Engineering; Università degli Studi di Perugia; Cornaglia S.p.A.; STSE S.r.l.**
Sapio, F., Millo, F., Fino, D., Monteverde, A., Sartoretto, E., Bianco, A., Postrioti, L., Tarabocchia, A., Buitoni, G., and Brizi, G., "Experimental and Numerical Analysis of Latest Generation Diesel Aftertreatment Systems," SAE Paper 2019-24-0142, 2019. DOI: 10.4271/2019-24-0142

974. **University of Connecticut; Université Larbi Ben M'hidi**
Toumey, J., Zhang, P., Hadeif, R., and Zhao, X., "Assessment of Turbulence Models for Simulating Confined Swirling Flows," *Spring Technical Meeting of the Eastern States Section of the Combustion Institute*, Columbia, SC, United States, Mar 8–11, 2020.

975. **Tianjin University; Brunel University London**
Feng, Y., Chen, T., Xie, H., Wang, X., and Zhao, H., "Effects of Injection Timing of DME on Micro Flame Ignition (MFI) Combustion in a Gasoline Engine," *Proceedings of the International Conference on Internal Combustion Engines and Powertrain Systems for Future Transport (ICEPSFT 2019)*, Birmingham, United Kingdom, Dec 11–12, 2019.

976. **FEV Europe GmbH; Max Planck Institute for Chemical Energy Conversion; Instituto de Tecnología Química; Vrije Universiteit Brussel; VTT Technical Research Centre of Finland Ltd; OWI Oel-Waerme-Institut gGmbH; TEC4FUELS GmbH; INERATEC GmbH; RWTH Aachen University; Uniresearch**
Heuser, B., Vorholt, A., Prieto, G., Graziano, B., Schönfeld, S., Messagie, M., Cardellini, G., Tuomi, S., Sittinger, N., Hermanns, R., Ramawamy, S., Kosuru, C.K., Hoffmann, H., Schulz, L., Yadav, J., Weide, M., and Schnorbus, T., "REDIFUEL: Robust and Efficient Processes and Technologies for Drop-In Renewable FUELS for Road Transport," *TRA2020: 8th Transport Research Arena*, Helsinki, Finland, Apr 27–30, 2020.

977. **Oakland University; Ford Motor Company; Texas Tech University**
Tao, M., Zhao, P., VanDerWege, B., Iyer, C., and Ge, H., "Further Study on Wall Film Effects and Flame Quenching Under Engine Thermodynamic Conditions," *Combustion and Flame*, 216, 100-110, 2020. DOI: 10.1016/j.combustflame.2020.02.022
978. **Ecole Nationale Polytechnique d'Oran; LTE Laboratory; Ecole Militaire Polytechnique, Algeria; University Center of Nâama; University of Abou Bekr Belkaid Tlemcen**
Bousbaa, H., Tarabet, L., Khatir, N., and Liazid, A., "Numerical Investigation of Combustion Behaviour of DI Diesel Engine Fueled With Eucalyptus as a Biofuel," *1st National Conference on Applied Energetics*, Naâma, Algeria, Feb 11–12, 2020.
979. **Argonne National Laboratory**
Dasgupta, D., Pal, P., Torelli, R., and Som, S., "Computational Fluid Dynamics Modeling of Flame Spray Pyrolysis for Nanoparticle Synthesis," *2020 WSSCI Spring Technical Meeting*, Stanford, CA, United States, Mar 23–24, 2020.
980. **Beijing University of Technology**
Shi, C., Ji, C., Wang, S., Yang, J., Ma, Z., and Xu, P., "Assessment of Spark-Energy Allocation and Ignition Environment on Lean Combustion in a Twin-Plug Wankel Engine," *Energy Conversion and Management*, 209, 2020. DOI: 10.1016/j.enconman.2020.112597
981. **Tianjin University**
Li, J., Deng, L., Guo, J., Zhang, M., Zi, Z., Zhang, J., and Wu, B., "Effect of Injection Strategies in Diesel/NG Direct-Injection Engines on the Combustion Process and Emissions Under Low-Load Operating Conditions," *Energies*, 13(4), 2020. DOI: 10.3390/en13040990
982. **University of Wisconsin-Madison**
Kokjohn, S., "Development and Validation of a Lagrangian Soot Model Considering Detailed Gas Phase Kinetics and Surface Chemistry," University of Wisconsin-Madison DOE-UW-0007300, 2019. DOI: 10.2172/1580657
983. **Indian Institute of Technology Bombay; Cummins Inc.**
Krishnamoorthi, M., Sreedhara, S., and Duvvuri, P.P., "Experimental, Numerical and Exergy Analyses of a Dual Fuel Combustion Engine Fuelled With Syngas and Biodiesel/Diesel Blends," *Applied Energy*, 263, 2020. DOI: 10.1016/j.apenergy.2020.114643
984. **King Abdullah University of Science and Technology; Saudi Aramco**
Du, J., Cenker, E., Badra, J., Sim, J., and Roberts, W.L., "Characteristics of a Non-Reacting Spray From an Outwardly Opening Hollow-Cone Injector With High-Reactivity Gasolines," *Fuel*, 268, 2020. DOI: 10.1016/j.fuel.2020.117293
985. **Purdue University**
Hasti, V.R., "High-Performance Computing Model for a Bio-Fuel Combustion Prediction With Artificial Intelligence," Ph.D. thesis, Purdue University, West Lafayette, IN, United States, 2019.
986. **Argonne National Laboratory; Aramco Services Company; CMT-Motores Térmicos; ETH Zurich**
Zhao, L., Ameen, M.M., Tang, M., Pei, Y., Zhang, Y., Traver, M.L., García-Oliver, J.M., and Vera-Tudela, W., "The Effect of Fuel Properties on Inert Spray Characteristics Under Compression Ignition Engine Conditions," *ILASS-Americas 30th Annual Conference on Liquid Atomization and Spray Systems*, Tempe, AZ, United States, May 12–15, 2019.
987. **Marmara University**
Özkara, M., "Piston Bowl Geometry Optimization Over a V-16 Heavy Duty Diesel Engine," M.S. thesis, Marmara University, Istanbul, Turkey, 2019
<https://katalog.marmara.edu.tr/veriler/yordambt/cokluortam/40EBC86E-A02E-4644-A512-334068AA778C/5d5e5b54aab7b.pdf>.

988. **Manchester Metropolitan University; King Abdullah University of Science and Technology; University of Hiroshima**
Kuti, O.A., Sarathy, S.M., and Nishida, K., "Spray Combustion Simulation Study of Waste Cooking Oil Biodiesel and Diesel Under Direct Injection Diesel Engine Conditions," *Fuel*, 267, 2020. DOI: 10.1016/j.fuel.2020.117240
989. **Michigan Technological University**
Zhu, X., "High Injection Pressure DME Ignition and Combustion Processes: Experiment and Simulation," Ph.D. thesis, Michigan Technological University, Houghton, MI, United States, 2019 <https://digitalcommons.mtu.edu/cgi/viewcontent.cgi?article=2096&context=etdr>.
990. **Purdue University**
Feyz, M.E., "Analytical and Computational Study of Turbulent-Hot Jet Ignition Process in Methane-Hydrogen-Air Mixtures," Ph.D. thesis, Purdue University, West Lafayette, IN, United States, 2019.
991. **Tianjin University; Argonne National Laboratory**
Chen, C., Pal, P., Ameen, M., Feng, D., and Wei, H., "Large-Eddy Simulation Study on Cycle-to-Cycle Variation of Knocking Combustion in a Spark-Ignition Engine," *Applied Energy*, 261, 2020. DOI: 10.1016/j.apenergy.2019.114447
992. **Brandenburg University of Technology; LOGE AB; Renault SAS**
Netzer, C., Pasternak, M., Seidel, L., Ravet, F., and Mauss, F., "Computationally Efficient Prediction of Cycle-to-Cycle Variations in Spark-Ignition Engines," *International Journal of Engine Research*, 2019. DOI: 10.1177/1468087419856493
993. **Brandenburg University of Technology; LOGE AB; Renault SAS**
Netzer, C., Seidel, L., Ravet, F., and Mauss, F., "Assessment of the Validity of RANS Knock Prediction Using the Resonance Theory," *International Journal of Engine Research*, 2019. DOI: 10.1177/1468087419846032
994. **Indian Institute of Technology Bombay; Cummins Inc.**
Duvvuri, P.P., Shrivastava, R.K., and Sreedhara, S., "Numerical Optimization of a Diesel Combustion System to Reduce Soot Mass and Particle Number Density," *Fuel*, 266, 2020. DOI: 10.1016/j.fuel.2020.117015
995. **Stony Brook University**
Boldaji, M.R., Gainey, B., O'Donnell, P., Gohn, J., and Lawler, B., "Investigating the Effect of Spray Included Angle on Thermally Stratified Compression Ignition With Wet Ethanol Using Computational Fluid Dynamics," *Applied Thermal Engineering*, 2020. DOI: 10.1016/j.applthermaleng.2020.114964
996. **Argonne National Laboratory**
Liu, I.-H., Torelli, R., Prabhakar, N., and Karbowski, D., "CFD Modeling of Unmanned Aerial Systems With Cut-Cell Grids and Adaptive Mesh Refinement," *AIAA SciTech Forum and Exposition 2020*, AIAA 2020-0538, Orlando, FL, United States, Jan 6–10, 2020. DOI: 10.2514/6.2020-0538
997. **National Renewable Energy Laboratory**
Luecke, J., Rahimi, M.J., Zigler, B.T., and Grout, R.W., "Experimental and Numerical Investigation of the Advanced Fuel Ignition Delay Analyzer (AFIDA) Constant-Volume Combustion Chamber as a Research Platform for Fuel Chemical Kinetic Mechanism Validation," *Fuel*, 265, 2020. DOI: 10.1016/j.fuel.2019.116929
998. **National Renewable Energy Laboratory; University of Connecticut**
Messerly, R.A., Rahimi, M.J., St. John, P.C., Luecke, J.H., Park, J.-W., Huq, N.A., Foust, T.D., Lu, T., Zigler, B.T., McCormick, R.L., and Kim, S., "Towards Quantitative Prediction of Ignition-Delay-Time Sensitivity on Fuel-to-Air Equivalence Ratio," *Combustion and Flame*, 214, 103-115, 2020. DOI: 10.1016/j.combustflame.2019.12.019

999. **Imperial College London; The University of Melbourne; University of Brighton**
 Navarro-Martinez, S., Tretola, G., Yosri, M.R., Gordon, R.L., and Vogiatzaki, K., "An Investigation on the Impact of Small-Scale Models in Gasoline Direct Injection Sprays (ECN Spray G)," *International Journal of Engine Research*, 21(1), 217-225, 2020. DOI: 10.1177/1468087419889449
1000. **Guangxi University; Guangxi Yuchai Machinery Group Co., Ltd.; Zhengzhou Yutong Bus Co., Ltd.**
 Huang, H., Chen, Y., Li, Z., Wang, H., Hao, B., Chen, Y., Lei, H., and Guo, X., "Analysis of Deposit Formation Mechanism and Structure Optimization in Urea-SCR System of Diesel Engine," *Fuel*, 265, 2020. DOI: 10.1016/j.fuel.2019.116941
1001. **University of Ulsan; Indonesian Institute of Sciences**
 Wahono, B., Setiawan, A., Lim, O., Praptijanto, A., and Putrasari, Y., "Study on the Effect of the Intake Port Configuration on the In-Cylinder of Small Engine," *2019 International Conference on Sustainable Energy Engineering and Application*, Tangerang, Indonesia, Oct 23–24, 2019.
1002. **National Institute of Advanced Industrial Science and Technology**
 Gong, H., Huang, W., and Pratama, R.H., "Eccentric Needle Motion Effect on Spray Dynamics of Multi-Hole Diesel Nozzle," SAE Paper 2019-01-2281, 2019.
1003. **Stony Brook University; Clemson University**
 Hariharan, D., Boldaji, M.R., Yan, Z., Mamalis, S., and Lawler, B., "Single-Fuel Reactivity Controlled Compression Ignition Through Catalytic Partial Oxidation Reformation of Diesel Fuel," *Fuel*, 264, 2020. DOI: 10.1016/j.fuel.2019.116815
1004. **IFP Energies nouvelles**
 Laget, O., Chevillard, S., Pilla, G., Gautrot, X., and Colliou, T., "Investigations on Pre-Chamber Ignition Device Using Experimental and Numerical Approaches," SAE Paper 2019-01-2163, 2019.
1005. **Sandia National Laboratories; Oregon State University**
 Yasutomi, K., Hwang, J., Manin, J., Pickett, L., Arienti, M., Daly, S., and Skeen, S., "Diesel Injector Elasticity Effects on Internal Nozzle Flow," SAE Paper 2019-01-2279, 2019.
1006. **University of Rome Tor Vergata; University of Salento; HELMo Gramme**
 Bartolucci, L., Carlucci, A.P., Cordiner, S., Ficarella, A., Mulone, V., Quoidbach, J., and Strafella, L., "Dual-Fuel Combustion Fundamentals: Experimental-Numerical Analysis Into a Constant-Volume Vessel," *AIP Conference Proceedings*, 2191(1), 2019. DOI: 10.1063/1.5138748
1007. **Isuzu Advanced Engineering Center, Ltd.; Yokohama National University**
 Saito, H., Furukawa, S., Ishii, Y., Shimazaki, N., and Ishii, K., "Numerical Simulation of In-Cylinder Particulate Matter Formation in Diesel Combustion by CFD Coupled With Chemical Kinetics Model," SAE Paper 2019-01-2277, 2019.
1008. **RMIT University**
 Sankesh, D. and Lappas, P., "An Experimental and Numerical Study of Natural Gas Jets for Direct Injection Internal Combustion Engines," *Fuel*, 263, 2020. DOI: 10.1016/j.fuel.2019.116745
1009. **RWTH Aachen University; Ford-Werke GmbH; Ford Research Center Aachen**
 Deshmukh, A.Y., Giefer, C., Goeb, D., Khosravi, M., van Bebbler, D., and Pitsch, H., "A Quasi-One-Dimensional Model for an Outwardly Opening Poppet-Type Direct Gas Injector for Internal Combustion Engines," *International Journal of Engine Research*, 2019. DOI: 10.1177/1468087419871117
1010. **Chalmers University of Technology**
 Matrisciano, A., "Development of an Efficient Solver for Detailed Kinetics in Reactive Flows," Licentiate of Engineering thesis, Chalmers University of Technology, Gothenburg, Sweden, 2019
https://research.chalmers.se/publication/513733/file/513733_Fulltext.pdf.
1011. **Argonne National Laboratory**
 Yue, Z. and Som, S., "Fuel Property Effects on Knock Propensity and Thermal Efficiency in a Direct-Injection Spark-Ignition Engine," *Applied Energy*, 2019. DOI: 10.1016/j.apenergy.2019.114221

1012. **University of Science and Technology of China; Zhejiang University; Southwest University of Science and Technology; Texas Tech University**
Zhao, D., Xia, Y., Ge, H., Lin, Q., and Wang, G., "Large Eddy Simulation of Flame Propagation During the Ignition Process in an Annular Multiple-Injector Combustor," *Fuel*, 2019. DOI: 10.1016/j.fuel.2019.116402
1013. **Argonne National Laboratory; University of Connecticut**
Kim, S., Kim, J., Shah, A., Pal, P., Scarcelli, R., Rockstroh, T., Som, S., Wu, Y., and Lu, T., "Numerical Study of Advanced Compression Ignition and Combustion in a Gasoline Direct Injection Engine," *ASME 2019 Internal Combustion Engine Division Fall Technical Conference*, ICEF2019-7281, Chicago, IL, United States, Oct 20–23, 2019.
1014. **Argonne National Laboratory**
Kim, J., Scarcelli, R., Som, S., Shah, A., Biruduganti, M.S., and Longman, D.E., "Assessment of Turbulent Combustion Models for Simulating Pre-Chamber Ignition in a Natural Gas Engine," *ASME 2019 Internal Combustion Engine Division Fall Technical Conference*, ICEF2019-7278, Chicago, IL, United States, Oct 20–23, 2019.
1015. **Argonne National Laboratory**
Magnotti, G.M. and Som, S., "Assessing Fuel Property Effects on Cavitation and Erosion Propensity Using a Computational Fuel Screening Tool," *ASME 2019 Internal Combustion Engine Division Fall Technical Conference*, ICEF2019-7269, Chicago, IL, United States, Oct 20–23, 2019.
1016. **Argonne National Laboratory; Sandia National Laboratories; University of Massachusetts Lowell; University of Connecticut; Lawrence Livermore National Laboratory**
Xu, C., Pal, P., Ren, X., Som, S., Sjöberg, M., Van Dam, N., Wu, Y., Lu, T., and McNenly, M., "Numerical Investigation of Fuel Property Effects on Mixed-Mode Combustion in a Spark-Ignition Engine," *ASME 2019 Internal Combustion Engine Division Fall Technical Conference*, ICEF2019-7265, Chicago, IL, United States, Oct 20–23, 2019.
1017. **Texas Tech University; Oakland University**
Lee, B., Ge, H., Parameswaran, S., and Zhao, P., "CFD Simulation of a Premixed Spark Ignition Hydrogen Engine," *ASME 2019 Internal Combustion Engine Division Fall Technical Conference*, ICEF2019-7257, Chicago, IL, United States, Oct 20–23, 2019.
1018. **Shanghai Jiao Tong University; Argonne National Laboratory**
Liu, M., Zhao, F., Li, X., Xu, M., Yue, Z., Som, S., and Hung, D.L., "Systematic Multi-Index Validations of SIDI Engine Flow Field LES Computations Using Crank Angle-Resolved PIV Measurements," *ASME 2019 Internal Combustion Engine Division Fall Technical Conference*, ICEF2019-7145, Chicago, IL, United States, Oct 20–23, 2019.
1019. **Harbin Engineering University**
Naruemon, I., Liu, L., Liu, D., and Ma, X., "Characteristics of Diesel Spray With Varying Injection Rate," *ASME 2019 Internal Combustion Engine Division Fall Technical Conference*, ICEF2019-7242, Chicago, IL, United States, Oct 20–23, 2019.
1020. **Navistar, Inc.**
Kumar, R., Wang, Y., Vojtech, R., and Cigler, J., "Effect of Fuel Injection Parameters on Performance and Emissions for High Efficiency Engines," *ASME 2019 Internal Combustion Engine Division Fall Technical Conference*, ICEF2019-7221, Chicago, IL, United States, Oct 20–23, 2019.
1021. **University of Rome Tor Vergata; The University of Alabama**
Bartolucci, L., Cordiner, S., Mulone, V., Krishnan, S.R., and Srinivasan, K.K., "A Computational Investigation of the Impact of Multiple Injection Strategies on Combustion Efficiency in Diesel–Natural Gas Dual Fuel Low Temperature Combustion Engine," *ASME 2019 Internal Combustion Engine Division Fall Technical Conference*, ICEF2019-7197, Chicago, IL, United States, Oct 20–23, 2019.

1022. **University of Massachusetts Lowell**
Shahsavan, M., Morovatiyan, M., Baghirzade, M., and Mack, J.H., "Implementing Natural Gas in a Compression Ignition Cycle Using Noble Gas Addition," *ASME 2019 Internal Combustion Engine Division Fall Technical Conference*, ICEF2019-7159, Chicago, IL, United States, Oct 20–23, 2019.
1023. **Aramco Research Center - Detroit**
Zhang, Y., Pei, Y., Tang, M., and Traver, M., "A Computational Investigation of Piston Bowl Geometry and Injector Spray Pattern Effects on Gasoline Compression Ignition in a Heavy-Duty Diesel Engine," *ASME 2019 Internal Combustion Engine Division Fall Technical Conference*, ICEF2019-7155, Chicago, IL, United States, Oct 20–23, 2019.
1024. **Argonne National Laboratory; University of Illinois at Chicago; University of Connecticut; Lawrence Livermore National Laboratory**
Pal, P., Kalvakala, K., Wu, Y., McNenly, M., Lapointe, S., Whitesides, R., Lu, T., Aggarwal, S.K., and Som, S., "Numerical Investigation of a Central Fuel Property Hypothesis Under Boosted Spark-Ignition Conditions," *ASME 2019 Internal Combustion Engine Division Fall Technical Conference*, ICEF2019-7284, Chicago, IL, United States, Oct 20–23, 2019.
1025. **Michigan Technological University; Aramco Research Center - Detroit**
Tang, M., Pei, Y., Zhang, Y., Traver, M., and Naber, J., "Effects of Fuel Chemical and Physical Properties on Spray and Ignition Characteristics Under Heavy-Duty Diesel Engine Conditions," *ASME 2019 Internal Combustion Engine Division Fall Technical Conference*, ICEF2019-7266, Chicago, IL, United States, Oct 20–23, 2019.
1026. **Argonne National Laboratory; University of Illinois Urbana-Champaign; Indian Institute of Technology Delhi**
Nocivelli, L., Yan, J., Saha, K., Magnotti, G.M., Lee, C.-F., and Som, S., "Effect of Ambient Pressure on the Behavior of Single-Component Fuels in a Gasoline Multi-Hole Injector," *ASME 2019 Internal Combustion Engine Division Fall Technical Conference*, ICEF2019-7258, Chicago, IL, United States, Oct 20–23, 2019.
1027. **Indian Institute of Technology Madras**
Gupta, S.K. and Mittal, M., "Analysis of Cycle-to-Cycle Combustion Variations in a Spark-Ignition Engine Operating Under Various Biogas Compositions," *Energy Fuels*, 2019. DOI: 10.1021/acs.energyfuels.9b02344
1028. **Indian Institute of Technology Delhi**
Dhyani, V. and Subramanian, K.A., "Fundamental Characterization of Backfire in a Hydrogen Fuelled Spark Ignition Engine Using CFD and Experiments," *International Journal of Hydrogen Energy*, 44(60), 32254-32270, 2019. DOI: 10.1016/j.ijhydene.2019.10.077
1029. **Caterpillar Inc.; Universitat Politècnica de València**
Fitzgerald, R.P., Vecchia, G.D., Peraza, J.E., and Martin, G.C., "Features of Internal Flow and Spray for a Multi-Hole Transparent Diesel Fuel Injector Tip," *ILASS 2019: 29th European Conference Liquid Atomization & Spray Systems*, Paris, France, Sep 2–4, 2019.
1030. **Tianjin University**
Liu, X., Wang, H., Zhang, Y., and Yao, M., "A Numerical Investigation on the Chemical Kinetics Process of a Reacting n-Dodecane Spray Flame Under Compression Ignition Combustion Condition," *Energy Fuels*, 33(11), 11899-11912, 2019. DOI: 10.1021/acs.energyfuels.9b02725
1031. **Purdue University**
Hasti, V.R., Lucht, R.P., and Gore, J.P., "Large Eddy Simulation of Hydrogen Piloted CH₄/Air Premixed Combustion With CO₂ Dilution," *Journal of the Energy Institute*, 93(3), 2020. DOI: 10.1016/j.joei.2019.10.004
1032. **Hunan University; Xihua University**
Shu, J., Fu, J., Zhang, Y., Xie, M., Liu, J., and Zeng, D., "Influences of Natural Gas Energy Fraction on Combustion and Emission Characteristics of a Diesel Pilot Ignition Natural Gas Engine Based on a Reduced Chemical Kinetic Model," *Fuel*, 261, 2020. DOI: 10.1016/j.fuel.2019.116432

1033. **Saudi Aramco**
Badra, J., Zubail, A., and Sim, J., "Numerical Investigation Into Effects of Fuel Physical Properties on GCI Engine Performance and Emissions," *Energy Fuels*, 33(10), 10267-10281, 2019. DOI: 10.1021/acs.energyfuels.9b02340
1034. **Politecnico di Torino**
Šamelis, G., "Development of a 3D-CFD Model for the Analysis of Combustion and Emissions in a Light-Duty Diesel Engine," M.S. thesis, Politecnico di Torino, Turin, Italy, 2019
<https://webthesis.biblio.polito.it/11974/1/tesi.pdf>.
1035. **Oregon State University**
Tran, K., "Development and Application of a Reduced Chemical Kinetics Model for Low-Speed Pre-Ignition Investigation," M.S. thesis, Oregon State University, Corvallis, OR, United States, 2019
https://ir.library.oregonstate.edu/concern/graduate_thesis_or_dissertations/n870zx965.
1036. **GE Global Research Center; Baker Hughes Company; The University of Oklahoma**
Gubba, S.R., Tamma, B., Kazempoor, P., Hurley, T.J., Patterson, M.A., and Hartman, G., "A Novel Air Management System for a Large Bore Two-Stroke Naturally Aspirated Gas Engine to Reduce Emissions," *International Journal of Engine Research*, 2019. DOI: 10.1177/1468087419871858
1037. **Indian Institute of Technology Bombay; Cummins Inc.**
Duvvuri, P.P., Shrivastava, R.K., Sukumaran, S., and Sreedhara, S., "Numerical Modeling of Thermophoretic Deposition on Cylinder Liner of a Diesel Engine Using a Sectional Soot Model," *Journal of Aerosol Science*, 139, 2020. DOI: 10.1016/j.jaerosci.2019.105464
1038. **Tongji University**
Wu, Z. and Han, Z., "Micro-GA Optimization Analysis of the Effect of Diesel Injection Strategy on Natural Gas-Diesel Dual-Fuel Combustion," *Fuel*, 259, 2020. DOI: 10.1016/j.fuel.2019.116288
1039. **Università degli Studi di Perugia**
Zembi, J., Mariani, F., and Battistoni, M., "Large Eddy Simulation of Ignition and Combustion Stability in a Lean SI Optical Access Engine," SAE Paper 2019-24-0087, 2019.
1040. **New Ace Inst. Co. Ltd.; IFP Energies nouvelles**
Uchida, N., Galpin, J., Watanabe, K., Enya, K., Zaccardi, J.-M., and Duffour, F., "Numerical and Experimental Investigation Into Brake Thermal Efficiency Optimum Heat Release Rate for a Diesel Engine," SAE Paper 2019-24-0109, 2019. DOI: 10.4271/2019-24-0109
1041. **Universitat Politècnica de València**
Broatch, A., Margot, X., Garcia-Tiscar, J., and Escalona, J., "Validation and Analysis of Heat Losses Prediction Using Conjugate Heat Transfer Simulation for an Internal Combustion Engine," SAE Paper 2019-24-0091, 2019.
1042. **Guangxi University; Liuzhou Vocational & Technical College**
Lv, D., Chen, Y., Chen, Y., Guo, X., Chen, H., and Huang, H., "Development of a Reduced Diesel/PODE_n Mechanism for Diesel Engine Application," *Energy Conversion and Management*, 199, 2019. DOI: 10.1016/j.enconman.2019.112070
1043. **IFP Energies nouvelles; Convergent Science**
Malbec, L.-M., Habchi1, C., Bohbot, J., Drennan, S., Quan, S., and Maciejewski, D., "On the Behaviour of Urea on a Heated Wall - A Revealed Leidenfrost-Like Temperature During Urea Thermolysis," *ILASS 2019: 29th European Conference Liquid Atomization & Spray Systems*, Paris, France, Sep 2-4, 2019.
1044. **University of Ulsan; Indonesian Institute of Sciences**
Wahono, B., Setiawan, A., and Lim, O., "Experimental Study and Numerical Simulation on In-Cylinder Flow of Small Motorcycle Engine," *Applied Energy*, 255, 2019. DOI: 10.1016/j.apenergy.2019.113863

1045. **Beijing Institute of Technology; Hebei University of Engineering**
Liu, F., Shi, Z., Zhang, Z., Li, Y., and Sun, C., "Numerical Study on Critical Ambient Temperature for Auto-Ignition of the Diesel Spray Under Cold-Start Conditions," *Fuel*, 258, 2019. DOI: 10.1016/j.fuel.2019.116191
1046. **Politecnico di Bari; Istituto Motori CNR**
Distaso, E., Amirante, R., Cassone, E., Catapano, F., De Palma, P., Sementa, P., and Tamburrano, P., "Experimental and Numerical Analysis of a Pre-Chamber Turbulent Jet Ignition Combustion System," SAE Paper 2019-24-0018, 2019.
1047. **Tianjin University; University of Wisconsin–Madison**
Liu, X., Kokjohn, S., Wang, H., and Yao, M., "A Comparative Numerical Investigation of Reactivity Controlled Compression Ignition Combustion Using Large Eddy Simulation and Reynolds-Averaged Navier-Stokes Approaches," *Fuel*, 257, 2019. DOI: 10.1016/j.fuel.2019.116023
1048. **CMT-Motores Térmicos**
Desantes, J.M., García-Oliver, J.M., Novella, R., and Pachano, L., "A Numerical Study of the Effect of Nozzle Diameter on Diesel Combustion Ignition and Flame Stabilization," *International Journal of Engine Research*, 2019. DOI: 10.1177/1468087419864203
1049. **RWTH Aachen University; FEV Europe GmbH**
Zubel, M., Ottenwälder, T., Heuser, B., and Pischinger, S., "Combustion System Optimization for Dimethyl Ether Using a Genetic Algorithm," *International Journal of Engine Research*, 2019. DOI: 10.1177/1468087419851577
1050. **Argonne National Laboratory; Università degli Studi di Perugia; Indian Institute of Technology Delhi**
Magnotti, G.M., Battistoni, M., Saha, K., and Som, S., "Linking Cavitation Collapse Energy With the Erosion Incubation Period," *ILASS 2019: 29th European Conference Liquid Atomization & Spray Systems*, Paris, France, Sep 2–4, 2019.
1051. **Convergent Science**
Liu, S., Kumar, G., Wang, M., and Pomraning, E., "Towards Accurate Temperature and Species Mass Fraction Predictions for Sandia Flame-D Using Detailed Chemistry and Adaptive Mesh Refinement," *2018 AIAA Aerospace Sciences Meeting*, AIAA 2018-1428, Kissimmee, FL, United States, Jan 8–12, 2018. DOI: 10.2514/6.2018-1428
1052. **Convergent Science; Caterpillar Inc.; Sandia National Laboratories**
Senecal, P.K., Pomraning, E., Anders, J.W., Weber, M.R., Gehrke, C.R., Polonowski, C.J., and Mueller, C.J., "Predictions of Transient Flame Lift-Off Length With Comparison to Single-Cylinder Optical Engine Experiments," *Journal of Engineering for Gas Turbines and Power*, 136(11), 2014. DOI: 10.1115/1.4027653
1053. **Politecnico di Torino**
Piano, A., "Analysis of Advanced Air and Fuel Management Systems for Future Automotive Diesel Engine Generations," Ph.D. thesis, Politecnico di Torino, Turin, Italy, 2018.
1054. **Hunan University; Wayne State University; Jiangsu University; Central South University of Forestry and Technology**
Zhang, S., Duan, X., Liu, Y., Guo, G., Zeng, H., Liu, J., Lai, M.-C., Talekar, A., and Yuan, Z., "Experimental and Numerical Study the Effect of Combustion Chamber Shapes on Combustion and Emissions Characteristics in a Heavy-Duty Lean Burn SI Natural Gas Engine Coupled With Detail Combustion Mechanism," *Fuel*, 258, 2019. DOI: 10.1016/j.fuel.2019.116130
1055. **Tianjin University**
Li, Y., Gao, W., Zhang, P., Ye, Y., and Wei, Z., "Effects Study of Injection Strategies on Hydrogen-Air Formation and Performance of Hydrogen Direct Injection Internal Combustion Engine," *International Journal of Hydrogen Energy*, 2019. DOI: 10.1016/j.ijhydene.2019.08.055

1056. **Argonne National Laboratory; Convergent Science; Michigan Technological University**
 Scarcelli, R., Zhang, A., Wallner, T., Som, S., Huang, J., Wijeyakulasuriya, S., Mao, Y., Zhu, X., and Lee, S.-Y., "Development of a Hybrid Lagrangian-Eulerian Model to Describe Spark-Ignition Processes at Engine-Like Turbulent Flow Conditions," *Journal of Engineering for Gas Turbines and Power*, 141(9), 2019. DOI: 10.1115/1.4043397
1057. **Convergent Science; Argonne National Laboratory**
 Probst, D., Wijeyakulasuriya, S., Pomraning, E., Kodavasal, J., Scarcelli, R., and Som, S., "Predicting Cycle-to-Cycle Variation With Concurrent Cycles in a Gasoline Direct Injected Engine With Large Eddy Simulations," *Journal of Energy Resources Technology*, 2019. DOI: 10.1115/1.4044766
1058. **Argonne National Laboratory; Università degli Studi di Perugia**
 Yue, Z., Battistoni, M., and Som, S., "Spray Characterization for Engine Combustion Network Spray G Injector Using High-Fidelity Simulation With Detailed Injector Geometry," *International Journal of Engine Research*, 2019. DOI: 10.1177/1468087419872398
1059. **Ecole Nationale Polytechnique d'Oran; LTE Laboratory; University Center of Nâama; University of Abou Bekr Belkaid Tlemcen; Institute Mines-Telecom Atlantique de Nantes, France**
 Bousbaa, H., Tarabet, L., Naima, K., Liazid, A., and Tazerout, M.L., "Eucalyptus Biofuel Study as Alternative for Diesel Engine," *International Journal of Renewable Energy Technology*, 10(3), 247-281, 2019. DOI: 10.1504/IJRET.2019.101733
1060. **RWTH Aachen University**
 Chu, H., Falkenstein, T., Davidovic, M., and Pitsch, H., "RANS of Motored Engine," *Darmstadt Engine Workshop VI*, Darmstadt, Germany, Oct 6, 2017.
1061. **RWTH Aachen University**
 Korkmaz, M., Lakshmanan, R., Beeckmann, J., and Pitsch, H., "Development of an Advanced Injection Strategy for LTC in a Single Cylinder CI Engine," *29th Deutscher Flammentag*, Bochum, Germany, Sep 17-18, 2019.
1062. **RWTH Aachen University**
 Korkmaz, M., Lakshmanan, R., Falkenstein, T., Beeckmann, J., and Pitsch, H., "Experimental and Numerical Investigation of the Maximum Pressure Rise Rate for an LTC Concept in a Single Cylinder CI Engine," *SAE Paper 2019-24-0023*, 2019.
1063. **RWTH Aachen University**
 Deshmukh, A.Y., Korkmaz, M., Davidovic, M., Goeb, D., Giefer, C., Bode, M., Cai, L., and Pitsch, H., "Towards an Integral Combustion Model for Model-Based Control of PCCI Engines," *SAE Paper 2019-24-0001*, 2019. DOI: 10.4271/2019-24-0001
1064. **RWTH Aachen University; Ford-Werke GmbH**
 Deshmukh, A.Y., Bode, M., Falkenstein, T., Khosravi, M., van Bebber, D., Klaas, M., Schröder, W., and Pitsch, H., "Simulation and Modeling of Direct Gas Injection Through Poppet-Type Outwardly-Opening Injectors in Internal Combustion Engines," *Natural Gas Engines*, eds. Srinivasan, K., Agarwal, A., Krishnan, S., and Mulone, V., Springer, Singapore, 2018. DOI: 10.1007/978-981-13-3307-1_4
1065. **University of Ulsan; Indonesian Institute of Sciences**
 Wahono, B., Putrasari, Y., and Lim, O., "A Study on In-Cylinder Flow Field of a 125cc Motorcycle Engine at Low Engine Speeds," *Journal of Mechanical Science and Technology*, 33(9), 4477-4494, 2019. DOI: 10.1007/s12206-019-0844-6
1066. **Tianjin University**
 Li, X., Zhen, X., Wang, Y., Liu, D., and Tiana, Z., "The Knock Study of High Compression Ratio SI Engine Fueled With Methanol in Combination With Different EGR Rates," *Fuel*, 257, 2019. DOI: 10.1016/j.fuel.2019.116098

1067. **IFP Energies nouvelles**
Iafrate, N., Matrat, M., and Zaccardi, J.-M., "Numerical Investigations on Hydrogen-Enhanced Combustion in Ultra-Lean Gasoline Spark-Ignition Engines," *International Journal of Engine Research*, 2019. DOI: 10.1177/1468087419870688
1068. **Argonne National Laboratory; Michigan Technological University; University of Massachusetts Dartmouth**
Torelli, R., Scarcelli, R., Som, S., Zhu, X., Lee, S.-Y., Naber, J., Markt, D., and Raessi, M., "Toward Predictive and Computationally Affordable Lagrangian-Eulerian Modeling of Spray-wall Interaction," *International Journal of Engine Research*, 2019. DOI: 10.1177/1468087419870619
1069. **King Abdullah University of Science and Technology**
Aljabri, H., "A Computational Investigation of Multiple Injection Strategy in an Isobaric Combustion Engine," M.S. thesis, King Abdullah University of Science and Technology, Thuwal, Saudi Arabia, 2019
<https://repository.kaust.edu.sa/bitstream/handle/10754/656454/MS%20Thesis%20-%20v5.pdf?sequence=1&isAllowed=y>.
1070. **Tianjin University; CSSC Marine Power Co., Ltd**
Liu, H., Li, J., Wang, J., Wu, C., Liu, B., Dong, J., Liu, T., Ye, Y., Wang, H., and Yao, M., "Effects of Injection Strategies on Low-speed Marine Engines Using the Dual Fuel of High-pressure Direct-injection Natural Gas and Diesel," *Energy Science & Engineering*, 2019. DOI: 10.1002/ese3.406
1071. **Marquette University**
Hatzenbihler, A., "Optimal Conditions for Measuring Ignition Quality in Non-Engine Tests," M.S. thesis, Marquette University, Milwaukee, WI, United States, 2019
https://publications.marquette.edu/cgi/viewcontent.cgi?article=1543&context=theses_open.
1072. **University of Wisconsin-Madison**
Ravindran, A.C. and Kokjohn, S.L., "Improving Numerical Modeling of DISI Cold-Start," 2019 *International Multidimensional Engine Modeling User's Group Meeting*, Detroit, MI, United States, Apr 8, 2019.
1073. **Universidad de Antioquia**
Domínguez-Cardozo, S., Bustamante-Londoño, F., and Agudelo-Santamaría, J.R., "CFD Model of a Spark-Ignition Engine Fueled With Several Oxygenated Compounds," *9th European Combustion Meeting*, Lisbon, Portugal, Apr 14-17, 2019.
1074. **Shanghai Jiao Tong University**
Cao, J., Ma, Z., Li, X., and Xu, M., "3D Proper Orthogonal Decomposition Analysis of Engine In-Cylinder Velocity Fields," *Measurement Science and Technology*, 30(8), 2019. DOI: 10.1088/1361-6501/ab25c1
1075. **Politecnico di Milano; RWTH Aachen University; Lawrence Livermore National Laboratory; Convergent Science; National University of Ireland, Galway**
Pelucchi, M., Cai, L., Pejpichestakul, W., Tripathi, R., Wagnon, S., Zhang, K., Raju, M., Mehl, M., Faravelli, T., Pitz, W., Pitsch, H., Curran, H., and Senecal, P.K., "Computational Chemistry Consortium: Surrogate Fuel Mechanism Development, Pollutants Sub-Mechanisms and Components Library," SAE Paper 2019-24-0020, 2019. DOI: 10.4271/2019-24-0020
1076. **Argonne National Laboratory; Convergent Science; University of Massachusetts Amherst**
Xue, Q., Battistoni, M., Quan, S.P., Senecal, P.K., Pomraning, E., Schmidt, D.P., and Som, S., "Eulerian Modeling of Fully-Coupled Diesel Injector Flow and Spray," *ILASS Americas 26th Annual Conference on Liquid Atomization and Spray Systems*, Portland, OR, United States, May 18-21, 2014.
1077. **Argonne National Laboratory; Università degli Studi di Perugia**
Battistoni, M., Kastengren, A.L., Powell, C.F., and Som, S., "Fluid Dynamics Modeling of End-Of-Injection Process," *ILASS Americas 26th Annual Conference on Liquid Atomization and Spray Systems*, Portland, OR, United States, May 18-21, 2014.

1078. **Argonne National Laboratory; Università degli Studi di Perugia**
Xue, Q., Battistoni, M., and Som, S., "CFD Modeling of the Nozzle Flow and Near-Field Spray on ECN Spray B Injector," *ILASS Americas 27th Annual Conference on Liquid Atomization and Spray Systems*, Raleigh, NC, United States, May 17–20, 2015.
1079. **Argonne National Laboratory; Università degli Studi di Perugia**
Saha, K., Som, S., and Battistoni, M., "Parametric Study of HRM for Gasoline Sprays," *ILASS Americas 28th Annual Conference on Liquid Atomization and Spray Systems*, Dearborn, MI, United States, May 2016.
1080. **Università degli Studi di Perugia; University of Bologna**
Zembi, J., Battistoni, M., Ranuzzi, K., and Cavina, S., "CFD Simulations of Port Water Injection Benefits in a GDI Engine Under Knock-Limited Conditions," *THIESEL 2018*, València, Spain, Sep 11–14, 2018.
1081. **Argonne National Laboratory; Università degli Studi di Perugia**
Saha, K., Battistoni, M., and Som, S., "Modeling of Flash Boiling Phenomenon in Internal and Near-Nozzle Flow of Fuel Injectors," *Droplets and Sprays*, eds. Basu, S., Agarwal, A., Mukhopadhyay, A., and Patel, C., Springer, Singapore, 2018. DOI: 10.1007/978-981-10-7449-3_7
1082. **Indian Institute of Technology Delhi; Università degli Studi di Perugia; Argonne National Laboratory; University of Waterloo**
Saha, K., Battistoni, M., Som, S., and Li, X., "Modeling of Cavitation in Fuel Injectors With Single- And Two-Fluid Approaches," *Two-Phase Flow for Automotive and Power Generation Sectors*, eds. Saha, K., Agarwal, A.K., Ghosh, K., and Som, S., Springer, Singapore, 2019. DOI: 10.1007/978-981-13-3256-2_7
1083. **Università degli Studi di Perugia; Argonne National Laboratory**
Battistoni, M., Duke, D., Swantek, A.B., Tilocco, F.Z., Powell, C.F., and Som, S., "Effects of Noncondensable Gas on Cavitating Nozzles," *Atomization and Sprays*, 25(6), 453–483, 2015. DOI: 10.1615/AtomizSpr.2015011076
1084. **Argonne National Laboratory; Università degli Studi di Perugia**
Battistoni, M., Xue, Q., and Som, S., "Large-Eddy Simulation (LES) of Spray Transients: Start and End of Injection Phenomena," *Oil & Gas Science and Technology*, 71(1), 2016. DOI: 10.2516/ogst/2015024
1085. **Università degli Studi di Perugia; Argonne National Laboratory**
Battistoni, M., Poggiani, C., and Som, S., "Prediction of the Nozzle Flow and Jet Characteristics at Start and End of Injection: Transient Behaviors," *SAE International Journal of Engines*, 9(1), 84–97, 2016. DOI: 10.4271/2015-01-1850
1086. **Argonne National Laboratory; Università degli Studi di Perugia; Convergent Science**
Saha, K., Som, S., Battistoni, M., Li, Y., Quan, S., and Senecal, P.K., "Modeling of Internal and Near-Nozzle Flow for a Gasoline Direct Injection Fuel Injector," *Journal of Energy Resources Technology*, 138(5), 2016. DOI: 10.1115/1.4032979
1087. **Università degli Studi di Perugia; Argonne National Laboratory**
Battistoni, M., Som, S., and Powell, C.F., "Highly Resolved Eulerian Simulations of Fuel Spray Transients in Single and Multi-Hole Injectors: Nozzle Flow and Near-Exit Dynamics," *Fuel*, 251, 709–729, 2019. DOI: 10.1016/j.fuel.2019.04.076
1088. **Michigan State University; Convergent Science**
Gholamisheeri, M., Givler, S., and Toulson, E., "RANS and LES of a Turbulent Jet Ignition System Fueled With iso-Octane," *Flow, Turbulence and Combustion*, 2019. DOI: 10.1007/s10494-019-00049-5
1089. **Hunan University; Xihua University; University of Canterbury; Shenzhen University**
Shu, J., Fu, J., Zhao, D., Liu, J., Ma, Y., Deng, B., Zeng, D., Liu, J., and Zhang, Y., "Numerical Investigation on the Effects of Valve Timing on In-Cylinder Flow, Combustion and Emission Performance of a Diesel Ignition Natural Gas Engine Through Computational Fluid Dynamics," *Energy Conversion and Management*, 198, 2019. DOI: 10.1016/j.enconman.2019.111786

1090. **Tianjin University; China Shipbuilding Power Engineering Institute Co., Ltd.**
Li, J., Wang, J., Liu, T., Dong, J., Liu, B., Wu, C., Ye, Y., Wang, H., and Liu, H., "An Investigation of the Influence of Gas Injection Rate Shape on High-Pressure Direct-Injection Natural Gas Marine Engines," *Energies*, 12(13), 2019. DOI: 10.3390/en12132571
1091. **University of Michigan; General Motors R&D**
Wu, A., Keum, S., Greene, M., Reuss, D., and Sick, V., "Comparison of Near-Wall Flow and Heat Transfer of an Internal Combustion Engine Using Particle Image Velocimetry and Computational Fluid Dynamics," *Journal of Energy Resources Technology*, 141(12), 2019. DOI: 10.1115/1.4044021
1092. **Brandenburg University of Technology; LOGE AB; Renault SAS**
Netzer, C., Seidel, L., Ravet, F., and Mauß, F., "Impact of the Surrogate Formulation on 3D CFD Engine Knock Prediction Using Detailed Chemistry," *Fuel*, 254, 2019. DOI: 10.1016/j.fuel.2019.115678
1093. **Indian Institute of Technology Bombay; Cummins Inc.**
Duvvuri, P.P., Sukumaran, S., Shrivastava, R.K., and Sreedhara, S., "Modeling Soot Particle Size Distribution in Diesel Engines," *Fuel*, 243, 70-78, 2019. DOI: 10.1016/j.fuel.2019.01.104
1094. **FEV**
Reichert, E., Mütter, M., Ghetti, S., Heuser, P., Schlemmer-Kelling, U., Bierl, M., Lauer, S., and Sankhla, H., "The Next Generation of High-Speed Engines: Targets and Enablers," *29th CIMAC World Congress 2019*, Technical Paper #433, Vancouver, Canada, Jun 10-14, 2019.
1095. **Prometheus Applied Technologies, LLC; Universität der Bundeswehr München**
Sotiropoulou, E., Tozzi, L., Trapp, C., Kong, L., and Zhu, S., "Cost Effective and Reliable Solutions for Gas Engines in Stationary and Mobile Applications Using Advanced Passive Prechamber Technologies," *29th CIMAC World Congress 2019*, Technical Paper #422, Vancouver, Canada, Jun 10-14, 2019.
1096. **ABB Turbo Systems**
Wunderwald, D., Müller, G., Hertel, A., Domenig, F., Seiler, M., and Maurer, F., "A200-H – the New Benchmark in Single-Stage Turbocharging," *29th CIMAC World Congress 2019*, Technical Paper #341, Vancouver, Canada, Jun 10-14, 2019.
1097. **Oak Ridge National Laboratory; ExxonMobil Research & Engineering; MAHLE Powertrain; Hans Jensen Lubricators**
Kaul, B., Nafziger, E., Kass, M., Givens, W., Crouthamel, K., Fogarty, J., Satterfield, A., Brabez, N., Jamieson, A., Williams, M., Blaxill, H., and Kristensen, N., "Enterprise: A Reduced-Scale, Flexible Fuel, Single-Cylinder Crosshead Marine Diesel Research Engine," *29th CIMAC World Congress 2019*, Technical Paper #326, Vancouver, Canada, Jun 10-14, 2019.
1098. **Tianjin University; China Shipbuilding Power Engineering Institute Co., Ltd.**
Liang, X., Yang, P., Zhang, F., Zhang, E., Cao, X., and Liu, T., "Research on EGR Mechanism of NOx Reduction on a Large-Bore Marine Diesel Engine by 3D-CFD Simulation," *29th CIMAC World Congress 2019*, Technical Paper #195, Vancouver, Canada, Jun 10-14, 2019.
1099. **Woodward, Inc.**
Nair, S., Hampson, G., and Carlson, J., "Controlled Multi-Staged Combustion Strategy for Overcoming Load Limitations of Fuel Flexible Gas / Diesel Engines," *29th CIMAC World Congress 2019*, Technical Paper #317, Vancouver, Canada, Jun 10-14, 2019.
1100. **GE Global Research Center; Convergent Science**
Klingbeil, A., Magina, N., Primus, R., Ravichandra, J.S., Probst, D., Wijeyakulasuriya, S., and Tamma, B., "Evaluation of Machine Learning for Piston Bowl Design," *29th CIMAC World Congress 2019*, Technical Paper #312, Vancouver, Canada, Jun 10-14, 2019.
1101. **Tianjin University; China Shipbuilding Power Engineering Institute Co., Ltd.**
Ye, Y., Liu, T., Dong, J., Li, J., Wang, H., Liu, H., and Yao, M., "Pre-Chamber Ignition and Flame Development Process on a Large Two-Stroke Dual-Fuel Engine," *29th CIMAC World Congress 2019*, Technical Paper #208, Vancouver, Canada, Jun 10-14, 2019.

1102. **Southwest Research Institute; GE Global Research Center**
Hoag, K., Abidin, Z., French, A., Primus, R., and Klingbeil, A., "A Simplified Kinetic Auto-Ignition Model for Cycle Simulation of Gas Engines," *29th CIMAC World Congress 2019*, Technical Paper #241, Vancouver, Canada, Jun 10–14, 2019.
1103. **Jiangsu University**
Rui, L. and Wang, Q., "Simulation Study on the Influence of Natural Gas and Diesel Injector Position on Combustion and Emission of Marine Dual-Fuel Engine," *29th CIMAC World Congress 2019*, Technical Paper #204, Vancouver, Canada, Jun 10–14, 2019.
1104. **Harbin Engineering University; HOERBIGER Wien GmbH**
Lu, C., Song, E., Dong, Q., Ranegger, G., and Huschenbett, M., "Gas Injection Timing Optimization for Combustion and Emission Improvement in a Multi-Point Injection Marine Gas Engine Under Low Load," *29th CIMAC World Congress 2019*, Technical Paper #184, Vancouver, Canada, Jun 10–14, 2019.
1105. **Shanghai Jiao Tong University; China Shipbuilding Power Engineering Institute Co., Ltd.**
Wang, D., Shi, L., Deng, K., Qian, Y., Gui, Y., and Liu, B., "Research and Optimization of Low-Speed Two-Stroke Engines Using High Pressure EGR With Cylinder Bypass," *29th CIMAC World Congress 2019*, Technical Paper #008, Vancouver, Canada, Jun 10–14, 2019.
1106. **Technische Universität München**
Frankl, S., Gleis, S., and Wachtmeister, G., "Interpretation of Ignition and Combustion in a Full-Optical High- Pressure-Dual-Fuel (HPDF) Engine Using 3D-CFD Methods," *29th CIMAC World Congress 2019*, Technical Paper #166, Vancouver, Canada, Jun 10–14, 2019.
1107. **Harbin Engineering University**
Hao, G., Zhou, S., Feng, Y., and Shreka, M., "Study on the Influence of Prechamber Structure on the Knock of a Marine Low- Speed Dual-Fuel Engine," *29th CIMAC World Congress 2019*, Technical Paper #050, Vancouver, Canada, Jun 10–14, 2019.
1108. **Tianjin University**
Wang, H., Wang, Y., Yao, M., Zheng, Z., and Liu, Y., "Numerical Study on the Technical Routines to Meet Tier III Regulation of a Low-Speed Marine Diesel Engine," *29th CIMAC World Congress 2019*, Technical Paper #143, Vancouver, Canada, Jun 10–14, 2019.
1109. **Hebei University of Technology; Tianjin University; University of Strathclyde; China Shipbuilding Power Engineering Institute Co., Ltd.**
Sun, X., Liang, X., Zhou, P., and Qian, Y., "Numerical Investigation of NO_x Reduction Technology Lines Under Large Two-Stroke Marine Diesel Engine Using Integrated CFD-Chemical Kinetics," *29th CIMAC World Congress 2019*, Technical Paper #043, Vancouver, Canada, Jun 10–14, 2019.
1110. **University of Michigan; General Motors R&D**
Wu, A., Keum, S., and Sick, V., "Large Eddy Simulations With Conjugate Heat Transfer (CHT) Modeling of Internal Combustion Engines (ICEs)," *Oil & Gas Science and Technology*, 74, 2019. DOI: 10.2516/ogst/2019029
1111. **Shanghai Jiao Tong University; General Motors R&D**
Zhao, F., Liu, M., Ge, P., Hung, D.L., Li, X., Xu, M., Yang, X., and Idicheria, C., "Multi-Plane Time-Resolved Particle Image Velocimetry (PIV) Flow Field Measurements in an Optical Spark-Ignition Direct-Injection (SIDI) Engine for Large-Eddy Simulation (LES) Model Validations," *Oil & Gas Science and Technology*, 74, 2019. DOI: 10.2516/ogst/2019022
1112. **Tsinghua University**
Xu, C., "Advanced Chemistry Solver Development and Computational Diagnostics and Dynamic Adaptive Modeling of Turbulent Combustion," Ph.D. thesis, Tsinghua University, Beijing, China, 2018 <https://opencommons.uconn.edu/cgi/viewcontent.cgi?article=8105&context=dissertations>.

1113. **Convergent Science; Argonne National Laboratory; Aramco Research Center**
Probst, D.M., Raju, M., Senecal, P.K., Kodavasal, J., Pal, P., Som, S., Moiz, A.A., and Pei, Y., "Evaluating Optimization Strategies for Engine Simulations Using Machine Learning Emulators," *Journal of Engineering for Gas Turbines and Power*, 141(9), 2019. DOI: 10.1115/1.4043964
1114. **Tianjin University; China Shipbuilding Power Engineering Institute Co., Ltd.**
Liu, Z., Zhou, L., Liu, B., Zhao, W., and Wei, H., "Effects of Equivalence Ratio and Pilot Fuel Mass on Ignition/Extinction and Pressure Oscillation in a Methane/Diesel Engine With Pre-Chamber," *Applied Thermal Engineering*, 158, 2019. DOI: 10.1016/j.applthermaleng.2019.113777
1115. **Stony Brook University**
Lawler, B., "Final Technical Report: Single-Fuel Reactivity Controlled Compression Ignition Combustion Enabled by Onboard Fuel Reformation," Stony Brook University DOE-SBU-0007216, Mar 31, 2019. DOI: 10.2172/1504151
1116. **Shenzhen University; Chongqing University; Hunan University**
Chen, Y., Liu, A., Deng, B., Xu, Z., Feng, R., Fu, J., Liu, X., Zhang, G., and Zhou, L., "The Influences of Ignition Modes on the Performances for a Motorcycle Single Cylinder Gasoline Engine at Lean Burn Operation: Looking Inside Interaction Between Flame Front and Turbulence," *Energy*, 179, 528-541, 2019. DOI: 10.1016/j.energy.2019.05.001
1117. **Amrita Vishwa Vidyapeetham; Renault Nissan Technology and Business Centre India; Renault SAS**
Sai, A.J., Balamurugan, R., Servant, C., Ravet, F., and Kumar, S.A., "Applying ECFM Combustion Model to Spark Ignition Engine, Comparison With Experimental Data," *Advances in Fluid and Thermal Engineering*, eds. Saha, P., Subbarao, P., and Sikarwar, B., Springer, Singapore, 2019. DOI: 10.1007/978-981-13-6416-7_68
1118. **University of Waterloo**
Ghasemi, A., "Near-Field Vortex Dynamics of Flows Emerging From a Rectangular Duct," Ph.D. thesis, University of Waterloo, Waterloo, Canada, 2019
https://uwspace.uwaterloo.ca/bitstream/handle/10012/14564/Ghasemi_Abbas.pdf?sequence=1&isAllowed=y.
1119. **Tsinghua University**
Li, F., Liu, C., Song, H., and Wang, Z., "Improving Combustion and Emission Characteristics in Heavy-Duty Natural-Gas Engine by Using Pistons Enhancing Turbulence," SAE Paper 2018-01-1685, 2018. DOI: 10.4271/2018-01-1685
1120. **King Abdullah University of Science and Technology; Saudi Aramco**
Singh, E., Ali, M.J.M., Ichim, A., Morganti, K., and Dibble, R., "Effect of Mixture Formation and Injection Strategies on Stochastic Pre-Ignition," SAE Paper 2018-01-1678, 2018. DOI: 10.4271/2018-01-1678
1121. **Tianjin University; Brunel University London; China North Engine Research Institute**
Li, X., He, B.-Q., Zhao, H., Zhang, Y., Li, Y., and Bai, H., "Simulation of the Effect of Intake Pressure and Split Injection on Lean Combustion Characteristics of a Poppet-Valve Two-Stroke Direct Injection Gasoline Engine at High Loads," SAE Paper 2018-01-1723, 2018. DOI: 10.4271/2018-01-1723
1122. **Shanghai Jiao Tong University; King Abdullah University of Science and Technology**
Luo, Y., Ali, M.J.M., Huang, Z., and Im, H., "Effects of Injection Rate Profiles on Auto-Ignition in Ignition Quality Tester," SAE Paper 2018-01-1695, 2018. DOI: 10.4271/2018-01-1695
1123. **Colorado State University**
Zdanowicz, A., Mohr, J., Tryner, J., Gustafson, K., Windom, B., Olsen, D., and Marchese, A.J., "End-Gas Autoignition Fraction and Flame Propagation Rate in Laser-Ignited Primary Reference Fuel Mixtures at Elevated Temperature and Pressure," *11th U.S. National Combustion Meeting*, 71IC-0208, Pasadena, CA, United States, Mar 24-27, 2019.

1124. **Sojo University**
Umeno, A., Uchida, K., Watanabe, N., and Saitoh, H., "Numerical Prediction of Mixture Formation Process of an Ethanol Spray in a Rapid Compression and Expansion Machine," *The 9th TSME International Conference on Mechanical Engineering*, Phuket, Thailand, Dec 11–14, 2018. DOI: 10.1088/1757-899X/501/1/012001
1125. **Sojo University**
Saitoh, H., Uchida, K., and Watanabe, N., "Numerical Study on the Required Surrounding Gas Conditions for Stable Auto-Ignition of an Ethanol Spray," *The 9th TSME International Conference on Mechanical Engineering*, AEC0004, Phuket, Thailand, Dec 11–14, 2018.
1126. **Sojo University**
Saitoh, H., Tohjo, Y., and Uchida, K., "Numerical Analysis on the Mixture Formation Process Up to Auto-Ignition of an Ethanol Spray," *The 7th TSME International Conference on Mechanical Engineering*, AEC0025, Chiang Mai, Thailand, Dec 13–16, 2016.
1127. **Argonne National Laboratory; Oak Ridge National Laboratory**
Yue, Z., Edwards, K.D., Sluders, C.S., and Som, S., "Prediction of Cyclic Variability and Knock-Limited Spark Advance in a Spark-Ignition Engine," *Journal of Energy Resources Technology*, 141(10), 2019. DOI: 10.1115/1.4043393
1128. **Tsinghua University**
Guo, H., Li, Y., Xu, H., Shuai, S., and Zhang, H., "Interaction Between Under-Expanded Flashing Jets: A Numerical Study," *International Journal of Heat and Mass Transfer*, 137, 990-1000, 2019. DOI: 10.1016/j.ijheatmasstransfer.2019.04.010
1129. **University of Science and Technology of China; Zhejiang University; Texas Tech University**
Zhao, D., Xia, Y., Ge, H., Lin, Q., Zou, J., and Wang, G., "Simulations of Flame Propagation During the Ignition Process in an Annular Multiple-Injector Combustor," *International Journal of Numerical Methods for Heat & Fluid Flow*, 2019. DOI: 10.1108/HFF-08-2018-0432
1130. **University of Michigan; Hongik University; Sandia National Laboratories**
Wang, Q., Elvati, P., Kim, D., Johansson, K.O., Schrader, P.E., Michelsen, H.A., and Violi, A., "Spatial Dependence of the Growth of Polycyclic Aromatic Compounds in an Ethylene Counterflow Flame," *Carbon*, 149, 328-335, 2019. DOI: 10.1016/j.carbon.2019.03.017
1131. **Hebei University of Technology; Shandong University**
Li, M., Zheng, X., Zhang, Q., Li, Z., Shen, B., and Liu, X., "The Effects of Partially Premixed Combustion Mode on the Performance and Emissions of a Direct Injection Natural Gas Engine," *Fuel*, 250, 218-234, 2019. DOI: 10.1016/j.fuel.2019.04.009
1132. **University of Massachusetts Lowell**
Morovatiyan, M., Mohapatra, A., Shahsavan, M., Kazi, A., Christodouleas, D.C., and Mack, J.H., "Combustion Assisted Fabrication of Paper-Templated Metal Structures," *11th U.S. National Combustion Meeting*, Pasadena, CA, United States, Mar 24–27, 2019.
1133. **North Carolina State University**
Scroggins, J.A., "On Modeling Lifted Jet Flames With the RIF-Ist Framework," Ph.D. thesis, North Carolina State University, Raleigh, NC, United States, 2019
<https://repository.lib.ncsu.edu/bitstream/handle/1840.20/36350/etd.pdf?sequence=1>.
1134. **Wuhan University; University of Illinois Urbana-Champaign; China Ship Development and Design Center**
Liu, W., Kang, Y., Chang, W., Liu, Q., and Lee, C.-F., "Cavitating Flow Within an Injector-Like Geometry and the Subsequent Spray," *SAE Paper 2019-01-0284*, 2019. DOI: 10.4271/2019-01-0284
1135. **Beijing Institute of Technology; Collaborative Innovation Center of Electric Vehicles in Beijing**
Liu, F., Shi, Z., Li, Y., Hua, Y., Chen, Y., and Gao, Y., "Online Measuring Method for the Engines' IVC Timing Based on the In-Cylinder Pressure Fluctuation," *International Journal of Automotive Technology*, 20(2), 365-377, Apr 2019. DOI: 10.1007/s12239-019-0036-5

1136. **University of California, Berkeley; Tianjin University**
Chen, Y., Chen, T., Feng, Y., Ryu, J.I., Yang, H., and Chen, J.-Y., "H Radical Sensitivity-Assisted Automatic Chemical Kinetic Model Reduction for Laminar Flame Chemistry Retaining: A Case Study of Gasoline-DME Mixture Under Engine Conditions," *Energy Fuels*, 33(4), 3551-3556, 2019. DOI: 10.1021/acs.energyfuels.8b04282

1137. **Stony Brook University; Sandia National Laboratories**
Sofianopoulos, A., Boldaji, M.R., Lawler, B., Mamalis, S., and Dec, J.E., "Effect of Engine Size, Speed, and Dilution Method on Thermal Stratification of Premixed Homogeneous Charge Compression-ignition Engines: A Large Eddy Simulation Study," *International Journal of Engine Research*, 2019. DOI: 10.1177/1468087418820735

1138. **The Ohio State University; Oak Ridge National Laboratory**
Su, Y., Splitter, D., and Kim, S.H., "Predicting Cycle-to-Cycle Variations in a Spark-Ignition Engine Using Multi-Cycle Large Eddy Simulation," *11th U.S. National Combustion Meeting*, Pasadena, CA, United States, Mar 24-27, 2019.

1139. **Texas Tech University; Oakland University**
Ge, H. and Zhao, P., "Advanced Ignition System Model for Spark-Ignition Engines," *29th International Multidimensional Engine Modeling User's Group Meeting*, Detroit, MI, United States, Apr 9, 2018.

1140. **King Abdullah University of Science and Technology; University of Jeddah; Saudi Aramco**
Li, Y., Alfazazi, A., Mohan, B., Tingas, E.A., Badra, J., Im, H.G., and Sarathy, M., "Development of a Reduced Four-Component (Toluene/n-Heptane/iso-Octane/Ethanol) Gasoline Surrogate Model," *Fuel*, 247, 164-178, Jul 1, 2019. DOI: 10.1016/j.fuel.2019.03.052

1141. **Carnegie Mellon University; University of Alabama**
Dai, X., Singh, S., Krishnan, S.R., and Srinivasan, K.K., "Numerical Study of Combustion Characteristics and Emissions of a Diesel-methane Dual-Fuel Engine for a Wide Range of Injection Timings," *International Journal of Engine Research*, 2018. DOI: 10.1177/1468087418783637

1142. **Carnegie Mellon University**
Singh, S., Adams, P.J., and Presto, A.A., "Simulations of Vehicle-Induced Mixing and Near-Road Aerosol Microphysics Using Computational Fluid Dynamics," *AIMS Environmental Science*, 5(5), 315-339, 2018. DOI: 10.3934/environsci.2018.5.315

1143. **Tianjin University**
Raza, M., Wang, H., and Yao, M., "Numerical Investigation of Reactivity Controlled Compression Ignition (RCCI) Using Different Multi-Component Surrogate Combinations of Diesel and Gasoline," *Applied Energy*, 242, 462-479, May 15, 2019. DOI: 10.1016/j.apenergy.2019.03.115

1144. **University of Manitoba; National Research Council, Canada**
Yousefi, A., Guo, H., Birouk, M., and Liko, B., "On Greenhouse Gas Emissions and Thermal Efficiency of Natural Gas/Diesel Dual-Fuel Engine at Low Load Conditions: Coupled Effect of Injector Rail Pressure and Split Injection," *Applied Energy*, 242, 216-231, May 15, 2019. DOI: 10.1016/j.apenergy.2019.03.093

1145. **Sardar Vallabhbhai National Institute of Technology; Gdhyana Sanshodhana Nagari**
Hiren, D., Bharatkumar, S., and Brijesh, P., "Effect of Pilot Quantity on Combustion and Emission Characteristics of a Single-Cylinder Diesel Engine Under Fixed Dwell Condition: Experimental and Numerical Study," *Clean Technologies and Environmental Policy*, 1-17, 2019. DOI: 10.1007/s10098-019-01680-6

1146. **Tsinghua University; University of Birmingham**
Guo, H., Li, Y., Wang, B., Zhang, H., and Xu, H., "Numerical Investigation on Flashing Jet Behaviors of Single-Hole GDI Injector," *International Journal of Heat and Mass Transfer*, 130, 50-59, Mar 2019. DOI: 10.1016/j.jheatmasstransfer.2018.10.088

1147. **Tianjin University**
Ren, S., Wang, Z., Li, B., Liu, H., and Wang, J., "Development of a Reduced Polyoxymethylene Dimethyl Ethers (PODEn) Mechanism for Engine Applications," *Fuel*, 238, 208-224, Feb 15, 2019. DOI: 10.1016/j.fuel.2018.10.111
1148. **Michigan Technological University**
Lee, S.-Y. and Zhao, L., "Droplet Impingement and Evaporation on a Solid Surface," *Two-Phase Flow for Automotive and Power Generation Sectors*, eds. Saha, K., Agarwal, A.K., Ghosh, K., and Som, S., Springer, Singapore, 2019. DOI: 10.1007/978-981-13-3256-2_6
1149. **Stony Brook University**
Boldaji, M.R., Gainey, B., and Lawler, B., "Thermally Stratified Compression Ignition Enabled by Wet Ethanol With a Split Injection Strategy: A CFD Simulation Study," *Applied Energy*, 235, 813-826, Feb 1, 2019. DOI: 10.1016/j.apenergy.2018.11.009
1150. **Aramco Services Company; Argonne National Laboratory**
Traver, M., Pei, Y., Tzanetakis, T., Torelli, R., Powell, C., and Som, S., "Investigation and Simulation of Gasoline in a Diesel Fuel Injector for Gasoline Compression Ignition Applications," *11. Tagung Einspritzung Und Kraftstoffe 2018*, eds. Tschöke, H. and Marohn, R., Springer Vieweg, Wiesbaden, 2019. DOI: 10.1007/978-3-658-23181-1_21
1151. **Tianjin University; Brunel University London; China North Engine Research Institute**
He, B.-Q., Lin, C.-L., Li, X., Wang, X., Zhao, H., and Zhang, Y., "Numerical Study of the Mixture Formation and Stratified-Flame-Induced Auto-Ignition (SFI) Combustion Processes in a Poppet-Valve Two-Stroke Direct Injection Gasoline Engine," *Applied Thermal Engineering*, 654-665, Apr 2019. DOI: 10.1016/j.applthermaleng.2019.02.025
1152. **Stony Brook University**
Boldaji, M.R., Sofianopoulos, A., Mamalis, S., and Lawler, B., "Computational Fluid Dynamics Simulations of the Effect of Water Injection Characteristics on TSCI: A New, Load-Flexible, Advanced Combustion Concept," *Journal of Engineering for Gas Turbines and Power*, 140(11), Jul 9, 2018. DOI: 10.1115/1.4040309
1153. **Argonne National Laboratory; University of Perugia; Bennett University**
Magnotti, G.M., Battistoni, M., Saha, K., and Som, S., "Evaluation of a New Cavitation Erosion Metric Based on Fluid-Solid Energy Transfer in Channel Flow Simulations," *14th International Conference on Liquid Atomization and Spray Systems*, Chicago, IL, United States, Jul 22-26, 2017.
1154. **Argonne National Laboratory; University of Perugia; Bennett University**
Magnotti, G.M., Battistoni, M., Saha, K., and Som, S., "Exploration of Cavitation-Induced Erosion Metrics in Throttle Flow Simulations," *10th International Symposium on Cavitation*, Baltimore, MD, United States, May 14-16, 2018. DOI: 10.1115/1.861851_ch87
1155. **Argonne National Laboratory; University of Perugia**
Yue, Z., Battistoni, M., and Som, S., "A Numerical Study on Spray Characteristics at Start of Injection for Gasoline Direct Injection," *14th International Conference on Liquid Atomization & Spray Systems*, Chicago, IL, United States, Jul 22-26, 2018.
1156. **Gardner Denver Schopfheim GmbH**
Willie, J., "Analytical and Numerical Prediction of the Flow and Performance in a Claw Vacuum Pump," *10th International Conference on Screw Machines*, Dortmund, Germany, Sep 18-19, 2018. DOI: 10.1088/1757-899X/425/1/012026
1157. **CMT-Motores Térmicos**
Torregrosa, A.J., Broatch, A., Margot, X., and Gomez-Soriano, J., "Understanding the Unsteady Pressure Field Inside Combustion Chambers of Compression-Ignited Engines Using a Computational Fluid Dynamics Approach," *International Journal of Engine Research*, Oct 9, 2018. DOI: 10.1177/1468087418803030

1158. **CMT-Motores Térmicos**
Broatch, A., Olmeda, P., Margot, X., and Gomez-Soriano, J., "Numerical Simulations for Evaluating the Impact of Advanced Insulation Coatings on H2 Additivated Gasoline Lean Combustion in a Turbocharged Spark-Ignited Engine," *Applied Thermal Engineering*, 148, 674-683, Feb 5, 2017. DOI: 10.1016/j.applthermaleng.2018.11.106
1159. **Mississippi State University**
Jha, P.R., Srinivasan, K.K., and Krishnan, S.R., "Influence of Swirl Ratio on Diesel-Methane Dual Fuel Combustion: A CFD Investigation," *ASME 2017 Internal Combustion Engine Division Fall Technical Conference*, ICEF2017-3683, Seattle, WA, United States, Oct 15–18, 2017. DOI: 10.1115/ICEF2017-3683
1160. **Aramco Research Center**
Zhang, Y., Voice, A., Pei, Y., Traver, M., and Cleary, D., "A Computational Investigation of Fuel Chemical and Physical Properties Effects on Gasoline Compression Ignition in a Heavy-Duty Diesel Engine," *ASME 2017 Internal Combustion Engine Division Fall Technical Conference*, ICEF2017-3664, Seattle, WA, United States, Oct 15–18, 2017. DOI: 10.1115/ICEF2017-3664
1161. **Convergent Science**
Luo, Z., Sukheswalla, P., Drennan, S.A., Wang, M., and Senecal, P.K., "3D Numerical Simulations of Selective Catalytic Reduction of NOx With Detailed Surface Chemistry," *ASME 2017 Internal Combustion Engine Division Fall Technical Conference*, ICEF2017-3658, Seattle, WA, United States, Oct 15–18, 2017. DOI: 10.1115/ICEF2017-3658
1162. **Hiltner Combustion Systems; Caterpillar Inc.**
Hockett, A., Flory, M., Hiltner, J., and Fiveland, S., "Using Multi-Dimensional Combustion Simulations of a Natural Gas/Diesel Dual Fuel Engine to Investigate NOx Trends With Air-Fuel Ratio," *ASME 2017 Internal Combustion Engine Division Fall Technical Conference*, ICEF2017-3642, Seattle, WA, United States, Oct 15–18, 2017. DOI: 10.1115/ICEF2017-3642
1163. **General Motors; AVL Dacolt**
Keum, S., Grover, R.O., Jr, Meijer, C., and Tap, F., "CFD Modelling of Partial Fuel Stratification Combustion Using Detailed Fuel Surrogate Models and Tabulated Chemistry," *ASME 2017 Internal Combustion Engine Division Fall Technical Conference*, ICEF2017-3632, Seattle, WA, United States, Oct 15–18, 2017. DOI: 10.1115/ICEF2017-3632
1164. **General Motors**
Yang, X., Kuo, T.-W., Singh, K., Hattar, R., and Zeng, Y., "Cold-Start CFD Simulation of Spark-Ignition Direct-Injection Engine," *ASME 2017 Internal Combustion Engine Division Fall Technical Conference*, ICEF2017-3630, Seattle, WA, United States, Oct 15–18, 2017. DOI: 10.1115/ICEF2017-3630
1165. **Pinnacle Engines; Oak Ridge National Laboratory**
Banerjee, S., Naber, C., Willcox, M., Finney, C.E.A., and Edwards, K.D., "High Performance Computing and Analysis-Led Development of High Efficiency Dilute Opposed Piston Gasoline Engine," *ASME 2017 Internal Combustion Engine Division Fall Technical Conference*, ICEF2017-3616, Seattle, WA, United States, Oct 15–18, 2017. DOI: 10.1115/ICEF2017-3616
1166. **Argonne National Laboratory**
Kodavasal, J., Moiz, A.A., Ameen, M., and Som, S., "Machine Learning Analysis of Factors Impacting Cycle-to-Cycle Variation in a Gasoline Spark-Ignited Engine," *ASME 2017 Internal Combustion Engine Division Fall Technical Conference*, ICEF2017-3604, Seattle, WA, United States, Oct 15–18, 2017. DOI: 10.1115/ICEF2017-3604
1167. **Argonne National Laboratory; Sandia National Laboratories**
Van Dam, N., Zeng, W., Sjöberg, M., and Som, S., "Parallel Multi-Cycle LES of an Optical Pent-Roof DISI Engine Under Motored Operating Conditions," *ASME 2017 Internal Combustion Engine Division Fall Technical Conference*, ICEF2017-3603, Seattle, WA, United States, Oct 15–18, 2017. DOI: 10.1115/ICEF2017-3603

1168. **Argonne National Laboratory; University of Connecticut; Convergent Science**
 Pal, P., Wu, Y., Lu, T., Som, S., See, Y.C., and Le Moine, A., "Multi-Dimensional CFD Simulations of Knocking Combustion in a CFR Engine," *ASME 2017 Internal Combustion Engine Division Fall Technical Conference*, ICEF2017-3599, Seattle, WA, United States, Oct 15–18, 2017. DOI: 10.1115/ICEF2017-3599

1169. **Argonne National Laboratory; University of Connecticut**
 Kundu, P., Ameen, M.M., Xu, C., Unnikrishnan, U., Lu, T., and Som, S., "Implementation of Detailed Chemistry Mechanisms in Engine Simulations," *ASME 2017 Internal Combustion Engine Division Fall Technical Conference*, ICEF2017-3596, Seattle, WA, United States, Oct 15–18, 2017. DOI: 10.1115/ICEF2017-3596

1170. **Argonne National Laboratory; General Motors R&D**
 Ameen, M.M., Yang, X., Kuo, T.-W., and Som, S., "Using LES to Simulate Cycle-to-Cycle Variability During the Gas Exchange Process," *ASME 2017 Internal Combustion Engine Division Fall Technical Conference*, ICEF2017-3591, Seattle, WA, United States, Oct 15–18, 2017. DOI: 10.1115/ICEF2017-3591

1171. **Tongji University**
 Liao, Y., Shi, X., Ni, J., and Kang, Y., "Simulation Investigation of Working Process and Emissions on GDI Engine Fueled With Hydrous Ethanol Gasoline Blends," SAE Paper 2019-01-0219, 2019. DOI: 10.4271/2019-01-0219

1172. **Aramco Research Center; Argonne National Laboratory; Delphi Technologies**
 Cho, K., Zhao, L., Ameen, M., Zhang, Y., Pei, Y., Moore, W., and Sellnau, M., "Understanding Fuel Stratification Effects on Partially Premixed Compression Ignition (PPCI) Combustion and Emissions Behaviors," SAE Paper 2019-01-1145, 2019. DOI: 10.4271/2019-01-1145

1173. **Southwest Research Institute**
 Shah, B., Moiz, A., Hoffmeyer, M., Abidin, Z., Megel, A., and Hoag, K., "A Comprehensive CFD-FEA Conjugate Heat Transfer Analysis for Diesel and Gasoline Engines," SAE Paper 2019-01-0212, 2019. DOI: 10.4271/2019-01-0212

1174. **Caterpillar Inc.**
 Kavuri, C. and Anders, J., "Methodology to Perform Conjugate Heat Transfer Modeling for a Piston on a Sector Geometry for Direct-Injection Internal Combustion Engine Applications," SAE Paper 2019-01-0210, 2019. DOI: 10.4271/2019-01-0210

1175. **Lawrence Livermore National Laboratory; Clemson University International Center for Automotive Research; Clemson University; Auburn University**
 Killingsworth, N., Powell, T., O'Donnell, R., Filipi, Z., and Hoffman, M., "Modeling the Effect of Thermal Barrier Coatings on HCCI Engine Combustion Using CFD Simulations With Conjugate Heat Transfer," SAE Paper 2019-01-0956, 2019. DOI: 10.4271/2019-01-0956

1176. **Tianjin University; Brunel University London**
 Feng, Y., Chen, T., Xie, H., Zhang, L., and Zhao, H., "Dilution Boundary Expansion Mechanism of SI-CAI Hybrid Combustion Based on Abstract," SAE Paper 2019-01-0954, 2019. DOI: 10.4271/2019-01-0954

1177. **Aramco Research Center; BorgWarner Turbo Systems**
 Kumar, P., Pei, Y., Traver, M., and Watson, J., "System Level 1-D Analysis of an Air-System for a Heavy-Duty Gasoline Compression Ignition Engine," SAE Paper 2019-01-0240, 2019. DOI: 10.4271/2019-01-0240

1178. **Delphi Technologies; Achates Power**
 Sellnau, M., Hoyer, K., Petot, J.H., Kahraman, E., Meissonnier, G., Zermeno, R., Quimby, D., Klyza, C., and Redon, F., "Fuel Injection System for Opposed-Piston Gasoline Compression-Ignited (OP-GCI) Engines," SAE Paper 2019-01-0287, 2019. DOI: 10.4271/2019-01-0287

1179. **IFP Energies nouvelles; Convergent Science**
 Habchi, C., Quan, S., Drennan, S.A., and Bohbot, J., "Towards Quantitative Prediction of Urea Thermo-Hydrolysis and Deposits Formation in Exhaust Selective Catalytic Reduction (SCR) Systems," SAE Paper 2019-01-0992, 2019. DOI: 10.4271/2019-01-0992

1180. **Convergent Science**
Maciejewski, D., Sukheswalla, P., Wang, C., Drennan, S.A., and Chai, X., "Accelerating Accurate Urea/SCR Film Temperature Simulations to Time-Scales Needed for Urea Deposit Predictions," SAE Paper 2019-01-0982, 2019. DOI: 10.4271/2019-01-0982
1181. **Convergent Science**
Gao, Y. and Wang, M., "Validation of a Species-Based Extended Coherent Flamelet Model (SB-ECFM) in a Spark Ignition Engine," SAE Paper 2019-01-0222, 2019. DOI: 10.4271/2019-01-0222
1182. **University of Oxford**
Fang, X., Ismail, R., and Davy, M., "A Study on Kinetic Mechanisms of Diesel Fuel Surrogate n-Dodecane for the Simulation of Combustion Recession," SAE Paper 2019-01-0202, 2019. DOI: 10.4271/2019-01-0202
1183. **FCA US LLC; Virginia Tech; Texas Tech University**
Su, X., Chang, B., Ge, H., and Zhong, L., "A Two-Step Combustion Model of iso-Octane for 3D CFD Combustion Simulation in SI Engines," SAE Paper 2019-01-0201, 2019. DOI: 10.4271/2019-01-0201
1184. **Argonne National Laboratory; Università degli Studi di Perugia; Indian Institute of Technology Delhi**
Magnotti, G.M., Battistoni, M., Saha, K., and Som, S.S., "Influence of Turbulence and Fluid Thermophysical Properties on Cavitation Erosion Predictions in Channel Flow Geometries," SAE Paper 2019-01-0290, 2019. DOI: 10.4271/2019-01-0290
1185. **University of Massachusetts Amherst; Argonne National Laboratory; Monash University; Convergent Science; Hino Motors, Ltd.; Artium Technologies, Inc.; Sandia National Laboratories; ICON Technology & Process Consulting Ltd.**
Mitra, P., Matusik, K., Duke, D., Srivastava, P., Yasutomi, K., Manin, J., Pickett, L., Powell, C.F., Arienti, M., Baldwin, E., Senecal, P.K., and Schmidt, D., "Identification and Characterization of Steady Spray Conditions in Convergent, Single-Hole Diesel Injectors," SAE Paper 2019-01-0281, 2019. DOI: 10.4271/2019-01-0281
1186. **Universitat Politècnica de València**
Payri, R., Gimeno, J., Marti-Aldaravi, P., and Martínez, M., "Nozzle Flow Simulation of GDI for Measuring Near-Field Spray Angle and Plume Direction," SAE Paper 2019-01-0280, 2019. DOI: 10.4271/2019-01-0280
1187. **ClearFlame Engines, Inc.; Argonne National Laboratory**
Blumreiter, J., Johnson, B., Zhou, A., Magnotti, G., Longman, D., and Som, S., "Mixing-Limited Combustion of Alcohol Fuels in a Diesel Engine," SAE Paper 2019-01-0552, 2019. DOI: 10.4271/2019-01-0552
1188. **Tianjin University; Guangxi Yuchai Machinery Group Co., Ltd.**
Zhao, X., Wang, H., Zheng, Z., Yao, M., Sheng, L., and Zhu, Z., "Evaluation of Knock Intensity and Knock-Limited Thermal Efficiency of Different Combustion Chambers in Stoichiometric Operation LNG Engine," SAE Paper 2019-01-1137, 2019. DOI: 10.4271/2019-01-1137
1189. **Indian Institute of Technology**
Lele, A., Soni, K., Narayanaswamy, K., and Krishnasamy, A., "Experimental and Modeling Investigation of NO Formation Mechanism for Biodiesel and Its Blend With Methanol," SAE Paper 2019-01-0217, 2019. DOI: 10.4271/2019-01-0217
1190. **King Abdullah University of Science and Technology; Volvo**
Nyrenstedt, G., Im, H., Andersson, A., and Johansson, B., "Novel Geometry Reaching High Efficiency for Multiple Injector Concepts," SAE Paper 2019-01-0246, 2019. DOI: 10.4271/2019-01-0246
1191. **Tongji University; Chongqing University; Y&C Engine Co., Ltd.**
Wu, J., Kang, Z., Deng, J., Wu, Z., Li, L., Li, Z., Shu, M., and Liang, H., "Numerical Study of Intake Manifold Water Injection on Performance and Emissions in a Heavy-Duty Nature Gas Engine," SAE Paper 2019-01-0562, 2019. DOI: 10.4271/2019-01-0562

1192. **University of Oxford; Jaguar Land Rover**
Ismail, R., Leach, F., Davy, M.H., Richardson, D., and Cooper, B., "Computational Investigation of the Effects of Piston Geometry on the Combustion Evolution in a Light Duty HSDI Engine," *ASME 2017 Internal Combustion Engine Division Fall Technical Conference*, ICEF2017-3588, Seattle, WA, United States, Oct 15–18, 2017. DOI: 10.1115/ICEF2017-3588
1193. **Indian Institute of Technology Bombay**
Chaurasia, S. and Sreedhara, S., "Combustion Characteristics of Hydrogen Fueled Spark Ignition Engine," *ASME 2017 Internal Combustion Engine Division Fall Technical Conference*, ICEF2017-3587, Seattle, WA, United States, Oct 15–18, 2017.
1194. **Saudi Aramco; Aramco Services Company**
Badra, J.A., Sim, J., Viollet, Y., Zhang, Y., Engineer, N., and Chang, J., "CFD Guided Gasoline Compression Ignition Engine Calibration," *ASME 2017 Internal Combustion Engine Division Fall Technical Conference*, ICEF2017-3583, Seattle, WA, United States, Oct 15–18, 2017. DOI: 10.1115/ICEF2017-3583
1195. **Mainstream Engineering Corporation**
Sykes, D.M., Carpenter, A.L., Wagner, J.G., Gattoni, J.M., Merical, K.I., and Yelvington, P.E., "1.25 L Turbocharged Diesel for Demanding Non-Road Applications," *ASME 2017 Internal Combustion Engine Division Fall Technical Conference*, ICEF2017-3536, Seattle, WA, United States, Oct 15–18, 2017. DOI: 10.1115/ICEF2017-3536
1196. **Technische Universität München**
Jud, M., Fink, G., and Sattelmayer, T., "Predicting Ignition and Combustion of a Pilot Ignited Natural Gas Jet Using Numerical Simulation Based on Detailed Chemistry," *ASME 2017 Internal Combustion Engine Division Fall Technical Conference*, ICEF2017-3533, Seattle, WA, United States, Oct 15–18, 2017. DOI: 10.1115/ICEF2017-3533
1197. **Aramco Services Company; Argonne National Laboratory**
Pei, Y., Torelli, R., Tzanetakakis, T., Zhang, Y., Traver, M., Cleary, D.J., and Som, S., "Modeling the Fuel Spray of a High Reactivity Gasoline Under Heavy-Duty Diesel Engine Conditions," *ASME 2017 Internal Combustion Engine Division Fall Technical Conference*, ICEF2017-3530, Seattle, WA, United States, Oct 15–18, 2017. DOI: 10.1115/ICEF2017-3530
1198. **GE Global Research Center; Convergent Science; Oak Ridge National Laboratory**
Gubba, S.R., Jupudi, R.S., Pasunurthi, S.S., Wijeyakulasuriya, S.D., Primus, R.J., Klingbeil, A., and Finney, C.E.A., "Capturing Pressure Oscillations in Numerical Simulations of Internal Combustion Engines," *ASME 2017 Internal Combustion Engine Division Fall Technical Conference*, ICEF2017-3527, Seattle, WA, United States, Oct 15–18, 2017. DOI: 10.1115/ICEF2017-3527
1199. **University of Windsor**
Sandhu, N.S., Yu, X., Yang, Z., Dev, S., Purohit, D., Ting, D., and Zheng, M., "An Investigation of Near-Spark-Plug Flow Field and Its Effect on Spark Behavior," *SAE Paper 2019-01-0718*, 2019. DOI: 10.4271/2019-01-0718
1200. **University of Windsor**
Sandhu, N., Dev, S., Purohit, D., Yang, Z., Zheng, M., and Ting, D., "Preliminary Simulation Study of Flow Field Around a Spark Plug Under Ambient and Engine Conditions," *The Energy Mix for Sustaining Our Future*, eds. Vassel, A. and Ting, D.S.-K., Springer International Publishing, 2019.
1201. **King Abdullah University of Science and Technology**
Nyrenstedt, G., Alturkestani, T., Im, H., and Johansson, B., "CFD Study of Heat Transfer Reduction Using Multiple Injectors in a DCEE Concept," *SAE Paper 2019-01-0070*, 2019. DOI: 10.4271/2019-01-0070
1202. **Southwest Research Institute**
Hoffmeyer, M., Moiz, A.A., Hoag, K., Megel, A., Shah, B., and Abidin, Z., "Advances Toward the Goal of a Genuinely Conjugate Engine Heat Transfer Analysis," *SAE Paper 2019-01-0008*, 2019. DOI: 10.4271/2019-01-0008

1203. **Tianjin University; Argonne National Laboratory; Ford Motor Company**
Chen, C., Ameen, M.M., Wei, H., Iyer, C., Ting, F., Vanderwege, B., and Som, S., "LES Analysis on Cycle-to-Cycle Variation of Combustion Process in a DISI Engine," SAE Paper 2019-01-0006, 2019. DOI: 10.4271/2019-01-0006
1204. **Texas Tech University; Oakland University**
Ge, H. and Zhao, P., "Numerical Investigation of the Spark Plug Orientation Effects on Flame Kernel Growth," SAE Paper 2019-01-0005, 2019. DOI: 10.4271/2019-01-0005
1205. **Indian Institute of Technology Madras**
Karaya, Y., Addepalli, S.K., and Mallikarjuna, J.M., "Comparison of Conventional Intake Port and Swirl Intake Port on Mixture Formation in a GDI Engine - A CFD Analysis," SAE Paper 2019-01-0010, 2019. DOI: 10.4271/2019-01-0010
1206. **Southwest Research Institute**
Chase, A., Miwa, J., Abidin, Z., and Cung, K., "Investigation of an Advanced Combustion System for Stoichiometric Diesel to Reduce Soot Emissions," SAE Paper 2019-01-0023, 2019. DOI: 10.4271/2019-01-0023
1207. **Aramco Research Center; Argonne National Laboratory; FRIENDSHIP SYSTEMS AG; Convergent Science**
Pei, Y., Pal, P., Zhang, Y., Traver, M., Cleary, D., Futterer, C., Brenner, M., Probst, D., and Som, S., "CFD-Guided Combustion System Optimization of a Gasoline Range Fuel in a Heavy-Duty Compression Ignition Engine Using Automatic Piston Geometry Generation and a Supercomputer," SAE Paper 2019-01-0001, 2019. DOI: 10.4271/2019-01-0001
1208. **Indian Institute of Technology Madras**
Saw, O.P., Addepalli, S.K., and Mallikarjuna, J.M., "Effects of Cylinder Head Geometry on Mixture Stratification, Combustion and Emissions in a GDI Engine - A CFD Analysis," SAE Paper 2019-01-0009, 2019. DOI: 10.4271/2019-01-0009
1209. **University Center of Nâama; Institute Mines-Telecom Atlantique de Nantes, France; University of Abou Bekr Belkaid Tlemcen**
Naima, K., Liazid, A., Tazerout, M., and Bousbaa, H., "Experimental and Numerical Investigation of Combustion Behaviour in Diesel Engine Fuelled With Waste Polyethylene Oil," *Journal of Engineering Science and Technology*, 13(10), 3204-3219, 2018.
1210. **Daihatsu Motor Co., Ltd.**
Kuroki, T., Shima, Y., Ono, Y., and Serizawa, T., "Predication of Knocking Origin Cyclic Fluctuation Using 3D SI Combustion Simulation (Part 1)," *29th Internal Combustion Engine Symposium*, Kyoto, Japan, Nov 26-28, 2018.
1211. **University of Waterloo**
Ghasemi, A. and Li, X., "Microfluidic Two-Phase Interactions Under Variable Liquid to Cross-Flow Gas Momentum Flux Ratios," *Microfluidics and Nanofluidics*, 22(121), 2018. DOI: 10.1007/s10404-018-2140-7
1212. **University of Waterloo**
Ghasemi, A., Pereira, A., and Li, X., "Evolution of Liquid and Gas Phases in Multi-Plume Spray Injection," *International Journal of Energy Research*, 40(14), 1935-1950, 2016. DOI: 10.1002/er.3562
1213. **DENSO Corporation**
Kurimoto, N., "A Method of Multi-Component Spray Combustion Simulations of Diverse Commercial Light Oils and the Uncertainty," *Journal of the Combustion Society of Japan*, 60(194), 254-259, 2018.
1214. **Convergent Science**
Drennan, S., Kumar, G., and Akin, B., "Fundamental Pre-Filming Atomizer Performance Predictions With Autonomous Meshing," *AIAA SciTech Forum and Exposition 2019*, San Diego, CA, United States, Jan 7-11, 2019. DOI: 10.2514/6.2019-1736

1215. **Convergent Science**
Burns, C. and Raju, M., "Implementation and Performance of Aggregation-Based AMG Solver for Computational Fluid Dynamics Applications," *AIAA SciTech Forum and Exposition 2019*, San Diego, CA, United States, Jan 7–11, 2019. DOI: 10.2514/6.2019-0352
1216. **Penn State College of Medicine; Pennsylvania State University**
Jhun, C., Siedlecki, C., Xu, L., Lukic, B., Newswanger, R., Yeager, E., Reibson, J., Cysyk, J., Weiss, W., and Rosenberg, G., "Stress and Exposure Time on Von Willebrand Factor Degradation," *Artificial Organs*, 2018. DOI: 10.1111/aor.13323
1217. **Argonne National Laboratory; Politecnico di Torino**
Ameen, M.M., Mirzaeian, M., Millo, F., and Som, S., "ASME 2017 Internal Combustion Engine Division Fall Technical Conference," *ASME 2017 Internal Combustion Engine Division Fall Technical Conference*, ICEF2017-3600, Seattle, WA, United States, Oct 15–18, 2017. DOI: 10.1115/ICEF2017-3600
1218. **University of Massachusetts Amherst; Convergent Science; Oregon State University; Northeastern University**
Johlas, H.M., Hallowell, S., Xie, S., Lomonaco, P., Lackner, M.A., Arwade, S.A., Myers, A.T., and Schmidt, D.P., "Modeling Breaking Waves for Fixed-Bottom Support Structures for Offshore Wind Turbines," *ASME 2018 1st International Offshore Wind Technical Conference*, IOWTC2018-1095, San Francisco, CA, United States, Nov 4–7, 2018. DOI: 10.1115/IOWTC2018-1095
1219. **Lund University; King Abdullah University of Science and Technology**
Li, Y., Bai, X.-S., Tunér, M., Im, H.G., and Johansson, B., "Investigation on a High-Stratified Direct Injection Spark Ignition (DISI) Engine Fueled With Methanol Under a High Compression Ratio," *Applied Thermal Engineering*, 148, 352-362, 2019. DOI: 10.1016/j.applthermaleng.2018.11.065
1220. **Convergent Science; Sanden International (Europe) Ltd.**
Rowinski, D., Pham, H.-D., and Brandt, T., "Modeling a Scroll Compressor Using a Cartesian Cut-Cell Based CFD Methodology With Automatic Adaptive Meshing," *24th International Compressor Engineering Conference at Purdue*, 1252, West Lafayette, IN, United States, Jul 9–12, 2018.
1221. **Convergent Science**
Li, Y., Rowinski, D.H., Bansal, K., and Reddy, K.R., "CFD Modeling and Performance Evaluation of a Centrifugal Fan Using a Cut-Cell Method With Automatic Mesh Generation and Adaptive Mesh Refinement," *24th International Compressor Engineering Conference at Purdue*, 1533, West Lafayette, IN, United States, Jul 9–12, 2018.
1222. **Convergent Science; Tecumseh Products Company**
Rowinski, D., Sadique, J., Oliveira, S., and Real, M., "Modeling a Reciprocating Compressor Using a Two-Way Coupled Fluid and Solid Solver With Automatic Grid Generation and Adaptive Mesh Refinement," *24th International Compressor Engineering Conference at Purdue*, 1587, West Lafayette, IN, United States, Jul 9–12, 2018.
1223. **Convergent Science**
Rowinski, D., Li, Y., and Bansal, K., "Investigations of Automatic Meshing in Modeling a Dry Twin Screw Compressor," *24th International Compressor Engineering Conference at Purdue*, 1528, West Lafayette, IN, United States, Jul 9–12, 2018.
1224. **Argonne National Laboratory; Achates Power**
Moiz, A.A., Kodavasal, J., Som, S., Hanson, R., Redon, F., and Zermeno, R., "Computational Fluid Dynamics Simulation of an Opposed-Piston Two-Stroke Gasoline Compression Ignition Engine," *ASME 2018 Internal Combustion Engine Division Fall Technical Conference*, ICEF2018-9713, San Diego, CA, United States, Nov 4–7, 2018. DOI: 10.1115/ICEF2018-9713
1225. **Cummins Inc.; Indian Institute of Technology Bombay**
Duvvuri, P.P., Sukumaran, S., Shrivastava, R.K., and Sreedhara, S., "Modeling the Effect of Parametric Variations on Soot Particle Size Distribution in a Diesel Engine," *ASME 2018 Internal Combustion Engine Division Fall Technical Conference*, ICEF2018-9699, San Diego, CA, United States, Nov 4–7, 2018. DOI: 10.1115/ICEF2018-9699

1226. **Michigan Technological University; Aramco Services Company; Convergent Science**
Tang, M., Pei, Y., Zhang, Y., Traver, M., Cleary, D., Luo, Z., Naber, J., and Lee, S.-Y., "Numerical Investigation of Fuel Effects on Soot Emissions at Heavy-Duty Diesel Engine Conditions," *ASME 2018 Internal Combustion Engine Division Fall Technical Conference*, ICEF2018-9696, San Diego, CA, United States, Nov 4–7, 2018. DOI: 10.1115/ICEF2018-9696

1227. **Argonne National Laboratory; Convergent Science; Michigan Technological University**
Scarcelli, R., Zhang, A., Wallner, T., Som, S., Huang, J., Wijeyakulasuriya, S., Mao, Y., Zhu, X., and Lee, S.-Y., "Development of a Hybrid Lagrangian-Eulerian Model to Describe Spark-Ignition Processes at Engine-Like Turbulent Flow Conditions," *ASME 2018 Internal Combustion Engine Division Fall Technical Conference*, ICEF2018-9690, San Diego, CA, United States, Nov 4–7, 2018. DOI: 10.1115/ICEF2018-9690

1228. **General Motors R&D; University of Michigan**
Wu, A., Keum, S., Greene, M., Reuss, D., and Sick, V., "Comparison of Near-Wall Flow and Heat Transfer of an Internal Combustion Engine Using Particle Image Velocimetry and Computational Fluid Dynamics," *ASME 2018 Internal Combustion Engine Division Fall Technical Conference*, ICEF2018-9676, San Diego, CA, United States, Nov 4–7, 2018. DOI: 10.1115/ICEF2018-9676

1229. **Argonne National Laboratory; Oak Ridge National Laboratory**
Yue, Z., Edwards, K.D., Sluder, C.S., and Som, S., "Prediction of Cyclic Variability and Knock-Limited Spark Advance (KLSA) in Spark-Ignition (SI) Engine," *ASME 2018 Internal Combustion Engine Division Fall Technical Conference*, ICEF2018-9605, San Diego, CA, United States, Nov 4–7, 2018. DOI: 10.1115/ICEF2018-9605

1230. **University of Oxford; Loughborough University**
Fang, X., Ismail, R., Davy, M.H., and Camm, J., "Numerical Studies of Combustion Recession on ECN Diesel Spray a," *ASME 2018 Internal Combustion Engine Division Fall Technical Conference*, ICEF2018-9597, San Diego, CA, United States, Nov 4–7, 2018. DOI: 10.1115/ICEF2018-9597

1231. **Texas Tech University; Oakland University**
Muller, M., Freeman, C., Zhao, P., and Ge, H., "Numerical Simulation of Ignition Mechanism in the Main Chamber of Turbulent Jet Ignition System," *ASME 2018 Internal Combustion Engine Division Fall Technical Conference*, ICEF2018-9587, San Diego, CA, United States, Nov 4–7, 2018. DOI: 10.1115/ICEF2018-9587

1232. **Technische Universität München**
Jud, M., Wieland, C., Fink, G., and Sattelmayer, T., "Numerical Analysis of the Combustion Process in Dual-Fuel Engines With Direct Injection of Natural Gas," *ASME 2018 Internal Combustion Engine Division Fall Technical Conference*, ICEF2018-9579, San Diego, CA, United States, Nov 4–7, 2018. DOI: 10.1115/ICEF2018-9579

1233. **Texas Tech University; Oakland University**
Ge, H. and Zhao, P., "A Comprehensive Ignition System Model for Spark Ignition Engines," *ASME 2018 Internal Combustion Engine Division Fall Technical Conference*, ICEF2018-9574, San Diego, CA, United States, Nov 4–7, 2018. DOI: 10.1115/ICEF2018-9574

1234. **University of Alabama**
Partridge, K.R., Jha, P.R., Mahabadipour, H., Srinivasan, K.K., and Krishnan, S.R., "Systematic Uncertainty Considerations in the Comparison of Experimental and Computed Cylinder Pressure and Heat Release Histories," *ASME 2018 Internal Combustion Engine Division Fall Technical Conference*, ICEF2018-9707, San Diego, CA, United States, Nov 4–7, 2018.

1235. **University of Rome Tor Vergata; University of Alabama**
Aniello, A., Bartolucci, L., Cordiner, S., Mulone, V., Krishnan, S.R., and Srinivasan, K.K., "CFD Analysis of Diesel-Methane Dual Fuel Low Temperature Combustion at Low Load and High Methane Substitution," *ASME 2018 Internal Combustion Engine Division Fall Technical Conference*, ICEF2018-9649, San Diego, CA, United States, Nov 4–7, 2018. DOI: 10.1115/ICEF2018-9649

1236. **University of Massachusetts Lowell**
Shahsavan, M., Morovatiyan, M., and Mack, J.H., "A Computational Investigation of Non-Premixed Combustion of Natural Gas Injected Into Mixture of Argon and Oxygen," *ASME 2018 Internal Combustion Engine Division Fall Technical Conference*, ICEF2018-9618, San Diego, CA, United States, Nov 4-7, 2018.
1237. **Argonne National Laboratory**
Bihari, B., Biruduganti, M.S., Torelli, R., and Singleton, D., "Performance Characterization of Alternative Ignition Systems Using Optical Tools in Natural Gas Engines," *ASME 2018 Internal Combustion Engine Division Fall Technical Conference*, ICEF2018-9704, San Diego, CA, United States, Nov 4-7, 2018.
1238. **Guangxi University**
Huang, H., Lv, D., Zhu, J., Zhu, Z., Chen, Y., Pan, Y., and Pan, M., "Development of a New Reduced Diesel/Natural Gas Mechanism for Dual-Fuel Engine Combustion and Emission Prediction," *Fuel*, 236, 30-42, 2019. DOI: 10.1016/j.fuel.2018.08.161
1239. **RWTH Aachen University**
Ottenwaelder, T. and Pischinger, S., "Comparing Large Eddy Simulation of a Reacting Fuel Spray With Measured Quantitative Flame Parameters," *SAE Paper 2018-01-1720*, 2018. DOI: 10.4271/2018-01-1720
1240. **Shanghai Jiao Tong University**
Huang, Z., Zhang, W., Xia, J., Ju, D., Han, D., and Lu, X.-C., "The Nozzle Flows and Atomization Characteristics of the Two-Component Surrogate Fuel of Diesel From Indirect Coal Liquefaction at Engine Conditions," *SAE Paper 2018-01-1691*, 2018. DOI: 10.4271/2018-01-1691
1241. **Argonne National Laboratory**
Kodavasal, J., Moiz, A.A., Ameen, M., and Som, S., "Using Machine Learning to Analyze Factors Determining Cycle-to-Cycle Variation in a Spark-Ignited Gasoline Engine," *Journal of Energy Resources Technology*, 140(10), 102204-102204-9, 2018. DOI: 10.1115/1.4040062
1242. **CMT-Motores Térmicos**
Desantes, J.M., Benajes, J., García, A., and Monsalve-Serrano, J., "The Role of the In-Cylinder Gas Temperature and Oxygen Concentration Over Low Load Reactivity Controlled Compression Ignition Combustion Efficiency," *Energy*, 78, 854-868, 2014. DOI: 10.1016/j.energy.2014.10.080
1243. **CMT-Motores Térmicos**
Payri, R., Gimeno, J., Marti-Aldaravi, P., and Vaquerizo, D., "Internal Flow Characterization on an ECN GDI Injector," *Atomization and Sprays*, 26(9), 889-919, 2016. DOI: 10.1615/AtomizSpr.2015013930
1244. **Universitat Politècnica de València; Jiangsu University; Integrale Marketing and Consulting SLU**
Pastor, J., Garcia-Oliver, J.M., Garcia, A., Zhong, W., Micó, C., and Xuan, T., "An Experimental Study on Diesel Spray Injection Into a Non-Quiescent Chamber," *SAE Paper 2017-01-0850*, 2017. DOI: 10.4271/2017-01-0850
1245. **Universitat Politècnica de València**
Pastor, J., Garcia-Oliver, J., Novella, R., and Xuan, T., "Soot Quantification of Single-Hole Diesel Sprays by Means of Extinction Imaging," *SAE Paper 2015-24-2417*, 2015. DOI: 10.4271/2015-24-2417
1246. **CMT-Motores Térmicos**
Benajes, J., Novella, R., De Lima, D., and Thein, K., "Impact of Injection Settings Operating With the Gasoline Partially Premixed Combustion Concept in a 2-Stroke HSDI Compression Ignition Engine," *Applied Energy*, 193, 515-530, 2017. DOI: 10.1016/j.apenergy.2017.02.044
1247. **CMT-Motores Térmicos; Groupe Renault**
Benajes, J., Novella, R., De Lima, D., and Tribotté, P., "Analysis of Combustion Concepts in a Newly Designed Two-Stroke High-Speed Direct Injection Compression Ignition Engine," *International Journal of Engine Research*, 16(1), 52-67, 2015. DOI: 10.1177/1468087414562867

1248. **CMT-Motores Térmicos**
Benajes, J., García, A., Pastor, J.M., and Monsalve-Serrano, J., "Effects of Piston Bowl Geometry on Reactivity Controlled Compression Ignition Heat Transfer and Combustion Losses at Different Engine Loads," *Energy*, 98, 64-77, 2016. DOI: 10.1016/j.energy.2016.01.014
1249. **CMT-Motores Térmicos**
Serrano, J.R., Novella, R., Gomez-Soriano, J., and Martinez-Hernandez, P.J., "Computational Methodology for Knocking Combustion Analysis in Compression-Ignited Advanced Concepts," *Applied Sciences*, 8(10), 2018. DOI: 10.3390/app8101707
1250. **CMT-Motores Térmicos**
Broatch, A., Novella, R., García-Tíscar, J., and Gomez-Soriano, J., "Potential of Dual Spray Injectors for Optimising the Noise Emission of Gasoline Partially Premixed Combustion in a 2-Stroke HSDI CI Engine," *Applied Thermal Engineering*, 134, 369-378, 2018. DOI: 10.1016/j.applthermaleng.2018.01.108
1251. **IDAJ Co. LTD**
Aoki, K., Kobayashi, K., Takase, H., and Ishikawa, M., "Simulations of Film Cooling With Cut Cell and Adaptive Mesh Refinement," *46th Annual Meeting of Gas Turbine Society of Japan*, C-2, 2018.
1252. **CMT-Motores Térmicos**
Torregrosa, A.J., Broatch, A., Gil, A., and Gomez-Soriano, J., "Numerical Approach for Assessing Combustion Noise in Compression-Ignited Diesel Engines," *Applied Acoustics*, 135, 91-100, 2018. DOI: 10.1016/j.apacoust.2018.02.006
1253. **CMT-Motores Térmicos**
Torregrosa, A.J., Broatch, A., García-Tíscar, J., and Gomez-Soriano, J., "Modal Decomposition of the Unsteady Flow Field in Compression-Ignited Combustion Chambers," *Combustion and Flame*, 188, 469-482, 2018. DOI: 10.1016/j.combustflame.2017.10.007
1254. **CMT-Motores Térmicos**
Torregrosa, A.J., Broatch, A., Margot, X., and Gomez-Soriano, J., "Towards a Predictive CFD Approach for Assessing Noise in Diesel Compression Ignition Engines," *9th International Conference on Modeling and Diagnostics for Advanced Engine Systems*, Okayama, Japan, Jul 25-28, 2017. DOI: 10.1299/jmsesdm.2017.9.A110
1255. **CMT-Motores Térmicos**
Broatch, A., Margot, X., Novella, R., and Gomez-Soriano, J., "Impact of the Injector Design on the Combustion Noise of Gasoline Partially Premixed Combustion in a 2-Stroke Engine," *Applied Thermal Engineering*, 119, 530-540, 2017. DOI: 10.1016/j.applthermaleng.2017.03.081
1256. **CMT-Motores Térmicos**
Broatch, A., Margot, X., Novella, R., and Gomez-Soriano, J., "Combustion Noise Analysis of Partially Premixed Combustion Concept Using Gasoline Fuel in a 2-Stroke Engine," *Energy*, 107, 612-624, 2016. DOI: 10.1016/j.energy.2016.04.045
1257. **Convergent Science; Argonne National Laboratory; Aramco Research Center**
Probst, D., Raju, M., Senecal, P.K., Moiz, A.A., Pal, P., Kodavasal, J., Som, S., and Pei, Y., "Evaluating Optimization Strategies for Engine Simulations Using Machine Learning Emulators," *ASME 2018 Internal Combustion Engine Division Fall Technical Conference*, ICEF2018-9726, San Diego, CA, United States, Nov 4-7, 2018. DOI: 10.1115/ICEF2018-9726
1258. **Convergent Science; Argonne National Laboratory**
Probst, D., Wijeyakulasuriya, S., Pomraning, E., Kodavasal, J., Scarcelli, R., and Som, S., "Predicting Cycle-to-Cycle Variation With Concurrent Cycles in a Gasoline Direct Injected Engine With Large Eddy Simulations," *ASME 2018 Internal Combustion Engine Division Fall Technical Conference*, ICEF2018-9722, San Diego, CA, United States, Nov 4-7, 2018. DOI: 10.1115/ICEF2018-9722

1259. **IFP Energies nouvelles; Convergent Science**
Colin, O., Chevillard, S., Bohbot, J., Senecal, P.K., Pomraning, E., and Wang, M., "Development of a Species-Based Extended Coherent Flamelet Model (SB-ECFM) for Gasoline Direct Injection Engine (GDI) Simulations," *ASME 2018 Internal Combustion Engine Division Fall Technical Conference*, ICEF2018-9684, San Diego, CA, United States, Nov 4–7, 2018. DOI: 10.1115/ICEF2018-9684
1260. **Argonne National Laboratory; Aramco Research Center**
Torelli, R., Sforzo, B., Matusik, K., Kastengren, A., Fezzaa, K., Powell, C., Som, S., Pei, Y., Tzanetakis, T., Zhang, Y., Traver, M., and Cleary, D., "Investigation of Shot-to-Shot Variability During Short Injections," *14th International Conference on Liquid Atomization & Spray Systems*, Chicago, IL, United States, Jul 22–26, 2018.
1261. **University of Manitoba**
Yousefi, A., Guo, H., and Birouk, M., "Effect of Swirl Ratio on NG/Diesel Dual-Fuel Combustion at Low to High Engine Load Conditions," *Applied Energy*, 229, 375-388, 2018. DOI: 10.1016/j.apenergy.2018.08.017
1262. **Technion – Israel Institute of Technology**
Faingold, G., Tartakovsky, L., and Frankel, S.H., "Numerical Study of a Direct Injection Internal Combustion Engine Burning a Blend of Hydrogen and Dimethyl Ether," *Drones*, 2(3), 2018. DOI: 10.3390/drones2030023
1263. **Hebei University of Technology; Shandong University**
Li, M., Zhang, Q., Liu, X., Ma, Y., and Zheng, Q., "Soot Emission Prediction in Pilot Ignited Direct Injection Natural Gas Engine Based on n-Heptane/Toluene/Methane/PAH Mechanism," *Energy*, 163, 660-681, 2018. DOI: 10.1016/j.energy.2018.08.102
1264. **Shanghai Jiao Tong University; Lund University; Dalian University of Technology**
Xu, L., Bai, X.-S., Jia, M., Qian, Y., Qiao, X., and Lu, X., "Experimental and Modeling Study of Liquid Fuel Injection and Combustion in Diesel Engines With a Common Rail Injection System," *Applied Energy*, 230, 287-304, 2018. DOI: 10.1016/j.apenergy.2018.08.104
1265. **Tianjin University**
Lu, H., Yao, A., Yao, C., Chen, C., and Wang, B., "An Investigation on the Characteristics of and Influence Factors for NO₂ Formation in Diesel/Methanol Dual Fuel Engine," *Fuel*, 235, 617-626, 2019. DOI: 10.1016/j.fuel.2018.08.061
1266. **Beijing Institute of Technology**
Liu, F., Shi, Z., Hua, Y., Kang, N., Li, Y., and Zhang, Z., "Study on the Misalignment Between the Maximum-Volume-Efficiency IVC and the None-Backflow IVC on a Single Cylinder Diesel Engine," *Journal of Engineering for Gas Turbines and Power*, 2018. DOI: 10.1115/1.4041169
1267. **University of Manitoba**
Yousefi, A., Guo, H., and Birouk, M., "Effect of Diesel Injection Timing on the Combustion of Natural Gas/Diesel Dual-Fuel Engine at Low-High Load and Low-High Speed Conditions," *Fuel*, 235, 838-846, 2019. DOI: 10.1016/j.fuel.2018.08.064
1268. **Convergent Science; Pinnacle Engines; Oak Ridge National Laboratory**
Mittal, A., Wijeyakulasuriya, S.D., Probst, D., Banerjee, S., Finney, C.E.A., Edwards, K.D., Willcox, M., and Naber, C., "Multi-Dimensional Computational Combustion of Highly Dilute, Premixed Spark-Ignited Opposed-Piston Gasoline Engine Using Direct Chemistry With a New Primary Reference Fuel Mechanism," *ASME 2017 Internal Combustion Engine Division Fall Technical Conference*, ICEF2017-3618, Seattle, WA, United States, Oct 15–18, 2017. DOI: 10.1115/ICEF2017-3618
1269. **University of Cincinnati; Wayne State University**
Kao, Y.-H., Denton, M., Wang, X., Jeng, S.-M., and Lai, M.-C., "Experimental Spray Structure and Combustion of a Linearly-Arranged 5-Swirl Array," *ASME Turbo Expo 2015: Turbine Technical Conference and Exposition*, GT2015-42509, Montreal, Canada, Jun 15–19, 2015. DOI: 10.1115/GT2015-42509

1270. **Convergent Science; TU Dortmund University**
Rowinski, D.H., Nikolov, A., and Brümmer, A., "Modeling a Dry Running Twin-Screw Expander Using a Coupled Thermal-Fluid Solver With Automatic Mesh Generation," *10th International Conference on Screw Machines*, Dortmund, Germany, Sep 18–19, 2018. DOI: 10.1088/1757-899X/425/1/012019
1271. **West Virginia University**
Li, Y., Li, H., and Guo, H., "A Numerical Investigation on NO₂ Formation Reaction Pathway in a Natural Gas–diesel Dual Fuel Engine," *Combustion and Flame*, 190, 337–348, 2018. DOI: 10.1016/j.combustflame.2017.12.006
1272. **West Virginia University; National Research Council, Canada; Tianjin University**
Li, Y., Li, H., Guo, H., Wang, H., and Yao, M., "A Numerical Study on the Chemical Kinetics Process During Auto-Ignition of n-Heptane in a Direct Injection Compression Ignition Engine," *Applied Energy*, 212, 909–918, 2018. DOI: 10.1016/j.apenergy.2017.12.067
1273. **Kocaeli University; Sakarya University**
Turkcan, A., Altinkurt, M.D., Coskun, G., and Canakci, M., "Numerical and Experimental Investigations of the Effects of the Second Injection Timing and Alcohol-Gasoline Fuel Blends on Combustion and Emissions of an HCCI-DI Engine," *Fuel*, 219, 50–61, 2018. DOI: 10.1016/j.fuel.2018.01.061
1274. **DENSO Corporation**
Watanabe, H., Uchida, N., and Nishijima, Y., "A Study on the Heat Release Profile Control to Achieve High-Efficient Diesel Engine," *Transactions of Society of Automotive Engineers of Japan*, 49(2), 217–223, 2018. DOI: 10.11351/jsaeronbun.49.217
1275. **Convergent Science**
Anumolu, C.R.L., Mashayekh, A., Srivastava, P., Pomraning, E., Coil, M., Quan, S.P., Dai, M., Wijeyakulasuriya, S.D., and Senecal, P.K., "High-Fidelity Numerical Simulation of a Pressure Swirl Atomizer in 3D Using CONVERGE," *14th International Conference on Liquid Atomization & Spray Systems*, 259, Chicago, IL, United States, Jul 22–26, 2018.
1276. **Federal University of Santa Catarina**
Sánchez, Y.O., "Modeling and Numerical Analysis of the Combustion of In-Natura Vegetable Oil in Internal Combustion Engines of Compression Ignition," Ph.D. thesis, Federal University of Santa Catarina, Florianópolis, Brazil, 2017 <https://repositorio.ufsc.br/handle/123456789/187787>.
1277. **Argonne National Laboratory; University of Connecticut; Convergent Science**
Pal, P., Wu, Y., Lu, T., Som, S., See, Y.C., and Le Moine, A., "Multidimensional Numerical Simulations of Knocking Combustion in a Cooperative Fuel Research Engine," *Journal of Energy Resources Technology*, 140(10), 2018. DOI: 10.1115/1.4040063
1278. **Stanford University**
Ma, P.C., Wu, H., Jaravel, T., Bravo, L., and Ihme, M., "Large-Eddy Simulations of Transcritical Injection and Auto-Ignition Using Diffuse-Interface Method and Finite-Rate Chemistry," *Proceedings of the Combustion Institute*, 37(3), 3303–3310, 2018. DOI: 10.1016/j.proci.2018.05.063
1279. **University of Illinois at Chicago**
Aggarwal, S.K., "Effect of Fuel Unsaturation on Emissions in Flames and Diesel Engines," *Energy for Propulsion*, eds. Runchal, A.K., Gupta, A.K., Kushari, A., De, A., and Aggarwal, S.K., Springer, Singapore, 2018. DOI: 10.1007/978-981-10-7473-8_3
1280. **Research Laboratory LTE-ENPO**
Naima, K., Liaqid, A., and Bousbaa, H., "Numerical Simulation of Combustion Behavior of DI Diesel Engine With Conjunction of AMR and Embedding Refinement Strategies," *Journal of the Society of Automotive Engineers Malaysia*, 2(2), 112–126, 2018.
1281. **Shanghai Jiao Tong University**
Huang, Z., Zhang, T., Ju, D., Qiao, X., Xiao, J., and Huang, Z., "The Atomization Characteristics of the Surrogate Fuel of Diesel From Indirect Coal Liquefaction at Engine Conditions," *ILASS-Asia 2017*, Jeju, Korea, Oct 18–21, 2017.

1282. **Shanghai Jiao Tong University**
Zhou, X., Li, T., Lai, Z., and Wang, B., "Theoretical Study on Similarity of Diesel Combustion," SAE Paper 2018-01-0235, 2018. DOI: 10.4271/2018-01-0235
1283. **Shanghai Jiao Tong University**
Sun, X., Li, X., Huang, Z., Ju, D., Lu, X.-C., Han, D., and Huang, Z., "Numerical Analysis on the Injection and Atomization Characteristics of Diesel Surrogates at Engine Conditions," SAE Paper 2017-01-2306, 2017. DOI: 10.4271/2017-01-2306
1284. **MOE Key Laboratory for Power Machinery and Engineering**
Huang, Z., Xu, X., Ju, D., Han, D., Qiao, X., and Huang, Z., "Development of Multi-Component Surrogates of Diesel From Indirect Coal Liquefaction for Spray Analysis," *Energy*, 152, 341-347, 2018. DOI: 10.1016/j.energy.2018.03.167
1285. **The Ohio State University**
Wang, K., "HCCI Engine CFD Simulations: Influence of Intake Temperature, Cylinder Wall Temperature and the Equivalence Ratio on Ignition Timing," B.S. thesis, The Ohio State University, Columbus, OH, United States, 2018.
1286. **Aramco Services Company**
Zhang, Y., Voice, A., Pei, Y., Traver, M., and Cleary, D., "A Computational Investigation of Fuel Chemical and Physical Properties Effects on Gasoline Compression Ignition in a Heavy-Duty Diesel Engine," *Journal of Energy Resources Technology*, 140(10), 2018. DOI: 10.1115/1.4040010
1287. **National Institute of Technology, Warangal, India**
Ganji, P.R., Kummara, V., Raju, V.R.K., and Surapaneni, S.R., "Effect of Early Injection Combined With EGR on Combustion Characteristics of Pongamia Biodiesel Blend," *Proceedings of the National Academy of Sciences, India*, 2018, 2018. DOI: 10.1007/s40010-018-0501-y
1288. **U.S. Army Research Laboratory; Stanford University; AMRDEC-ADD**
Bravo, L.G., Ma, P.C., Ihme, M., and Kerner, K.A., "Transcritical Mixing and Auto-Ignition of n-Dodecane Fuel Using a Diffuse Interface Method," *2018 AIAA/SAE/ASEE Joint Propulsion Conference, AIAA 2018-4685*, Cincinnati, OH, United States, Jul 9–11, 2018. DOI: 10.2514/6.2018-4685
1289. **Iowa State University**
Murugan, M., Ghoshal, A., Bravo, L., Xu, F., Hsu, M.-C., and Bazilevs, Y., "Articulating Axial-Flow Turbomachinery Rotor Blade for Enabling Variable Speed Gas Turbine Engine," *2018 AIAA/SAE/ASEE Joint Propulsion Conference, AIAA 2018-4522*, Cincinnati, OH, United States, Jul 9–11, 2018. DOI: 10.2514/6.2018-4522
1290. **General Motors; Oak Ridge National Laboratory; Lawrence Livermore National Laboratory**
Gao, J., Grover, R.O., Jr, Gopalakrishnan, V., Diwakar, R., Elwasif, W., Edwards, K.D., Finney, C.E.A., and Whitesides, R.A., "Steady-State Calibration of a Diesel Engine in Computational Fluid Dynamics Using a Graphical Processing Unit-Based Chemistry Solver," *Journal of Engineering for Gas Turbines and Power*, 140(10), 2018. DOI: 10.1115/1.4039735
1291. **Argonne National Laboratory; Purdue University; Convergent Science; University of South Carolina**
Hasti, V.R., Kundu, P., Kumar, G., Drennan, S.A., Sibendu, S., Won, S.H., Dryer, F.L., and Gore, J.P., "Lean Blow-Out (LBO) Computations in a Gas Turbine Combustor," *2018 AIAA/SAE/ASEE Joint Propulsion Conference, AIAA 2018-4958*, Cincinnati, OH, United States, Jul 9–11, 2018. DOI: 10.2514/6.2018-4958
1292. **Argonne National Laboratory; Purdue University; Convergent Science**
Hasti, V.R., Kundu, P., Kumar, G., Drennan, S.A., Som, S., and Gore, J.P., "Numerical Simulation of Flow Distribution in a Realistic Gas Turbine Combustor," *2018 AIAA/SAE/ASEE Joint Propulsion Conference, AIAA 2018-4956*, Cincinnati, OH, United States, Jul 9–11, 2018. DOI: 10.2514/6.2018-4956

1293. **Argonne National Laboratory; Purdue University; Convergent Science**
 Hasti, V.R., Kundu, P., Kumar, G., Drennan, S.A., Som, S., and Gore, J.P., "A Numerical Study of Flame Characteristics During Lean Blow-Out in a Gas Turbine Combustor," *2018 AIAA/SAE/ASEE Joint Propulsion Conference*, AIAA 2018-4955, Cincinnati, OH, United States, Jul 9–11, 2018. DOI: 10.2514/6.2018-4955
1294. **U.S. Army Research Laboratory; University of Maryland; AMRDEC-ADD; Convergent Science**
 Jain, N., Bravo, L.G., Murugan, M., Ghoshal, A., Kumar, G., Flatau, A., and Kerner, K.A., "Numerical Investigation of Aerodynamic Transitional Flow Around a Pitching Airfoil: Assessment of Hybrid and SGS Models for Turbomachinery Applications," *2018 AIAA/SAE/ASEE Joint Propulsion Conference*, AIAA 2018-4737, Cincinnati, OH, United States, Jul 9–11, 2018. DOI: 10.2514/6.2018-4737
1295. **Wayne State University**
 Piehl, J.A., "Uncertainty in Combustion Reaction Rates and Its Effects on Combustion Simulations," M.S. thesis, Wayne State University, Detroit, MI, United States, 2018 [ProQuest 10822044](#).
1296. **Wayne State University**
 Piehl, J.A., Abianeh, O.S., Goyal, A., and Bravo, L., "Turbulent Spray Combustion Modeling Using Various Kinetics Solvers and Turbulence Models," *Journal of Engineering for Gas Turbines and Power*, 2018, 2018. DOI: 10.1115/1.4040659
1297. **University of Massachusetts; General Motors**
 Moulai, M., Grover, R., Parrish, S., and Schmidt, D., "Internal and Near-Nozzle Flow in a Multi-Hole Gasoline Injector Under Flashing and Non-Flashing Conditions," SAE Paper 2015-01-0944, 2015. DOI: 10.4271/2015-01-0944
1298. **National Institute of Technology, Warangal, India**
 Ganji, P.R., Singh, R.N., Raju, V.R.K., and Rao, S.S., "Design of Piston Bowl Geometry for Better Combustion in Direct-Injection Compression Ignition Engine," *Sādhanā*, 43, 92, 2018. DOI: 10.1007/s12046-018-0907-x
1299. **University of Manitoba**
 Yousefi, A., Guo, H., and Birouk, M., "A Numerical Study of the Combustion of Natural Gas/Diesel Dual-Fuel Engine Under Medium to High Load Conditions," *2018 Spring Technical Meeting of the Canadian Section of the Combustion Institute*, Toronto, Canada, May 14–17, 2018.
1300. **Convergent Science**
 Drennan, S.A. and Kumar, G., "Demonstrating Accurate Gas Turbine Ignition and Relight With Detailed Chemistry and Autonomous Meshing," *2018 AIAA/SAE/ASEE Joint Propulsion Conference*, AIAA 2018-4681, Cincinnati, OH, United States, Jul 9–11, 2018. DOI: 10.2514/6.2018-4681
1301. **IFP Energies nouvelles; Convergent Science**
 Mehl, C., Liu, S., See, Y.C., and Colin, O., "LES of a Stratified Turbulent Burner With a Thickened Flame Model Coupled to Adaptive Mesh Refinement and Detailed Chemistry," *2018 AIAA/SAE/ASEE Joint Propulsion Conference*, AIAA 2018-4563, Cincinnati, OH, United States, Jul 9–11, 2018. DOI: 10.2514/6.2018-4563
1302. **University of Oxford**
 Leach, F., Ismail, R., and Davy, M., "Engine-Out Emissions From a Modern High Speed Diesel Engine – the Importance of Nozzle Tip Protrusion," *Applied Energy*, 226, 340-352, 2018. DOI: 10.1016/j.apenergy.2018.05.117
1303. **University of Michigan-Ann Arbor**
 Kim, D., Violi, A., and Boehman, A., "The Effects of Injection Timing and Injected Fuel Mass on Local Charge Conditions and Emissions for Gasoline Direct Injection Engines," *ASME 2017 Internal Combustion Engine Division Fall Technical Conference*, ICEF2017-3623, Seattle, WA, United States, Oct 15–18, 2017. DOI: 10.1115/ICEF2017-3623

1304. **Purdue University; Convergent Science**
Hasti, V.R., Kumar, G., Liu, S., Lucht, R.P., and Gore, J.P., "A Computational Study on Hydrogen Piloted Turbulent Methane / Air Premixed Flame With CO₂ Dilution," *CSSCI Spring Technical Meeting*, 44TC-0109, Minneapolis, MN, United States, May 20–22, 2018.
1305. **Convergent Science; Aramco Services Company**
Raju, M., Mittal, A., Wang, M., Luo, Z., LeMoine, J., Yunliang, P., and Voice, A., "Surrogate Fuel Strategy for Multi-Component Diesel Spray Simulations," *CSSCI Spring Technical Meeting*, 44DS-0088, Minneapolis, MN, United States, May 20–22, 2018.
1306. **GE Global Research Center; Convergent Science; Oak Ridge National Laboratory**
Gubba, S.R., Jupudi, R.S., Pasunurthu, S.S., Wijeyakulasuriya, S.D., Primus, R.J., Klingbeil, A., and Finney, C.E.A., "Capturing Pressure Oscillations in Numerical Simulations of Internal Combustion Engines," *Journal of Energy Resources Technology*, 140(8), 082205, 2018. DOI: 10.1115/1.4039630
1307. **General Motors**
Yang, X., Kuo, T.-W., Singh, K., Hattar, R., and Zeng, Y., "Cold-Start CFD Simulation of Spark-Ignition Direct-Injection Engine," *Journal of Engineering for Gas Turbines and Power*, 2018. DOI: 10.1115/1.4039729
1308. **Michigan State University; Convergent Science**
Gholamisheeri, M., Givler, S., and Toulson, E., "Large Eddy Simulation of a Homogeneously Charged Turbulent Jet Ignition System," *International Journal of Engine Research*, 20(2), 181-193, 2017. DOI: 10.1177/1468087417742834
1309. **Ecole Nationale Polytechnique d'Oran**
Bousbaa, H., Naima, K., and Liaqid, A., "Three Dimensional Modeling of Mixture Formation and Combustion in a CI Engine Operated on Animal Fats Bio-Fuel," *9èmes Journées De Mécanique De L'EMP*, Bordj El-Bahri, Algeria, Apr 8–9, 2014.
1310. **University of Massachusetts Lowell**
Shahsavan, M., Morovatiyan, M., and Mack, J.H., "The Influence of Mixedness on Ignition for Hydrogen Direct Injection in a Constant Volume Combustion Chamber," *2018 Spring Technical Meeting of the Eastern States Section of the Combustion Institute*, State College, PA, United States, Mar 4–7, 2018.
1311. **University of Massachusetts Lowell**
Morovatiyan, M., Shahsavan, M., and Mack, J.H., "Development of a Constant Volume Combustion Chamber for Material Synthesis," *2018 Spring Technical Meeting of the Eastern States Section of the Combustion Institute*, State College, PA, United States, Mar 4–7, 2018.
1312. **Universitat Politècnica de València**
Sanchez, D.V., "Study on Advanced Spray-Guided Gasoline Direct Injection Systems," Ph.D. thesis, Universitat Politècnica de València, València, Spain, 2018.
1313. **Aero Engine Academy of China; China Agricultural University; Tsinghua University**
Jing, D., Zhao, H., Li, Y., Guo, H., Xiao, J., and Shuai, S.-J., "Numerical Investigation on the Effect of Fuel Temperature on Spray Collapse and Mixture Formation Characteristics in GDI Engines," *SAE Paper* 2018-01-0311, 2018. DOI: 10.4271/2018-01-0311
1314. **King Abdullah University of Science and Technology**
Mubarak Ali, M.J., Elhagrasy, A., Sarathy, M., Chung, S., and Im, H.G., "Auto-Ignition and Spray Characteristics of n-Heptane and iso-Octane Fuels in Ignition Quality Tester," *SAE Paper* 2018-01-0299, 2018. DOI: 10.4271/2018-01-0299
1315. **RWTH Aachen University; University of Illinois Urbana-Champaign; Ford Research Center; Ford Research Center Aachen**
Deshmukh, A.Y., Vishwanathan, G., Bode, M., Pitsch, H., Khosravi, M., and van Bebbler, D., "Characterization of Hollow Cone Gas Jets in the Context of Direct Gas Injection in Internal Combustion Engines," *SAE Paper* 2018-01-0296, 2018. DOI: 10.4271/2018-01-0296

1316. **Istituto Motori CNR; University of Rome Tor Vergata**
Allocca, L., Bartolucci, L., Cordiner, S., Lazzaro, M., Montanaro, A., Mulone, V., and Rocco, V., "ECN Spray G Injector: Assessment of Numerical Modeling Accuracy," SAE Paper 2018-01-0306, 2018. DOI: 10.4271/2018-01-0306
1317. **RWTH Aachen University; Ford Research Center Aachen**
Deshmukh, A.Y., Falkenstein, T., Pitsch, H., Khosravi, M., van Bebber, D., Klaas, M., and Schroeder, W., "Numerical Investigation of Direct Gas Injection in an Optical Internal Combustion Engine," SAE Paper 2018-01-0171, 2018. DOI: 10.4271/2018-01-0171
1318. **University of Oxford**
Nicholson, L., Fang, X., Camm, J., Davy, M., and Richardson, D., "Comparison of Transient Diesel Spray Breakup Between Two Computational Fluid Dynamics Codes," SAE Paper 2018-01-0307, 2018. DOI: 10.4271/2018-01-0307
1319. **Renault SAS**
Petit, B., Boiarciuc, A., Radenac, E., Delahaye, L., and Floch, A., "PN Formation Mechanism and Countermeasures With the Spray Design on Port Fuel Injection SI Engine," SAE Paper 2018-01-1417, 2018. DOI: 10.4271/2018-01-1417
1320. **Saudi Aramco; King Abdullah University of Science and Technology**
Badra, J., Bakor, R., AlRamadan, A., Almansour, M., Sim, J., Ahmed, A., Viollet, Y., and Chang, J., "Standardized Gasoline Compression Ignition Fuels Matrix," SAE Paper 2018-01-0925, 2018. DOI: 10.4271/2018-01-0925
1321. **Aramco Research Center**
Zhang, Y., Kumar, P., Pei, Y., Traver, M., and Cleary, D., "An Experimental and Computational Investigation of Gasoline Compression Ignition Using Conventional and Higher Reactivity Gasolines in a Multi-Cylinder Heavy-Duty Diesel Engine," SAE Paper 2018-01-0226, 2018. DOI: 10.4271/2018-01-0226
1322. **Michigan Technological University; Argonne National Laboratory; University of Massachusetts Dartmouth**
Zhao, L., Torelli, R., Zhu, X., Naber, J., Lee, S.-Y., Som, S., Scarcelli, R., and Raessi, M., "Evaluation of Diesel Spray-Wall Interaction and Morphology Around Impingement Location," SAE Paper 2018-01-0276, 2018. DOI: 10.4271/2018-01-0276
1323. **Università degli Studi di Perugia; Argonne National Laboratory; Georgia Institute of Technology; Sandia National Laboratories; Monash University; Universitat Politècnica de València**
Battistoni, M., Magnotti, G.M., Genzale, C.L., Arienti, M., Matusik, K.E., Duke, D.J., Giraldo, J., Ilavsky, J., Kastengren, A.L., Powell, C.F., and Marti-Aldaravi, P., "Experimental and Computational Investigation of Subcritical Near-Nozzle Spray Structure and Primary Atomization in the Engine Combustion Network Spray D," SAE Paper 2018-01-0277, 2018. DOI: 10.4271/2018-01-0277
1324. **Argonne National Laboratory; Sandia National Laboratories**
Dam, N.V., Sjöberg, M., and Som, S., "Large-Eddy Simulations of Spray Variability Effects on Flow Variability in a Direct-Injection Spark-Ignition Engine Under Non-Combusting Operating Conditions," SAE Paper 2018-01-0196, 2018. DOI: 10.4271/2018-01-0196
1325. **Bennett University; Convergent Science; Argonne National Laboratory**
Saha, K., Srivastava, P., Quan, S., Senecal, P.K., Pomraning, E., and Som, S., "Modeling Dynamic Coupling of Internal Nozzle Flow and Spray Formation for Gasoline Direct Injection Applications," SAE Paper 2018-01-0314, 2018. DOI: 10.4271/2018-01-0314
1326. **Michigan Technological University**
Zhao, L., Ahuja, N., Zhu, X., Zhao, Z., and Lee, S.-Y., "Splashing Criterion and Topological Features of a Single Droplet Impinging on the Flat Plate," SAE Paper 2018-01-0289, 2018. DOI: 10.4271/2018-01-0289

1327. **Convergent Science**
Sun, Y., Sharma, S., Vernham, B., Shibata, K., and Drennan, S., "Urea Deposit Predictions on a Practical Mid/Heavy Duty Vehicle After Treatment System," SAE Paper 2018-01-0960, 2018. DOI: 10.4271/2018-01-0960
1328. **Argonne National Laboratory**
Broatch, A., Novella, R., Gomez-Soriano, J., Pal, P., and Som, S., "Numerical Methodology for Optimization of Compression-Ignited Engines Considering Combustion Noise Control," SAE Paper 2018-01-0193, 2018. DOI: 10.4271/2018-01-0193
1329. **Caterpillar Inc.**
Dempsey, A.B., Seiler, P., Svensson, K., and Qi, Y., "Evaluation of the Two-Step Hiroyasu Soot Model Over a Broad Range of Diesel Combustion Systems," SAE Paper 2018-01-0242, 2018. DOI: 10.4271/2018-01-0242
1330. **Argonne National Laboratory; Universitat Politècnica de València; University of Connecticut; Convergent Science**
Pal, P., Kolodziej, C.P., Choi, S., Som, S., Broatch, A., Gomez-Soriano, J., Wu, Y., Lu, T., and See, Y.C., "Development of a Virtual CFR Engine Model for Knocking Combustion Analysis," SAE Paper 2018-01-0187, 2018. DOI: 10.4271/2018-01-0187
1331. **Stony Brook University**
Boldaji, M.R., Sofianopoulos, A., Mamalis, S., and Lawler, B., "Effect of Mass, Pressure, and Timing of Injection on the Efficiency and Emissions Characteristics of TSCI Combustion With Direct Water Injection," SAE Paper 2018-01-0178, 2018. DOI: 10.4271/2018-01-0178
1332. **Argonne National Laboratory; Convergent Science; Aramco Research Center**
Moiz, A.A., Pal, P., Probst, D., Pei, Y., Zhang, Y., Som, S., and Kodavasal, J., "A Machine Learning - Genetic Algorithm (MLGA) Approach for Rapid Virtual Optimization Using High-Performance Computing," SAE Paper 2018-01-0190, 2018. DOI: 10.4271/2018-01-0190
1333. **King Abdullah University of Science and Technology**
Mubarak Ali, M.J., Perez, F.H., Sow, A., and Im, H., "A Computational Study of Abnormal Combustion Characteristics in Spark Ignition Engines," SAE Paper 2018-01-0179, 2018. DOI: 10.4271/2018-01-0179
1334. **Argonne National Laboratory; Aramco Research Center**
Torelli, R., Matusik, K.E., Nelli, K.C., Kastengren, A.L., Fezzaa, K., Powell, C.F., Som, S., Pei, Y., Tzanetakis, T., Zhang, Y., Traver, M., and Cleary, D.J., "Evaluation of Shot-to-Shot In-Nozzle Flow Variations in a Heavy-Duty Diesel Injector Using Real Nozzle Geometry," SAE Paper 2018-01-0303, 2018. DOI: 10.4271/2018-01-0303
1335. **University of Massachusetts Dartmouth; Argonne National Laboratory; Michigan Technological University**
Markt, D.P., Torelli, R., Pathak, A., Raessi, M., Som, S., Scarcelli, R., Lee, S.-Y., and Naber, J., "Using a DNS Framework to Test a Splashed Mass Sub-Model for Lagrangian Spray Simulations," SAE Paper 2018-01-0297, 2018. DOI: 10.4271/2018-01-0297
1336. **Carnegie Mellon University; General Motors; University of Michigan**
Nichani, V.H., Jaime, R., Singh, S., Yang, X., and Sick, V., "Influence of Discretization Schemes and LES Subgrid Models on Flow Field Predictions for a Motored Optical Engine," SAE Paper 2018-01-0185, 2018. DOI: 10.4271/2018-01-0185
1337. **King Abdullah University of Science and Technology; Saudi Aramco**
An, Y., Mubarak Ali, M.J., Vallinayagam, R., Vedharaj, S., Perez, F.H., Sim, J., Chang, J., Im, H., and Johansson, B., "Investigation of Premixed and Diffusion Flames in PPC and CI Combustion Modes," SAE Paper 2018-01-0899, 2018. DOI: 10.4271/2018-01-0899

1338. **Politecnico di Torino; IFP Energies nouvelles; Groupe Renault**
Baratta, M., Misul, D., Goel, P., Laurenzano, D., Lecointe, B., Rouleau, L., Ravet, F., and Christou, P., "Experimental and Numerical Analysis of Diluted Combustion in a Direct Injection CNG Engine Featuring Post- Euro-VI Fuel Consumption Targets," SAE Paper 2018-01-1142, 2018. DOI: 10.4271/2018-01-1142
1339. **Texas Tech University; John Deere Power Systems**
Ge, H. and Cho, N.H., "Effects of Numerical Models on Prediction of Cylinder Pressure Ringing in a DI Diesel Engine," SAE Paper 2018-01-0194, 2018. DOI: 10.4271/2018-01-0194
1340. **Brandenburg University of Technology; LOGE AB**
Netzer, C., Franken, T., Seidel, L., Lehtiniemi, H., and Mauss, F., "Numerical Analysis of the Impact of Water Injection on Combustion and Thermodynamics in a Gasoline Engine Using Detailed Chemistry," SAE Paper 2018-01-0200, 2018. DOI: 10.4271/2018-01-0200
1341. **Stony Brook University**
Sofianopoulos, A., Boldaji, M.R., Lawler, B., and Mamalis, S., "Analysis of Thermal Stratification Effects in HCCI Engines Using Large Eddy Simulations and Detailed Chemical Kinetics," SAE Paper 2018-01-0189, 2018. DOI: 10.4271/2018-01-0189
1342. **Indian Institute of Technology; King Abdullah University of Science and Technology**
Wakale, A.B., Mohamed, S.Y., Naser, N., Mubarak ali, M.J., Banerjee, R., Im, H., and Sarathy, S.M., "An Experimental and Numerical Study of n-Dodecane/Butanol Blends for Compression Ignition Engines," SAE Paper 2018-01-0240, 2018. DOI: 10.4271/2018-01-0240
1343. **Michigan Technological University; Aramco Research Center; Convergent Science**
Tang, M., Pei, Y., Zhang, Y., Tzanetakis, T., Traver, M., Cleary, D., Quan, S., Naber, J., and Lee, S.-Y., "Development of a Transient Spray Cone Angle Correlation for CFD Simulations at Diesel Engine Conditions," SAE Paper 2018-01-0304, 2018. DOI: 10.4271/2018-01-0304
1344. **Indian Institute of Technology**
Karaya, Y., Addepalli, S.K., and Mallikarjuna, J.M., "Effect of Injector Location and Nozzle Hole Orientation on Mixture Stratification in a GDI Engine – a CFD Analysis," SAE Paper 2018-01-0201, 2018. DOI: 10.4271/2018-01-0201
1345. **Hyundai Motor Company**
Lee, K.S., "CONVERGE GT-SUITE Coupling Analysis for Denox System on SCR Catalyst," *IDA J CAE Solution Conference 2016: Korea*, Seoul, Korea, Nov 21, 2016.
1346. **Wayne State University**
Abianeh, S.O., Curtis, N., and Sung, C.-J., "Determination of Modeled Luminosity-Based and Pressure-Based Ignition Delay Times of Turbulent Spray Combustion," *International Journal of Heat and Mass Transfer*, 103:1297-1312, 2016. DOI: 10.1016/j.ijheatmasstransfer.2016.06.067
1347. **Convergent Science**
Luo, Z., Raju, M., and Senecal, P.K., "Application of Dynamic Mechanism Reduction for Detailed Soot Modeling in Internal Combustion Engine Simulations," *9th US National Combustion Meeting*, Cincinnati, OH, May 17–20, 2015.
1348. **General Motors; Oak Ridge National Laboratory; Lawrence Livermore National Laboratory**
Gao, J., Grover, R.O., Jr, Gopalakrishnan, V., Diwakar, R., Elwasif, W., Edwards, K.D., Finney, C.E.A., and Whitesides, R., "Steady-State Calibration of a Diesel Engine in CFD Using a GPU-Based Chemistry Solver," *ASME 2017 Internal Combustion Engine Division Fall Technical Conference*, ICEF2017-3631, Seattle, WA, United States, Oct 15–18, 2017. DOI: 10.1115/ICEF2017-3631
1349. **AVIC**
Wang, Z., Wang, Z., and Zhong, X., "Gas Turbine Combustion Simulation With Automatic Mesh Generation and Detailed Chemistry," *IDA J CAE Solution Conference 2015: China*, Beijing, China, Nov 23–24, 2015.

1350. **Chiba University**
Uehara, R., Takahashi, Y., Yamada, T., Kuboyama, T., and Moriyoshi, Y., "Development of a Cycle Simulator for a Natural Gas Engine With a Pre-Chamber," *International University of Automotive Technology for Young Engineers*, Toyko, Japan, Mar 7, 2014.
1351. **Argonne National Laboratory; Convergent Science**
Scarcelli, R., Richards, K., Pomraning, E., Senecal, P.K., Wallner, T., and Sevik, J., "Cycle-to-Cycle Variations in Multi-Cycle Engine RANS Simulations," SAE Paper 2016-01-0593, 2016. DOI: 10.4271/2016-01-0593
1352. **Toyota Motor Corporation**
Sawada, R., "Study for Cycle Variation of Flow in Engine Cylinder by Measurement and CFD," *2015 JSAE Annual Congress*, Yokohama, Japan, May 20–22, 2015.
1353. **Southwest Research Institute**
Rothbauer, R.J., Stovell, C.H., Roberts, C.E., and Alger, T.F., "Low Soot and Low Heat Loss Combustion Bowl Development for High Efficiency Diesel Engines Using CFD," *2010 JSAE Annual Congress*, Yokohama, Japan, May 2010.
1354. **Argonne National Laboratory; Gamma Technologies; Politecnico di Torino**
Zhao, L., Moiz, A.A., Som, S., Fogla, N., Bybee, M., Wahiduzzaman, S., Mirzaeian, M., Millo, F., and Kodavasal, J., "Examining the Role of Flame Topologies and In-Cylinder Flow Fields on Cyclic Variability in Spark-Ignited Engines Using Large-Eddy Simulation," *International Journal of Engine Research*, 2017. DOI: 10.1177/1468087417732447
1355. **Hunan University**
Wu, Z., Rutland, C.J., and Han, Z., "Numerical Optimization of Natural Gas and Diesel Dual-Fuel Combustion for a Heavy-Duty Engine Operated at a Medium Load," *International Journal of Engine Research*, 2017. DOI: 10.1177/1468087417729255
1356. **POWERTECH Engineering; Wartsila Italia**
Servetto, E., Bianco, A., Caputo, G., and Lo Iacono, G., "Experimental and Computational Investigation of a Quarter-Wave Resonator on a Large-Bore Marine Dual-Fuel Engine," SAE Paper 2017-24-0017, 2017. DOI: 10.4271/2017-24-0017
1357. **Ford Motor Company**
Ruhland, H., Lorenz, T., Dunstheimer, J., and Breuer, A., "A Study on Charge Motion Requirements for a Class-Leading GTDI Engine," SAE Paper 2017-24-0065, 2017. DOI: 10.4271/2017-24-0065
1358. **Argonne National Laboratory**
Marti-Aldaravi, P., Saha, K., Gimeno, J., and Som, S., "Numerical Simulation of a Direct-Acting Piezoelectric Prototype Injector Nozzle Flow for Partial Needle Lifts," SAE Paper 2017-24-0101, 2017. DOI: 10.4271/2017-24-0101
1359. **Indian Institute of Technology Madras**
Jadhav, P. and Mallikarjuna, J., "Effect of EGR on Performance and Emission Characteristics of a GDI Engine - A CFD Study," SAE Paper 2017-24-0033, 2017. DOI: 10.4271/2017-24-0033
1360. **Federal University of Santa Catarina; Embraco**
da Silva, L.R., Dutra, T., Deschamps, C.J., and Rodrigues, T.T., "A New Modeling Strategy to Simulation the Compression Cycle of Reciprocating Compressors," *IIR Conference on Compressors*, 0226, Bratislava, Slovakia, Sep 6–8, 2017. DOI: 10.18462/iir.compr.2017.0226
1361. **RWTH Aachen University**
Budak, O., Hoppe, F., Heuser, B., Pischinger, S., Burke, U., and Heufer, A., "Hot Surface Pre-Ignition in Direct-Injection Spark-Ignition Engines: Investigations With Tailor-Made Fuels From Biomass," *International Journal of Engine Research*, 2017. DOI: 10.1177/1468087417729238

1362. **Stony Brook University**
 Boldaji, M.R., Sofianopoulos, A., Mamalis, S., and Lawler, B., "CFD Simulations of the Effect of Water Injection Characteristics on TSCI: A New, Load-Flexible, Advanced Combustion Concept," *ASME 2017 Internal Combustion Engine Fall Technical Conference*, ICEF2017-3662, Seattle, WA, United States, Oct 15–18, 2017. DOI: 10.1115/ICEF2016-3662

1363. **Magneti Marelli**
 Battistoni, M., Grimaldi, C., Cruccolini, V., and Discepoli, G., "Assessment of Port Water Injection Strategies to Control Knock in a GDI Engine Through Multi-Cycle CFD Simulations," SAE Paper 2017-24-0034, 2017. DOI: 10.4271/2017-24-0034

1364. **University of Rome Tor Vergata**
 Bartolucci, L., Cordiner, S., Mulone, V., and Rocco, V., "Natural Gas Fueled Engines Modeling Under Partial Stratified Charge Operating Conditions," SAE Paper 2017-24-0093, 2017. DOI: 10.4271/2017-24-0093

1365. **University of Illinois at Chicago**
 Aggarwal, S.K., "Ignition and Lifted Flame Behavior in Homogeneous Mixtures and Sprays," *10th Mediterranean Combustion Symposium*, EGTSC-2, Naples, Italy, Sep 17–21, 2017.

1366. **Indian Institute of Technology Madras**
 Addepalli, S., Saw, O., and Mallikarjuna, J., "Effect of Mixture Distribution on Combustion and Emission Characteristics in a GDI Engine - A CFD Analysis," SAE Paper 2017-24-0036, 2017. DOI: 10.4271/2017-24-0036

1367. **Marquette University**
 Wilson, D. and Allen, C., "Application of a Multi-Zone Model for the Prediction of Species Concentration in Rapid Compression Machine Experiments," *Combustion and Flame*, 171, 185-197, 2016. DOI: 10.1016/j.combustflame.2016.05.018

1368. **Tianjin University; Guilin University of Aerospace Technology**
 Wei, H., Chen, X., Wang, G., Zhou, L., An, S., and Shu, G., "Effect of Swirl Flow on Spray and Combustion Characteristics With Heavy Fuel Oil Under Two-Stroke Marine Engine Relevant Conditions," *Applied Thermal Engineering*, 124, 302-314, 2017. DOI: 10.1016/j.applthermaleng.2017.05.202

1369. **Tsinghua University**
 Wang, Y., Xiang, S., Qi, Y., Mevel, R., and Wang, Z., "Shockwave and Flame Front Induced Detonation in Rapid Compression Machine," *26th International Colloquium on the Dynamics of Explosions and Reactive Systems*, Boston, MA, United States, Jul 30–Aug 4, 2017.

1370. **Argonne National Laboratory**
 Van Dam, N., Som, S., Swantek, A.B., and Powell, C.F., "The Effect of Grid Resolution on Predicted Spray Variability Using Multiple Large-Eddy Spray Simulations," *Proceedings of the ASME 2016 Internal Combustion Engine Division Fall Technical Conference*, ICEF2016-9384, Greenville, SC, United States, Oct 9–12, 2016. DOI: 10.1115/ICEF2016-9384

1371. **Tianjin University**
 Sun, X., Liang, X., Yu, H., Wang, Y., and Zhu, Z., "Comparison the Performance of n-Heptane, n-Dodecane, n-Tetradecane and n-Hexadecane," *Energy Procedia*, 105, 1426 – 1433, 2017. DOI: 10.1016/j.egypro.2017.03.533

1372. **Tianjin University**
 Sun, X., Liang, X., Shu, G., Wang, Y., Wang, Y., and Yu, H., "Effect of Different Combustion Models and Alternative Fuels on Two-Stroke Marine Diesel Engine Performance," *Applied Thermal Engineering*, 115, 597-606, 2017. DOI: 10.1016/j.applthermaleng.2016.12.093

1373. **Tianjin University**
 Sun, X., Liang, X., Shu, G., Wang, Y., Wang, Y., and Yu, H., "Development of a Reduced n-Tetradecane–Polycyclic Aromatic Hydrocarbon Mechanism for Application to Two-Stroke Marine Diesel Engines," *Energy Fuels*, 31, 941-952, 2017. DOI: 10.1021/acs.energyfuels.6b02708

1374. **Tsinghua University; China Agricultural University**
Ren, S., Wang, Z., Xiang, S., Zhao, H., and Wang, J., "Numerical Study of Gasoline Homogeneous Charge Induced Ignition (HCII) by Diesel With a Multi-Component Chemical Kinetic Mechanism," SAE Paper 2016-01-0784, 2016. DOI: 10.4271/2016-01-0784
1375. **Tsinghua University**
Ren, S., Kokjohn, S.L., Wang, Z., Liu, H., Wang, B., and Wang, J., "A Multi-Component Wide Distillation Fuel (covering Gasoline, Jet Fuel and Diesel Fuel) Mechanism for Combustion and PAH Prediction," *Fuel*, 208, 447-468, 2017. DOI: 10.1016/j.fuel.2017.07.009
1376. **VIT University**
Puri Ing, T.N., Soni Ing, L.R., and Deshpande, S., "Combined Effects of Injection Timing and Fuel Injection Pressure on Performance, Combustion and Emission Characteristics of a Direct Injection Diesel Engine Numerically Using CONVERGE CFD Tool," SAE Paper 2017-28-1953, 2017. DOI: 10.4271/2017-28-1953
1377. **Tianjin University**
Pan, J., Wei, H., Shu, G., Pan, M., Feng, D., and Li, N., "LES Analysis for Auto-Ignition Induced Abnormal Combustion Based on a Downsized SI Engine," *Applied Energy*, 191, 183-192, 2017. DOI: 10.1016/j.apenergy.2017.01.044
1378. **U.S. Army Research Laboratory; NAVAIR; NASA Glenn Research Center; AMRDEC-ADD**
Murugan, M., Ghoshal, A., Walock, M., Nieto, A., Bravo, L., Barnet, B., Pepi, M., Swab, J., Pegg, R.T., Rowe, C., Zhu, D., and Kerner, K., "Microstructure Based Material-Sand Particulate Interactions and Assessment of Coatings for High Temperature Turbine Blades," *ASME Turbo Expo 2017: Turbomachinery Technical Conference and Exposition*, GT2017-64051, Charlotte, NC, United States, Jun 26-30, 2017. DOI: 10.1115/GT2017-64051
1379. **Tianjin University**
Liu, H., Zhang, H., Wang, H., Zou, X., and Yao, M., "A Numerical Study on Combustion and Emission Characteristics of Marine Engine Through Miller Cycle Coupled With EGR and Water Emulsified Fuel," SAE Paper 2016-01-2187, 2016. DOI: 10.4271/2016-01-2187
1380. **Shanghai Jiao Tong University**
Li, T., Yin, T., and Wang, B., "Anatomy of the Cooled EGR Effects on Soot Emission Reduction in Boosted Spark-Ignited Direct-Injection Engines," *Applied Energy*, 190, 43-56, 2017. DOI: 10.1016/j.apenergy.2016.12.105
1381. **West Virginia University; Tianjin University; National Research Council, Canada**
Li, Y., Li, H., Li, Y., Yao, M., and Guo, H., "A Numerical Investigation on No2 Formation in a Natural Gas-Diesel Dual Fuel Engine," *ASME 2017 Internal Combustion Engine Fall Technical Conference*, ICEF2017-3688, Seattle, WA, United States, Oct 15-18, 2017. DOI: 10.1115/ICEF2017-3688
1382. **West Virginia University; National Research Council, Canada; Tianjin University**
Li, Y., Li, H., Guo, H., Li, Y., and Yao, M., "A Numerical Investigation on Methane Combustion and Emissions From a Natural Gas-Diesel Dual Fuel Engine Using CFD Model," *Applied Energy*, 205, 153-162, 2017. DOI: 10.1016/j.apenergy.2017.07.071
1383. **University of Oxford; Jaguar Land Rover**
Leach, F., Ismail, R., Davy, M., Weall, A., and Cooper, B., "Comparing the Effect of Fuel/Air Interactions in a Modern High-Speed Light-Duty Diesel Engine," SAE Paper 2017-24-0075, 2017. DOI: 10.4271/2017-24-0075
1384. **Argonne National Laboratory**
Kundu, P., Echehki, T., Pei, Y., and Som, S., "An Equivalent Dissipation Rate Model for Capturing History Effects in Non-Premixed Flames," *Combustion and Flame*, 176, 202-212, 2016. DOI: 10.1016/j.combustflame.2016.10.001

1385. **Argonne National Laboratory**
Kundu, P., Ameen, M., and Som, S., "Importance of Turbulence-Chemistry Interactions at Low Temperature Engine Conditions," *Combustion and Flame*, 183, 283-298, 2017. DOI: 10.1016/j.combustflame.2017.05.025

1386. **Argonne National Laboratory**
Kodavasal, J., Ciatti, S., and Som, S., "Analysis of the Impact of Uncertainties in Inputs on CFD Predictions of Gasoline Compression Ignition," *Proceedings of the ASME 2016 Internal Combustion Engine Division Fall Technical Conference*, ICEF2016-9328, Greenville, SC, United States, Oct 9–12, 2016. DOI: 10.1115/ICEF2016-9328

1387. **Continental Automotive France**
Khan, M.M., Helie, J., Gorokhovski, M., and Sheikh, N.A., "Experimental and Numerical Study of Flash Boiling in Gasoline Direct Ignition Sprays," *Applied Thermal Engineering*, 123, 377-389, 2017. DOI: 10.1016/j.applthermaleng.2017.05.102

1388. **Indiana University – Purdue University Indianapolis**
Jamali, A. and Nalim, M.R., "Numerical Simulation of Dual-Fuel Compression-Ignition Engine in Part-Load Operating Condition With Double Ignition," *Proceedings of the ASME 2016 Internal Combustion Engine Division Fall Technical Conference*, ICEF2016-9374, Greenville, SC, United States, Oct 9–12, 2016. DOI: 10.1115/ICEF2016-9374

1389. **Universiti Kebangsaan Malaysia**
Hafiz, N.M., Mansor, M.R., Mahmood, W.M., Ibrahim, F., Abdullah, S., and Sopian, K., "Numerical Study of Hydrogen Fuel Combustion in Compression Ignition Engine Under Argon-Oxygen Atmosphere," *Jurnal Teknologi (Sciences & Engineering)*, 78(6-10), 77-83, 2016.

1390. **Colorado State University**
Hockett, A., Hampson, G., and Marchese, A.J., "Natural Gas/Diesel RCCI CFD Simulations Using Multi-Component Fuel Surrogates," *International Journal of Powertrains*, 6(1), 082915, 2017. DOI: 10.1504/IJPT.2017.082915

1391. **General Motors**
Gao, J. and Kuo, T.-W., "Towards the Accurate Prediction of Soot in Engine Application," *9th International Conference on Modeling and Diagnostics for Advanced Engine Systems*, A104, Okayama, Japan, Jul 25–28, 2017.

1392. **Argonne National Laboratory; North Carolina State University**
Pei, Y., Som, S., Kundu, P., and Goldin, G.M., "Large Eddy Simulation of a Reacting Spray Flame Under Diesel Engine Conditions," *SAE Paper 2015-01-1844*, 2015. DOI: 10.4271/2015-01-1844

1393. **Argonne National Laboratory; Lawrence Livermore National Laboratory; University of Connecticut**
Pei, Y., Mehl, M., Liu, W., Lu, T., Pitz, W.J., and Som, S., "A Multi-Component Blend as a Diesel Fuel Surrogate for Compression Ignition Engine Applications," *Proceedings of the ASME 2014 Internal Combustion Engine Division Fall Technical Conference*, ICEF2014-5625, Columbus, IN, United States, Oct 19–22, 2014.

1394. **Argonne National Laboratory; North Carolina State University**
Pei, Y., Kundu, P., Goldin, G.M., and Som, S., "Large Eddy Simulation of an n-Dodecane Spray Flame Under Diesel Engine Conditions," *9th US National Combustion Meeting*, Cincinnati, OH, United States, May 17–20, 2015.

1395. **Argonne National Laboratory; Cummins Inc.**
Pei, Y., Hu, B., and Som, S., "Large Eddy Simulation of an n-Dodecane Spray Flame Under Different Ambient Oxygen Conditions," *Proceedings of the ASME 2015 Internal Combustion Engine Division Fall Technical Conference*, ICEF2015-1034, Houston, TX, United States, Nov 9–11, 2015.

1396. **Automotive Research Association of India**
Pawar, P., Jose, A., Chaudhari, H.B., Juttu, S., Walke, N.H., and Marathe, N.V., "Virtual Engine Optimization From Design to Experimentation," SAE Paper 2017-26-0264, 2017. DOI: 10.4271/2017-26-0264
1397. **Cameron**
Patterson, M., "Redesigning the COOPER-BESSEMER® GMV to Meet 2008 Emissions Regulations Using Advanced In-Cylinder Combustion CFD and Experimental Methods," *Presentation at 2013 Gas/Electric Partnership Conference*, Feb 2013.
1398. **GE Global Research Center; Convergent Science; King Abdullah University of Science and Technology; Oak Ridge National Laboratory**
Pasunurthi, S., Jupudi, R., Wijeyakulasuriya, S., Gubba, S.R., Im, H., Ali, M.J., Primus, R., Klingbeil, A., and Finney, C., "Cycle to Cycle Variation Study in a Dual Fuel Operated Engine," SAE Paper 2017-01-0772, 2017. DOI: 10.4271/2017-01-0772
1399. **Honda Motor Co. Ltd.**
Park, S. and Furukawa, T., "Validation of Turbulent Combustion and Knocking Simulation in Spark-Ignition Engines Using Reduced Chemical Kinetics," SAE Paper 2015-01-0705, 2015.
1400. **Argonne National Laboratory; Convergent Science; Aramco Research Center**
Pal, P., Probst, D., Pei, Y., Zhang, Y., Traver, M., Cleary, D., and Som, S., "Numerical Investigation of a Gasoline-Like Fuel in a Heavy-Duty Compression Ignition Engine Using Global Sensitivity Analysis," SAE Paper 2017-01-0578, 2017. DOI: 10.4271/2017-01-0578
1401. **Colorado School of Mines; National Renewable Energy Laboratory**
Osecky, E.M., Bogin Jr., G.E., Villano, S.M., Ratcliff, M.A., Luecke, J., Ziglet, B.T., and Dean, A.M., "Investigation of iso-Octane Ignition and Validation of a Multizone Modeling Method in an Ignition Quality Tester," *Energy and Fuels*, 30(11), 9761-9771, 2016. DOI: 10.1021/acs.energyfuels.6b01406
1402. **YANMAR Co., Ltd.; IDAJ Co. LTD; Convergent Science**
Omote, H., Hirota, K., Hotta, T., Kumar, G., and Drennan, S.A., "Combustion and Conjugate Heat Transfer CFD Simulations to Support Combustor Design," *2015 International Gas Turbines Conference*, Tokyo, Japan, Nov 15–20, 2015.
1403. **New Ace Inst. Co. Ltd.**
Okamoto, T. and Uchida, N., "New Concept for Overcoming the Trade-Off Between Thermal Efficiency, Each Loss and Exhaust Emissions in a Heavy Duty Diesel Engine," *SAE International Journal of Engines*, 9(2), 2016. DOI: 10.4271/2016-01-0729
1404. **Tohoku University; Keihin Corp.**
Ochiai, N., Ishimoto, J., Arioka, A., Yamaguchi, N., Sasaki, Y., and Furukawa, N., "Integration Computational Study for Total Atomization Process of Primary Breakup to Spray Droplet Formation in Injector Nozzle," SAE Paper 2016-02-3303, 2016. DOI: 10.4271/2016-01-2202
1405. **Marquette University**
Neuman, J. and Allen, C.M., "The Effects of Non-Uniform Boundary Temperatures on Ignition Delay Time Measurements From Heated Rapid Compression Machine Experiments," *53rd AIAA Aerospace Sciences Meeting*, Kissimmee, FL, United States, Jan 5–9, 2015.
1406. **Brandenburg University of Technology; LOGE AB; Groupe Renault**
Netzer, C., Seidel, L., Pasternak, M., Klauer, C., Perlman, C., Ravet, F., and Mauss, F., "Engine Knock Prediction and Evaluation Based on Detonation Theory Using a Quasi-Dimensional Stochastic Reactor Model," SAE Paper 2017-01-0538, 2017. DOI: 10.4271/2017-01-0538
1407. **Brandenburg University of Technology; LOGE AB; Groupe Renault**
Netzer, C., Seidel, L., Pasternak, M., Mauss, F., Lehtiniemi, H., Perlman, C., and Ravet, F., "3D CFD Engine Knock Prediction and Evaluation Based on Detailed Chemistry and Detonation Theory," *13th International Congress of Engine Combustion Processes*, Luwigsburg, Germany, Mar 16–17, 2017. DOI: ISBN 978-3-945806-08-1

1408. **Brandenburg University of Technology; LOGE AB; Groupe Renault**
 Netzer, C., Seidel, L., Lehtiniemi, H., Ravet, F., and Mauss, F., "Efficient Tracking of Knock Onset for a Wide Range of Fuel Surrogates," *2017 International Multidimensional Engine Modeling User's Group Meeting at the SAE Congress*, 9-Paper7, Detroit, MI, United States, Apr 3, 2017. DOI: <https://imem.cray.com/2017/Meeting-2017/9-Paper7-Netzer-et-al.pdf>

1409. **U.S. Military Academy**
 Nelson, T., Bravo, L., Benson, M., Van Poppel, B., Sowell, T., Lee, Z., Beck, J., Glass, T., Vazquez Guzman, P., Fahrig, R., Eaton, J., Hinshaw, W., Kurman, M., Tess, M., and Kweon, C.-B., "Geometric VOF-PLIC Simulations of Hollow Cone Sprays," *67th Annual Meeting of the APS Division of Fluid Dynamics*, San Francisco, CA, United States, Nov 23–25, 2015.

1410. **Carnegie Mellon University; University of Cassino and Lazio Meridionale**
 Neft, I., Scungio, M., Culver, N., and Singh, S., "Simulations of Aerosol Filtration by Vegetation: Validation of Existing Models With Available Lab Data and Application to Near-Roadway Scenario," *Aerosol Science and Technology*, 50(9), 937-946, 2016. DOI: 10.1080/02786826.2016.1206653

1411. **Southwest Research Institute**
 Neely, G.D., Florea, R., Miwa, J., and Abidin, Z., "Efficiency and Emissions Characteristics of Partially Premixed Dual-Fuel Combustion by Co-Direct Injection of NG and Diesel Fuel (DI2) – Part 2," SAE Paper 2017-01-0766, 2017. DOI: 10.4271/2017-01-0766

1412. **École des Mines de Nantes; Laboratoire de Recherche en Technologie de l'Environnement**
 Ndayishimiye, P., Naima, K., Liqid, A., and Tzerout, M., "Performance and Emission Characteristics of a DI Compression Ignition Engine Operated on PODL Biofuel," *International Journal of Renewable Energy Technology*, 2(3), 324-344, 2011. DOI: 10.1504/IJRET.2011.040867

1413. **Delphi; Wayne State University**
 Moore, W., Foster, M., Confer, M., Matsumoto, A., Zheng, Y., Xie, X., and Lai, M.-C., "Charge Motion Benefits of Valve Deactivation to Reduce Fuel Consumption and Emissions in a SIDI, VVA Engine," SAE Paper 2011-01-1221, 2011.

1414. **CMT-Motores Térmicos; Volvo Group**
 Molina, S., Garcia, A., Pastor, J.M., Belarte, E., and Balloul, I., "Operating Range Extension of RCCI Combustion Concept From Low to Full Load in a Heavy-Duty Engine," *Applied Energy*, 143, 211-227, 2015. DOI: 10.1016/j.apenergy.2015.01.035

1415. **Michigan Technological University; Nostrum Energy LLC**
 Moiz, A., Zhao, L., Lee, S.-Y., Naber, J., Barros, S., and Alkinson, W., "Jet-to-Jet Collision Studies of a Novel High-Pressure Two-Hole Injector Under Gasoline Engine Conditions," *ILASS Americas 27th Annual Conference on Liquid Atomization and Spray Systems*, Raleigh, NC, United States, May 17–20, 2015.

1416. **Michigan Technological University; Argonne National Laboratory; U.S. Army Research Laboratory**
 Moiz, A.A., Som, S., Bravo, L., and Lee, S.-Y., "Experimental and Numerical Studies on Combustion Model Selection for Split Injection Spray Combustion," SAE Paper 2015-01-0374, 2015. DOI: 10.4271/2015-01-0374

1417. **Michigan Technological University**
 Moiz, A.A., Cung, K.D., and Lee, S.-Y., "Ignition, Lift-Off, and Soot Formation Studies in n-Dodecane Split Injection Spray-Flames," *International Journal of Engine Research*, 2017. DOI: 10.1177/1468087417700778

1418. **Michigan Technological University; Argonne National Laboratory**
 Moiz, A.A., Ameen, M.M., Lee, S.-Y., and Som, S., "Study of Soot Production for Double Injections of n-Dodecane in CI Engine-Like Conditions," *Combustion and Flame*, 173, 123-131, 2016. DOI: 10.1016/j.combustflame.2016.08.005

1419. **Michigan Technological University**
Moiz, A.A., "Low Temperature Split Injection Spray Combustion: Ignition, Flame Stabilization and Soot Formation Characteristics in Diesel Engine Conditions," Ph.D. thesis, Michigan Technological University, MI, United States, 2016 <http://digitalcommons.mtu.edu/etdr/253>.
1420. **Wayne State University; Delphi**
Matsumoto, A., Moore, W.R., Lai, M.-C., Zheng, Y., Foster, M., Xie, X.-B., Yen, D., Confer, K., and Hopkins, E., "Spray Characterization of Ethanol Gasoline Blends and Comparison to a CFD Model for a Gasoline Direct Injecto," *SAE International Journal of Engines*, 3, 402-425, 2010. DOI: 10.4271/2010-01-0601
1421. **Wayne State University; Delphi**
Matsumoto, A., Zheng, Y., Xie, X., Lai, M.-C., and Moore, W., "Characterization of Ethanol/Gasoline Direct Injection Multi-Hole Spray and Mixing in an Optical Accessible Engine," *SAE Paper 2010-01-1459*, 2010. DOI: 10.4271/2010-01-1459
1422. **Wayne State University; Delphi**
Matsumoto, A., Xie, X., Zheng, Y., Lai, M.-C., and Moore, W., "Direct Injection Multi-Hole Spray and Mixing Characterization of Ethanol Gasoline Blends in Engine," *ILASS Americas 22nd Annual Conference on Liquid Atomization and Spray Systems*, Cincinnati, OH, United States, May 16-19, 2010.
1423. **Chalmers University of Technology; LOGE AB; Brandenburg University of Technology**
Matrisciano, A., Borg, A., Perlman, C., Pasternak, M., Seidel, L., Netzer, C., Mauss, F., and Lehtiniemi, H., "Simulation of DI-Diesel Combustion Using Tabulated Chemistry Approach," *1st Conference on Combustion Processes in Marine and Automotive Engines*, Lund, Sweden, Jun 7-8, 2016.
1424. **Texas A&M University; Cameron**
Mashayekh, A., Jacobs, T.J., and Etcheverry, J., "Study of Conjugate Heat Transfer of a Spark-Ignited Natural Gas Engine Cylinder," *GMRC Gas Machinery Conference*, Nashville, Tennessee, United States, Oct 5-8, 2014.
1425. **Texas A&M University; GE Oil & Gas**
Mashayekh, A., Jacobs, T.J., Patterson, M., and Etcheverry, J., "Prediction of Air-Fuel Ratio Control of a Large Bore Natural Gas Engine Using Computational Fluid Dynamic Modeling of Reed Valve Dynamics," *International Journal of Engine Research*, 2017. DOI: 10.1177/1468087416686224
1426. **Universidade do Minho**
Martins, J., Pereira, C., and Brito, F., "A New Rotary Valve for 2-Stroke Engines Enabling Over-Expansion," *SAE Paper 2016-01-1054*, 2016. DOI: 10.4271/2016-01-1054
1427. **Prometheus Applied Technologies, LLC; Colorado State University**
Martinez-Morett, D., Tozzi, L., and Marchese, A.J., "A Reduced Chemical-Kinetic Mechanism for CFD Simulations of High BMEP, Lean-Burn Natural Gas Engines," *ASME 2012 Internal Combustion Engine Division Spring Technical Conference*, Torino, Italy, May 6-9, 2012.
1428. **University of Illinois at Chicago**
Malewicki, T., "Development of a Jet a Chemical Surrogate Model Using High Pressure Shock Tube Speciation Data," Ph.D. thesis, University of Illinois at Chicago, Chicago, IL, United States, 2012.
1429. **Georgia Institute of Technology**
Magnotti, G.M., Matusik, K.E., Duke, D.K., Knox, B.W., Martinez, G.L., Powell, C.F., Kastengren, A.L., and Gebzale, C.L., "Modeling the Influence of Nozzle-Generated Turbulence on Diesel Sprays," *ILASS Americas 29th Annual Conference on Liquid Atomization and Spray System*, Atlanta, GA, United States, May 2017.
1430. **Georgia Institute of Technology**
Magnotti, G.M. and Genzale, C.L., "Exploration of Turbulent Atomization Mechanisms for Diesel Spray Simulations," *SAE Paper 2017-01-0829*, 2017. DOI: 10.4271/2017-01-0829

1431. **Stanford University; Technische Universität Darmstadt; University of Michigan**
Ma, P.C., Greene, M., Sick, V., and Ihme, M., "Non-Equilibrium Wall-Modeling for Internal Combustion Engine Simulations With Wall Heat Transfer," *International Journal of Engine Research*, 2017. DOI: 10.1177/1468087416686699
1432. **Stanford University; Technische Universität Darmstadt; University of Michigan**
Ma, P.C., Ewan, T., Jainski, C., Lu, L., Dreizler, A., Sick, V., and Ihme, M., "Development and Analysis of Wall Models for Internal Combustion Engine Simulations Using High-Speed Micro-PIV Measurements," *Flow, Turbulence and Combustion*, 98, 283, 2017. DOI: 10.1007/s10494-016-9734-5
1433. **Gamma Technologies**
Lynch, B., "Simulation of Mechanical Hydraulic System Dynamics Using Coupled Specialized Fluid Models and Multibody Dynamics," *Proceedings of the ASME 2015 Internal Combustion Engine Division Fall Technical Conference*, ICEF2015-1121, Houston, TX, United States, Nov 9–11, 2015. DOI: 10.1115/ICEF2015-1121
1434. **Convergent Science; LOGE AB; Caterpillar Inc.**
Luo, Z., Raju, M., Senecal, P.K., Lehtiniemi, H., Perlman, C., Mauss, F., Shethaji, T., and Li, Y., "Efficient Implementation of Detailed Soot Models in Internal Combustion Engine Simulations," *2014 Spring Technical Meeting of the Central States Section of the Combustion Institute*, Mar 16–18, 2014.
1435. **Argonne National Laboratory; University of Connecticut**
Liu, W., Sivaramakrishnan, R., Davis, M.J., Som, S., and Longman, D.E., "Development of a Reduced Biodiesel Surrogate Model for Compression Ignition Engine Modeling," *2012 Spring Technical Meeting of the Central States Section of the Combustion Institute*, Dayton, OH, United States, Apr 22–24, 2012.
1436. **LiquidPiston Inc.**
Littera, D., Nickerson, M., Kopache, A., Machamada, G., Sun, C., Schramm, A., Medeiros, N., Becker, K., Shkolnik, N., and Shkolnik, A., "Development of the XMv3 High Efficiency Cycloidal Engine," SAE Paper 2015-32-9719, 2015. DOI: 10.4271/2015-32-9719
1437. **West Virginia University; National Research Council, Canada**
Li, Y., Guo, H., and Li, H., "Evaluation of Chemical Reactions of Compression Ignition Engine Using CFD Model Coupled With Chemical Kinetics," SAE Paper 2017-01-0554, 2017. DOI: 10.4271/2017-01-0554
1438. **Altronic Hoerbiger; Prometheus Applied Technologies, LLC**
Lepley, D., Zhu, S., Sotiropoulou, E., and Tozzi, L., "Optimizing High-Energy Tunable Ignition Technology: Preventing Electrode Damage While Extending the Lean Flammability Limit of Gas Engines," *2014 Gas Machinery Conference*, Nashville, TN, United States, Oct 5–8, 2014.
1439. **Altronic Hoerbiger; Prometheus Applied Technologies, LLC**
Lepley, D., Sotiropoulou, E., Zhu, S., and Tozzi, L., "Next Generation Passive Prechamber Spark Plug for High Efficiency, High BMEP Gas Engine," *2015 Gas Machinery Conference*, Austin, TX, United States, 2015.
1440. **Groupe Renault; Convergent Science**
Leguille, M., Ravet, F., Le Moine, J., Pomraning, E., Richards, K., and Senecal, P.K., "Coupled Fluid-Solid Simulation for the Prediction of Gas-Exposed Surface Temperature Distribution in a SI Engine," SAE Paper 2017-01-0669, 2017. DOI: 10.4271/2017-01-0669
1441. **Caterpillar Inc.**
Lee, W.G. and Montgomery, D., "Numerical Investigation of the Performance of a High Pressure Direct Injection (HPDI) Natural Gas Engine," *Proceedings of the ASME 2014 Internal Combustion Engine Division Fall Technical Conference*, ICEF2014-5681, Columbus, IN, United States, Oct 19–22, 2014. DOI: 10.1115/ICEF2014-5681
1442. **Convergent Science; University of Duisburg-Essen; Caterpillar Inc.**
Le Moine, J., Senecal, P.K., Kaiser, S.A., Salazar, V.M., Anders, J.W., Svennson, K.I., and Gehrke, C.R., "A Computational Study of the Mixture Preparation in a Direct Injection Hydrogen Engine," *ASME Journal of Engineering for Gas Turbines and Power*, 137(11), 111508, 2015. DOI: 10.1115/1.4030397

1443. **King Abdullah University of Science and Technology; University of Hiroshima**
Kuti, O., Sarathy, M., Nishida, K., and Roberts, W., "Numerical Studies of Spray Combustion Processes of Palm Oil Biodiesel and Diesel Fuels Using Reduced Chemical Kinetic Mechanisms," SAE Paper 2014-01-1143, 2014. DOI: 10.4271/2014-01-1143
1444. **DENSO Corporation; Japan Automobile Research Institute**
Kurimoto, N., Watanabe, N., Hoshi, S., Sasaki, S., and Matsumoto, M., "Numerical Modeling of International Variations in Diesel Spray Combustion With Evaporation Surrogate and Virtual Species Conversion," SAE Paper 2017-01-0582, 2017. DOI: 10.4271/2017-01-0582
1445. **Argonne National Laboratory**
Kundu, P., Ameen, M., Unikrishnan, U., and Som, S., "Implementation of a Tabulated Flamelet Model for Compression Ignition Engine Applications," SAE Paper 2017-01-0564, 2017. DOI: 10.4271/2017-01-0564
1446. **Aramco Research Center**
Kumar, P., Zhang, Y., Traver, M., and Cleary, D., "Simulation-Guided Air System Design for a Higher Reactivity Gasoline Fuel Under Partially-Premixed Combustion in a Heavy-Duty Diesel Engine," SAE Paper 2017-01-0751, 2017. DOI: 10.4271/2017-01-0751
1447. **Convergent Science**
Kumar, G. and Drennan, S., "A CFD Investigation of Multiple Burner Ignition and Flame Propagation With Detailed Chemistry and Automatic Meshing," *52nd AIAA/SAE/ASEE Joint Propulsion Conference, Propulsion and Energy Forum*, AIAA 2016-4561, Salt Lake City, UT, United States, Jul 25–27, 2016. DOI: 10.2514/6.2016-4561
1448. **Convergent Science**
Kumar, G. and Drennan, S., "Simulations of the Effect of Velocity Ratios on an Effusion Cooled Combustor Wall With Adaptive Mesh Refinement CFD and Conjugate Heat Transfer," *AIAA Propulsion & Energy 2015 Conference*, Orlando, FL, United States, Jul 27–29, 2015.
1449. **Convergent Science**
Kumar, G. and Drennan, S., "Coupled Transient Combustion and Combustor Wall Temperature With Adaptive Mesh Refinement CFD and Conjugate Heat Transfer," *9th US National Combustion Meeting*, Cincinnati, OH, United States, May 17–20, 2015.
1450. **Argonne National Laboratory; Convergent Science**
Kodavasal, J., Pei, Y., Harms, K., Ciatti, S., Wagner, A., Senecal, P.K., Garcia, M., and Som, S., "Global Sensitivity Analysis of a Gasoline Compression Ignition Engine Simulation With Multiple Targets on an IBM Blue Gene/Q Supercomputer," SAE Paper 2016-01-0602, 2016. DOI: 10.4271/2016-01-0602
1451. **Argonne National Laboratory**
Kodavasal, J., Kolodziej, C., Ciatti, S., and Som, S., "Effects of Injection Parameters, Boost, and Swirl Ratio on Gasoline Compression Ignition Operation at Idle and Low-Load Conditions," *International Journal of Engine Research*, 2016. DOI: 10.1177/1468087416675709
1452. **Argonne National Laboratory**
Kodavasal, J., Kolodziej, C., Ciatti, S., and Som, S., "CFD Simulation of Gasoline Compression Ignition," *Proceedings of the ASME 2014 Internal Combustion Engine Division Fall Technical Conference*, ICEF2014-5591, Columbus, IN, United States, Oct 19–22, 2014. DOI: 10.1115/ICEF2014-5591
1453. **Argonne National Laboratory; Convergent Science**
Kodavasal, J., Harms, K., Srivastava, P., Som, S., Quan, S., Richards, K., and Garcia, M., "Development of a Stiffness-Based Chemistry Load Balancing Scheme, and Optimization of I/O and Communication, to Enable Massively Parallel High-Fidelity Internal Combustion Engine Simulations," *Proceedings of the ASME 2015 Internal Combustion Engine Division Fall Technical Conference*, ICEF2015-1035, Houston, TX, United States, Nov 9–11, 2015. DOI: 10.1115/ICEF2015-1035

1454. **Caterpillar Inc.**
Koci, C., Svensson, K., and Gehrke, C., "Investigating Limitations of a Two-Zone NOx Model Applied to DI Diesel Combustion Using 3-D Modeling," SAE Paper 2016-01-0576, 2016. DOI: 10.4271/2016-01-0576
1455. **Caterpillar Inc.**
Koci, C., Dempsey, A., Nudd, J., and Knier, B., "Understanding Hydrocarbon Emissions in Heavy Duty Diesel Engines Combining Experimental and Computational Methods," SAE Paper 2017-01-0703, 2017. DOI: 10.4271/2017-01-0703
1456. **University of Michigan-Ann Arbor**
Kim, D., Martz, J., and Violi, A., "The Relative Importance of Fuel Oxidation Chemistry and Physical Properties to Spray Ignition," SAE Paper 2017-01-0269, 2017. DOI: 10.4271/2017-01-0269
1457. **Georgia Institute of Technology**
Kim, S., Jarrahashi, D., and Genzale, C., "The Role of Turbulent-Chemistry Interaction in Simulating End-Of-Injection Combustion Transients in Diesel Sprays," SAE Paper 2017-01-0838, 2017. DOI: 10.4271/2017-01-0838
1458. **General Motors**
Keum, S.H. and Idicheria, C.A., "Comparison of Experimental and Numerical Modeling of Reforming HCCI Combustion," *Proceedings of the ASME 2013 Internal Combustion Engine Division Fall Technical Conference*, ICEF2013-19216, Oct 13–16, 2013. DOI: 10.1115/ICEF2013-19216
1459. **Carnegie Mellon University; Mississippi State University; Argonne National Laboratory**
Kavuri, C., Singh, S., Krishnan, S.R., Srinivasan, K.K., and Ciatti, S., "Computational Analysis of Combustion of High and Low Cetane Fuels in a Compression Ignition Engine," *Proceedings of the ASME 2013 Internal Combustion Engine Division Fall Technical Conference*, ICEF2013-19178, Dearborn, MI, United States, Oct 13–16, 2013. DOI: 10.1115/ICEF2013-19178
1460. **Renault SAS**
Kancherla, R.V.M.C., Rathinam, B., Douailler, B., Naithani, U., Dugue, V., and Vaxelaire, F., "Spray Modelling for GDI Application: Two Different Approach," SAE Paper 2016-28-0007, 2016. DOI: 10.4271/2016-28-0007
1461. **GE Global Research Center; Oak Ridge National Laboratory; Convergent Science**
Jupudi, R., Finney, C., Primus, R., Wijeyakulasuriya, S., Klingbeil, A.E., Tamma, B., and Stoyanov, M.K., "Application of High Performance Computing for Simulating Cycle-to-Cycle Variation in Dual-Fuel Combustion Engines," SAE Paper 2016-01-0798, 2016. DOI: 10.4271/2016-01-0798
1462. **Wayne State University; US Army TARDEC**
Joshi, U.M.C., Trivedi, M.J., Zheng, Z., Schihl, P., and Henein, N.A., "Simulation and Comparison of Autoignition of Homogeneous Fuel/ Air Mixtures and Sprays in Diesel Engines," SAE Paper 2016-01-0311, 2016. DOI: 10.4271/2016-01-0311
1463. **Chrysler Group LLC**
Iqbal, O., Jonnalageda, S., Arora, K., Zhong, L., and Gaikwad, S., "Comparison of 1-D Vs. 3-D Combustion Boundary Conditions for SI Engine Thermal Load Prediction," *Proceedings of the ASME 2013 Internal Combustion Engine Division Fall Technical Conference*, ICEF2013-19227, Dearborn, MI, United States, Oct 13–16, 2013. DOI: 10.1115/ICEF2013-19227
1464. **Argonne National Laboratory; Convergent Science**
Insley, J.A., Kodavasal, J., Chai, X., Harms, K., Garcia, M., and Som, S., "Gasoline Compression Ignition: Optimizing Start of Ignition Time," *International Conference for High Performance Computing, Networking, Storage and Analysis*, Austin, TX, United States, Nov 15–20, 2015.
1465. **Universiti Kebangsaan Malaysia**
Ibrahim, F., Mahmood, W.M.F., Abdullah, S., and Mansor, M.R.A., "Comparison of Soot Emissions in Compression Ignition Diesel Engine by CFD Simulation From Simple to Detailed Soot Model," SAE Paper 2017-01-1006, 2017. DOI: 10.4271/2017-01-1006

1466. **Rensselaer Polytechnic Institute**
Huang, M., Gowdagiri, S., Cesari, X.M., and Oehlschlaeger, M.A., "Diesel Engine Simulations and Experiments: Fuel Variability Effects on Ignition," *Proceedings of the ASME 2014 International Mechanical Engineering Congress and Exposition*, Montreal, Canada, Nov 14–20, 2014. DOI: 10.1115/IMECE2014-37336
1467. **Cummins Inc.; Argonne National Laboratory; Convergent Science**
Hu, B., Banerjee, S., Liu, K., Rajamohan, D., Deur, J.M., Xue, Q., Som, S., Senecal, P.K., and Pomraning, E., "Large Eddy Simulation of a Turbulent Non-Reacting Spray Jet," *Proceedings of the ASME 2015 Internal Combustion Engine Division Fall Technical Conference*, ICEF2015-1033, Houston, TX, United States, Nov 9–11, 2015. DOI: 10.1115/ICEF2015-1033
1468. **Chrysler Group LLC; Argonne National Laboratory**
Zhu, Y., Salman, N., Freeman, K., Reese, R., II, Wang, Z., Scarcelli, R., and Som, S., "Numerical Study of the Combustion Characteristics of a Diesel Micro Pilot Ignited DI Gasoline Engine With Turbocharging and Cooled EGR," *Proceedings of the ASME 2013 Internal Combustion Engine Division Fall Technical Conference*, ICEF2013-19170, Dearborn, MI, United States, Oct 13–16, 2013.
1469. **Prometheus Applied Technologies, LLC**
Zhu, S., Sotiropoulou, E., Tozzi, L., and Yasueda, S., "A Method for Developing Counter Measures for Lubricating Oil Preignition in Natural Gas Engines," *9th Dessau Gas Engine Conference*, Dessau-Roßlau, Germany, Apr 16–17, 2015.
1470. **Wayne State University**
Zheng, Z., "Effect of Cetane Number and Volatility on Autoignition and Combustion of Alternative Fuels and Their Surrogates," Ph.D. thesis, Wayne State University, Detroit, MI, United States, 2014.
1471. **Weichai Power Emissions Solutions Company**
Zheng, G., "CFD Modeling of Urea Spray and Deposits for SCR Systems," SAE Paper 2016-01-8077, 2016. DOI: 10.4271/2016-01-8077
1472. **Michigan Technological University; Argonne National Laboratory**
Zhao, L., Torelli, R., Zhu, X., Scarcelli, R., Som, S., Schmidt, H., Naber, J., and Lee, S.-Y., "An Experimental and Numerical Study of Diesel Spray Impingement on a Flat Plate," SAE Paper 2017-01-0854, 2017. DOI: 10.4271/2017-01-0854
1473. **Michigan Technological University; Nostrum Energy LLC**
Zhao, L., Moiz, A., Naber, J., Lee, S.-Y., Barros, S., and Atkinson, W., "High-Speed Spray-to-Spray Collision Study on Two-Hole Impinging Jet Nozzles," SAE Paper 2015-01-0948, 2015. DOI: 10.4271/2015-01-0948
1474. **Michigan Technological University; Nostrum Energy LLC**
Zhao, L., Moiz, A., Lee, S.-Y., Naber, J., Barros, S., and Atkinson, W., "Investigation of Multi-Hole Impinging Jet High Pressure Spray Characteristics Under Gasoline Engine-Like Conditions," SAE Paper 2016-01-0847, 2016. DOI: 10.4271/2016-01-0847
1475. **Michigan Technological University; Nostrum Energy LLC**
Zhao, L., Limbu, S., Potham, S.P., Lee, S.-Y., Naber, J., Barros, S., and Atkinson, W., "Numerical Simulations for Spray Characterization of Uneven Multiple Jet-to-Jet Impingement Injectors," SAE Paper 2016-01-0840, 2016. DOI: 10.4271/2016-01-0840
1476. **Convergent Science; Argonne National Laboratory**
Zhao, H., Quan, S., Dai, M., Pomraning, E., Senecal, P.K., Xue, Q., Battistoni, M., and Som, S., "Validation of a Three-Dimensional Internal Nozzle Flow Model Including Automatic Mesh Generation and Cavitation Effects," *Journal of Engineering for Gas Turbines and Power*, 136(9), 2014. DOI: 10.1115/1.4027193
1477. **Aramco Research Center**
Zhang, Y., Sommers, S., Pei, Y., Kumar, P., Voice, A., Traver, M., and Cleary, D., "Mixing-Controlled Combustion of Conventional and Higher Reactivity Gasolines in a Multi-Cylinder Heavy-Duty Compression Ignition Engine," SAE Paper 2017-01-0696, 2017. DOI: 10.4271/2017-01-0696

1478. **Aramco Research Center**
Zhang, Y., Pei, Y., Engineer, N., Cho, K., and Cleary, D., "CFD-Guided Combustion Strategy Development for a Higher Reactivity Gasoline in a Light-Duty Gasoline Compression Ignition Engine," SAE Paper 2017-01-0740, 2017. DOI: 10.4271/2017-01-0740
1479. **Aramco Services Company**
Zhang, Y., Kumar, P., Traver, M., and Cleary, D., "Conventional and Low Temperature Combustion Using Naphtha Fuels in a Multi-Cylinder Heavy-Duty Diesel Engine," *SAE International Journal of Engines*, 9(2), 2016. DOI: 10.4271/2016-01-0764
1480. **Argonne National Laboratory; Michigan Technological University**
Zhang, A., Scarcelli, R., Lee, S.-Y., Wallner, T., and Naber, J., "Numerical Investigation of Spark Ignition Events in Lean and Dilute Methane/Air Mixtures Using a Detailed Energy Deposition Model," SAE Paper 2016-01-0609, 2016. DOI: 10.4271/2016-01-0609
1481. **Sandia National Laboratories; Convergent Science**
Zha, K., Busch, S., Miles, P.C., Wijeyakulasuriya, S., Mitra, S., and Senecal, P.K., "Characterization of Flow Asymmetry During the Compression Stroke Using Swirl-Plane PIV in a Light-Duty Optical Diesel Engine With the Re-Entrant Piston Bowl Geometry," *SAE International Journal of Engines*, 8(4), 1837-1855, 2015. DOI: 10.4271/2015-01-1699
1482. **Prometheus Applied Technologies, LLC**
Yasueda, S., Sotiropoulou, E., and Tozzi, L., "Predicting Autoignition Caused by Lubricating Oil in Gas Engines," *27th CIMAC World Congress 2013*, Technical Paper #37, Shanghai, China, May 13-17, 2013.
1483. **General Motors**
Yang, X., Solomon, A., and Kuo, T.-W., "Ignition and Combustion Simulations of Spray- Guided SIDI Engine Using Arrhenius Combustion With Spark-Energy Deposition Model," SAE Paper 2012-01-0147, 2012.
1484. **General Motors R&D**
Yang, X., Keum, S., and Kuo, T.-W., "Effect of Valve Opening/Closing Setup on CFD Prediction of Engine Flows," *Proceedings of the ASME 2015 Internal Combustion Engine Division Fall Technical Conference*, ICEF2015-1022, Houston, TX, United States, Nov 9-11, 2015.
1485. **General Motors**
Yang, X., Gupta, S., Kuo, T.-W., and Gopalakrishnan, V., "RANS and LES of IC Engine Flows," *Proceedings of the ASME 2013 Internal Combustion Engine Division Fall Technical Conference*, ICEF2013-19043, Dearborn, MI, United States, Oct 13-16, 2013.
1486. **General Motors**
Yang, X., Chen, Z., and Kuo, T.-W., "Pitfalls for Accurate Steady-State Port Flow Simulations," *Proceedings of the ASME 2012 International Mechanical Engineering Congress and Exposition*, IMECE2012-87534, Houston, TX, United States, Nov 9-15, 2012.
1487. **Ford Motor Company; Convergent Science; Dalian University of Technology**
Yang, S., Pomraning, E., and Jia, M., "Simulations of Gasoline Engine Combustion and Emissions Using a Chemical-Kinetics-Based Turbulent Premixed Combustion Approach," *Journal of Automobile Engineering*, 2016. DOI: 10.1177/0954407016661448
1488. **Argonne National Laboratory; Convergent Science**
Xue, Q., Som, S., Senecal, P.K., and Pomraning, E., "Large Eddy Simulation of Fuel- Spray Under Non-Reacting IC Engine Conditions," *Atomization and Sprays*, 23(10), 925-955, 2013.
1489. **Argonne National Laboratory; Convergent Science**
Xue, Q., Som, S., Senecal, P.K., and Pomraning, E., "A Study of Grid Resolution and SGS Models for LES Under Non-Reacting Spray Conditions," *ILASS Americas 25th Annual Conference on Liquid Atomization and Spray Systems*, Pittsburgh, PA, United States, May 5-8, 2013.

1490. **Argonne National Laboratory; Università degli Studi di Perugia; Convergent Science**
Xue, Q., Battistoni, M., Som, S., Longman, D.E., Zhao, H., Senecal, P.K., and Pomraning, E., "Three-Dimensional Simulations of the Transient Internal Flow in a Diesel Injector: Effects of Needle Movement," *ILASS Americas 25th Annual Conference on Liquid Atomization and Spray Systems*, Pittsburgh, PA, United States, May 5–8, 2013.
1491. **Argonne National Laboratory; Università degli Studi di Perugia; Convergent Science; University of Massachusetts**
Xue, Q., Battistoni, M., Som, S., Quan, S., Seneca, P.K., Pomraning, E., and Schmidt, D., "Eulerian CFD Modeling of Coupled Nozzle Flow and Spray With Validation Against X-Ray Radiography Data," SAE Paper 2014-01-1425, 2014. DOI: 10.4271/2014-01-1425
1492. **Argonne National Laboratory; Università degli Studi di Perugia; Convergent Science; University of Massachusetts**
Xue, Q., Battistoni, M., Powell, C.F., Quan, S., Pomraning, E., Senecal, P.K., Schmidt, D., and Som, S., "An Eulerian CFD Model and X-Ray Radiography for Coupled Nozzle Flow and Spray in Internal Combustion Engines," *International Journal of Multi-Phase Flows*, 70, 77-88, 2015. DOI: 10.1016/j.ijmultiphaseflow.2014.11.012
1493. **Hunan University; University of Wisconsin–Madison**
Wu, Z., Rutland, C., and Han, Z., "Numerical Study on Controllability of Natural Gas and Diesel Dual Fuel Combustion in a Heavy-Duty Engine," SAE Paper 2017-01-0756, 2017. DOI: 10.4271/2017-01-0756
1494. **Tianjin University; Chongqing Changan Automobile Co., Ltd.**
Wu, M., Pei, Y., Qin, J., Li, X., Zhou, J., Zhan, Z.S., Guo, Q., Liu, B., and Hu, T.G., "Study on Methods of Coupling Numerical Simulation of Conjugate Heat Transfer and In-Cylinder Combustion Process in GDI Engine," SAE Paper 2017-01-0576, 2017. DOI: 10.4271/2017-01-0576
1495. **University of California, Berkeley; Sandia National Laboratories**
Wolk, B., Chen, J.-Y., and Dec, J.E., "Computational Study of the Pressure Dependence of Sequential Auto-Ignition for Partial Fuel Stratification With Gasoline," *Proceedings of the Combustion Institute*, 35(3), 2993-3000, 2015. DOI: 10.1016/j.proci.2014.05.023
1496. **Convergent Science; Indiana University – Purdue University Indianapolis**
Wijeyakulasuriya, S.D., Rajagopal, M., and Nalim, R., "Shock-Flame Interaction Modeling in a Constant-Volume Combustion Channel Using Detailed Chemical Kinetics and Automatic Mesh Refinement," *Proceedings of ASME Turbo Expo 2013: Turbine Technical Conference and Exposition*, GT2013-94617, San Antonio, TX, United States, Jun 3–7, 2013.
1497. **Convergent Science**
Wijeyakulasuriya, S. and Mitra, S., "Analyzing Three-Dimensional Multiple Shock-Flame Interactions in a Constant-Volume Combustion Channel," *Combustion Science and Technology*, 186(12), 1907-1927, 2014. DOI: 10.1080/00102202.2014.937860
1498. **Convergent Science; GE Global Research Center**
Wijeyakulasuriya, S.D., Jupudi, R.S., Givler, S., Primus, R.J., Klingbeil, A.E., Raju, M., and Raman, A., "Multidimensional Modeling and Validation of Dual-Fuel Combustion in a Large Bore Medium Speed Diesel Engine," *Proceedings of the ASME 2015 Internal Combustion Engine Division Fall Technical Conference*, ICEF2015-1077, Houston, TX, United States, Nov 9–11, 2015.
1499. **Technical University of Denmark; Sandia National Laboratories**
Westlye, F.R., Battistoni, M., Skeen, S.A., Manin, J., Pickett, L.M., and Ivarsson, A., "Penetration and Combustion Characterization of Cavitating and Non-Cavitating Fuel Injectors Under Diesel Engine Conditions," SAE Paper 2016-01-0860, 2016. DOI: 10.4271/2016-01-0860
1500. **Mississippi State University; Argonne National Laboratory**
Wang, Z., Srinivasan, K.K., Krishnan, S.R., and Som, S., "A Computational Investigation of Diesel and Biodiesel Combustion and NO_x Formation in a Light-Duty Compression Ignition Engine," *2012 Spring Technical Meeting of the Central States Section of the Combustion Institute*, Apr 22–24, 2012.

1501. **Argonne National Laboratory; Chrysler Group LLC; Convergent Science**
Wang, Z., Scarcelli, R., Som, S., McConnell, S., Salman, N., Zhu, Y., Hardman, K., Freeman, K., Reese, R., Senecal, P.K., Raju, M., and Givler, S., "Multi-Dimensional Modeling and Validation of Combustion in a High-Efficiency Dual-Fuel Light-Duty Engine," SAE Paper 2013-01-1091, 2013. DOI: 10.4271/2013-01-1091
1502. **Convergent Science; North Carolina State University; Argonne National Laboratory**
Wang, M., Raju, M., Pomraning, E., Kundu, P., Pei, Y., and Som, S., "Comparison of Representative Interactive Flamelet and Detailed Chemistry Based Combustion Models for Internal Combustion Engines," *Proceedings of the ASME 2014 Internal Combustion Engine Division Fall Technical Conference*, ICEF2014-5522, Columbus, IN, United States, Oct 19–22, 2014.
1503. **Purdue University; Argonne National Laboratory; San Diego State University**
Wang, Z., Ameen, M., Som, S., and Abraham, J., "Assessment of Large-Eddy Simulations of Turbulent Round Jets Using Low-Order Numerical Schemes," SAE Paper 2017-01-0575, 2017. DOI: 10.4271/2017-01-0575
1504. **University of Nottingham; University of Birmingham; Tsinghua University**
Wang, B., Badawy, T., Hutchins, P., Tu, P., Xu, H., and Zhang, X., "Numerical Investigation of the Deposit Effect on GDI Injector Nozzle Flow," *Energy Procedia*, 105, 1671-1676, 2017. DOI: 10.1016/j.egypro.2017.03.545
1505. **RWTH Aachen University; Complexe de Recherche Interprofessionnel en Aérothermochimie**
Varea, E., Berger, L., Kruse, S., and Pitsch, H., "Entrainment Rate and Mixing Process in a Confined Reverse Flow Reactor," *European Combustion Meeting 2015*, Budapest, Hungary, Mar 30–Apr 2, 2015.
1506. **Caterpillar Inc.; Southwest Research Institute**
Van Alstine, D.G., Montgomery, D.T., Callahan, T.J., and Florea, R.C., "Ability of the Methane Number Index of a Fuel to Predict Rapid Combustion in Heavy Duty Dual Fuel Engines for North American Locomotives," *Proceedings of the ASME 2015 Internal Combustion Engine Division Fall Technical Conference*, ICEF2015-1119, Houston, TX, United States, Nov 9–11, 2015.
1507. **Prometheus Applied Technologies, LLC; Altronic Hoerbiger**
Tozzi, L., Sotiropoulou, E., Zhu, S., Lepley, D., and Yasueda, S., "Arc Travel Ignition Technology," *15 Tagung Der Arbeitsprozess Des Verbrennungsmotors*, Graz, Austria, Sep 24–25, 2015.
1508. **Prometheus Applied Technologies, LLC**
Tozzi, L., Sotiropoulou, E., Harral, J., Miller-Lionberg, D., and Benson, K., "Passive Prechamber Spark Plugs: Then and Now," *7th Dessau Gas Engine Conference*, Dessau-Roßlau, Germany, Mar 24–25, 2011.
1509. **Prometheus Applied Technologies, LLC; Hoerbier; Altronic, LLC**
Tozzi, L., Sotiropoulou, E., Beshouri, G., and Lesley, D., "Novel Pre-Combustion Chamber Technology for Large Bore Natural Gas Engines," *28th CIMAC World Congress 2016*, Technical Paper #259, Helsinki, Finland, Jun 6–10, 2016.
1510. **Argonne National Laboratory; Aramco Research Center**
Torelli, R., Som, S., Pei, Y., Zhang, Y., and Traver, M., "Influence of Fuel Properties on Internal Nozzle Flow Development in a Multi-Hole Diesel Injector," *Fuel*, 204, 171-184, 2017. DOI: 10.1016/j.fuel.2017.04.123
1511. **Argonne National Laboratory; Aramco Research Center**
Torelli, R., Som, S., Pei, Y., Zhang, Y., Voice, A., Traver, M., and Cleary, D., "Comparison of In-Nozzle Flow Characteristics of Naphtha and n-Dodecane Fuels," SAE Paper 2017-01-0853, 2017. DOI: 10.4271/2017-01-0853
1512. **Weichai Power Emissions Solutions Company; Tsinghua University**
Tong, D., Ren, S., Li, Y., Wang, Z., Zhang, H., Wang, Z., and Wang, J., "Performance and Emissions of Gasoline Homogeneous Charge Induced Ignition (HCII) by Diesel Through Whole Operating Range on a Heavy-Duty Multi-Cylinder Engine," *Fuel*, 197, 259-271, 2017. DOI: 10.1016/j.fuel.2017.02.003

1513. **Michigan State University**
Thelen, B.C. and Toulson, E., "A Computational Study of the Effect of the Orifice Size on the Performance of a Turbulent Jet Ignition System," *Journal of Automobile Engineering*, 231(4), 536-554, 2016. DOI: 10.1177/0954407016659199
1514. **Michigan State University**
Thelen, B.C. and Toulson, E., "A Computational Study of the Effects of Spark Location on the Performance of a Turbulent Jet Ignition System," SAE Paper 2016-01-0608, 2016. DOI: 10.4271/2016-01-0608
1515. **Michigan State University**
Thelen, B.C., Gentz, G., and Toulson, E., "Computational Study of a Turbulent Jet Ignition System for Lean Burn Operation in a Rapid Compression Machine," SAE Paper 2015-01-0396, 2015. DOI: 10.4271/2015-01-0396
1516. **Ecole Militaire Polytechnique, Algeria; École des Mines de Nantes; Université de Boumerdes, Algeria**
Tarabet, L., Loubar, K., Lounici, M.S., Hanchi, S., and Tazerout, M., "Eucalyptus Biodiesel as an Alternative to Diesel Fuel: Preparation and Tests on DI Diesel Engine," *Journal of Biomedicine and Biotechnology*, 2012, 235485, 2012. DOI: 10.1155/2012/235485
1517. **Wayne State University; Xian Jiaotong University**
Talekar, A.P., Lai, M.-C., Zeng, K., Yang, B., and Jansons, M., "Simulation of Dual-Fuel-CI and Single-Fuel-SI Engine Combustion Fueled With CNG," SAE Paper 2016-01-0789, 2016. DOI: 10.4271/2016-01-0789
1518. **Mainstream Engineering Corporation; U.S. Army Tank Automotive Research Development and Engineering Center**
Sykes, D.M. and Ratowski, J., "Development of a Lightweight, Multi Fuel-Capable, 30- KWe APU for Non-Primary Power," *Proceedings of the 2009 Ground Vehicle Systems Engineering and Technology Symposium*, 2009.
1519. **Isuzu Technical Center of America, Inc.; Convergent Science**
Sun, Y., Vernham, B., and Drennan, S.A., "Demonstration and Validation of Urea Deposit Predictions on a Practical Mid/Heavy Duty Vehicle Aftertreatment System," *ILASS Americas 29th Annual Conference on Liquid Atomization and Spray Systems*, Atlanta, GA, United States, May 2017.
1520. **Allison Transmission India Pvt. Ltd.; Saveetha Engineering College; Madras Institute of Technology**
Subramanian, S., Rathinam, B., Lalvani, J., and Annamalai, K., "Piston Bowl Optimization for Single Cylinder Diesel Engine Using CFD," SAE Paper 2016-28-0107, 2016. DOI: 10.4271/2016-28-0107
1521. **Technische Universität Wien**
Spreitzer, J., Zahradnik, F., and Geringer, B., "Implementation of a Rotary Engine (Wankel Engine) in a CFD Simulation Tool With Special Emphasis on Combustion and Flow Phenomena," SAE Paper 2015-01-0382, 2015. DOI: 10.4271/2015-01-0382
1522. **Imperial College London; Sandia National Laboratories; Politecnico di Milano; Argonne National Laboratory**
Sphicas, P., Pickett, L.M., Skeen, S., Frank, J., Lucchini, T., Sinoir, D., D'Errico, G., Saha, K., and Som, S., "A Comparison of Experimental and Modeled Velocity in Gasoline Direct-Injection Sprays With Plume Interaction and Collapse," SAE Paper 2017-01-0837, 2017. DOI: 10.4271/2017-01-0837
1523. **Prometheus Applied Technologies, LLC; GEC Inc.**
Sotiropoulou, E., Zhu, S., Tozzi, L., and Yasueda, S., "Improving Efficiency of the Premixed Combustion by Reducing Cyclic Variability," *28th CIMAC World Congress 2016*, Technical Paper #257, Helsinki, Finland, Jun 6-10, 2016.
1524. **Prometheus Applied Technologies, LLC; Altronic Hoerbiger**
Sotiropoulou, E., Lepley, D., and Tozzi, L., "Solutions for Meeting Low Emission Requirements in Large Bore Natural Gas Engines," *27th CIMAC World Congress 2013*, Technical Paper #278, Shanghai, China, 2013.

1525. **Prometheus Applied Technologies, LLC**
Sotiropoulou, E., Harral, J., and Tozzi, L., "A Method for Predicting Knock in Gas Engines by Means of Chemical Precursors From Detailed Chemistry CFD," *8th Dessau Gas Engine Conference*, Dessau-Roßlau, Germany, Mar 21–22, 2013.
1526. **Argonne National Laboratory; Convergent Science**
Som, S., Wang, Z., Pei, Y., Senecal, P.K., and Pomraning, E., "LES of Vaporizing Gasoline Sprays Considering Multi-Injection Averaging and Grid-Convergent Mesh Resolution," *Proceedings of the ASME 2015 Internal Combustion Engine Division Fall Technical Conference*, ICEF2015-1003, Houston, TX, United States, Nov 9–11, 2015.
1527. **Argonne National Laboratory**
Som, S., Wang, Z., Liu, W., and Longman, D.E., "Comparison of Different Chemical- Kinetic Models for Biodiesel Combustion," *Proceedings of the ASME 2013 Internal Combustion Engine Division Fall Technical Conference*, ICEF2013-19094, Dearborn, MI, United States, Oct 13–16, 2013.
1528. **Argonne National Laboratory**
Som, S., Senecal, P.K., and Pomraning, E., "Comparison of RANS and LES Turbulence Models Against Constant Volume Diesel Experiments," *ILASS Americas 24th Annual Conference on Liquid Atomization and Spray Systems*, San Antonio, TX, United States, May 20–23, 2012.
1529. **University of Illinois at Chicago; Argonne National Laboratory; Convergent Science**
Som, S., Ramirez, A.I., Aggarwal, S.K., Kastengren, A.L., El-Hannouny, E., Longman, D.E., and Senecal, P.K., "Development and Validation of a Primary Breakup Model for Diesel Engine Applications," SAE Paper 2009-01-0838, 2009. DOI: 10.4271/2009-01-0838
1530. **Argonne National Laboratory; University of Illinois at Chicago**
Som, S., Longman, D.E., Ramirez, A.I., and Aggarwal, S.K., "A Comparison of Injector Flow and Spray Characteristics of Biodiesel With Petrodiesel," *Fuel*, 89(12), 4014-4024, 2010.
1531. **Argonne National Laboratory; University of Connecticut; Convergent Science**
Som, S., Longman, D.E., Luo, Z., Plomer, M., Lu, T., Senecal, P.K., and Pomraning, E., "Simulating Flame Lift-Off Characteristics of Diesel and Biodiesel Fuels Using Detailed Chemical-Kinetic Mechanics," *Journal of Energy Resources Technology*, 134(3), 032204, 2010. DOI: 10.1115/1.4007216
1532. **Argonne National Laboratory; Convergent Science; Caterpillar Inc.**
Som, S., Longman, D.E., Aithal, S., Bair, R., Garcia, M., Quan, S., Richards, K.J., Senecal, P.K., Shethaji, T., and Weber, M., "A Numerical Investigation on Scalability and Grid Convergence of Internal Combustion Engine Simulations," SAE Paper 2013-01-1095, 2013. DOI: 10.4271/2013-01-1095
1533. **Argonne National Laboratory; Politecnico di Milano**
Som, S., D'Errico, G., Longman, D.E., and Lucchini, T., "Comparison and Standardization of Numerical Approaches for the Prediction of Non-Reacting and Reacting Diesel Sprays," SAE Paper 2012-01-1263, 2012. DOI: 10.4271/2012-01-1263
1534. **University of Illinois at Chicago**
Som, S. and Aggarwal, S.K., "Effects of Primary Breakup Modeling on Spray and Combustion Characteristics of Compression Ignition Engines," *Combustion and Flame*, 157, 1179-1193, 2010.
1535. **University of Illinois at Chicago**
Som, S. and Aggarwal, S.K., "Assessment of Atomization Models for Diesel Engine Simulations," *Atomization and Sprays*, 19(9), 885-903, 2009.
1536. **University of Illinois at Chicago**
Som, S., "Development and Validation of Spray Models for Investigating Diesel Engine Combustion and Emissions," Ph.D thesis, University of Illinois at Chicago, Chicago, IL, United States, 2009.

1537. **King Abdullah University of Science and Technology; Saudi Aramco**
Sim, J., Badra, J., Hong, G., and Im, H., "Hollow-Cone Spray Modeling for Outwardly Opening Piezoelectric Injector," *54th AIAA Aerospace Sciences Meeting*, San Diego, CA, United States, 2016. DOI: 10.2514/6.2016-1452
1538. **King Abdullah University of Science and Technology; Saudi Aramco**
Sim, J., Badra, J., Elwardany, A., and Im, H., "Spray Modeling for Outwardly-Opening Hollow-Cone Injector," SAE Paper 2016-01-0844, 2016. DOI: 10.4271/2016-01-0844
1539. **Sandia National Laboratories; King Abdullah University of Science and Technology; IFP Energies nouvelles; Meiji University; Technical University of Denmark; Universitat Politècnica de València; Argonne National Laboratory; University of Wisconsin; Politecnico di Milano; ETH Zurich; University of New South Wales**
Skeen, S.A., Manin, J., Pickett, L.M., Cenker, E., Bruneaux, G., Kondo, K., Aizawa, T., Westlye, F., Dalen, K., Ivarsson, A., Xuan, T., Garcia-Oliver, J.M., Pei, Y., Som, S., Hu, W., Reitz, R.D., Lucchini, T., D'Errico, G., Farrace, D., Pandurangi, S.S., Wright, Y.M., Chishty, M.A., Bolla, M., and Hawkes, E., "A Progress Review on Soot Experiments and Modeling in the Engine Combustion Network (ECN)," *SAE International Journal of Engines*, 9(2), 2016. DOI: 10.4271/2016-01-0734
1540. **Carnegie Mellon University; Pennsylvania State University**
Singh, S., Adams, P.J., Misquitta, A., Lee, K.J., Lipsky, E.M., and Robinson, A.L., "Computational Analysis of Particle Nucleation in Dilution Tunnels: Effects of Flow Configuration and Tunnel Geometry," *Journal of Aerosol Science and Technology*, 48, 638-648, 2014.
1541. **University of California, Berkeley; KAUST**
Sierra-Aznar, M., Pineda, D.I., Cage, B.S., Shi, X., Corvello, J.P., Chen, J.-Y., and Dibble, R.W., "Working Fluid Replacement in Gaseous Direct-Ignition Internal Combustion Engines: A Fundamental and Applied Experimental Investigation," *10th National Combustion Meeting of the Eastern States Section of the Combustion Institution*, College Park, MD, United States, Apr 23–26, 2017.
1542. **University of Michigan; University of Wisconsin; Pennsylvania State University; Sandia National Laboratories; Technische Universität Darmstadt; General Motors**
Sick, V., Reuss, D., Rutland, C., Haworth, D., Oefelein, J., Janicka, J., Kuo, T.-W., Yang, X., and Freitag, M., "A Common Engine Platform for Engine LES Development and Validation," *LES for Internal Combustion Engine Flows 2010*, Nov 18–19, 2010.
1543. **Convergent Science; Argonne National Laboratory; Cummins Inc.**
Senecal, P.K., Pomraning, E., Xue, Q., Som, S., Banerjee, S., Hu, B., Liu, K., and Deur, J.M., "Large Eddy Simulation of Vaporizing Sprays Considering Multi-Injection Averaging and Grid-Convergent Mesh Resolution," *Journal of Engineering for Gas Turbines and Power*, 136(11), 111504:1-13, 2014.
1544. **Convergent Science; Argonne National Laboratory**
Senecal, P.K., Pomraning, E., Richards, K.J., and Som, S., "Grid-Convergent Spray Models for Internal Combustion Engine CFD Simulations," *Journal of Energy Resources Technology*, 136(1), 012204, 2013. DOI: 10.1115/1.4024861
1545. **Convergent Science; Argonne National Laboratory**
Senecal, P.K., Pomraning, E., Richards, K.J., and Som, S., "Grid-Convergent Spray Models for Internal Combustion Engine CFD Simulations," *Proceedings of the ASME 2012 Internal Combustion Engine Division Fall Technical Conference*, ICEF2012-92043, Vancouver, BC, Canada, Sep 23–26, 2012. DOI: 10.1115/ICEF2012-92043
1546. **Convergent Science; Argonne National Laboratory**
Senecal, P.K., Pomraning, E., Richards, K.J., and Som, S., "An Investigation of Grid Convergence for Spray Simulations Using an LES Turbulence Model," SAE Paper 2013-01-1083, 2013.
1547. **Convergent Science**
Senecal, P.K., Pomraning, E., Richards, K.J., Briggs, T.E., Choi, C.Y., McDavid, R.M., Patterson, M.A., Hou, S., and Shethaji, T., "A New Parallel Cut-Cell Cartesian CFD Code for Rapid Grid Generation Applied to In-Cylinder Diesel Engine Simulations," SAE Paper 2007-01-0159, 2007. DOI: 10.4271/2007-01-0159

1548. **Convergent Science; Caterpillar Inc.**
Senecal, P.K., Pomraning, E., Richards, K.J., Briggs, T.E., Choi, C.Y., McDavid, R.M., and Patterson, M.A., "Multi-Dimensional Modeling of Direct-Injection Diesel Spray Liquid Length and Flame Lift-Off Length Using CFD and Parallel Detailed Chemistry," SAE Paper 2003-01-104, 2003.
1549. **Convergent Science**
Senecal, P.K., Pomraning, E., and Richards, K.J., "Multi-Mode Genetic Algorithm Optimization of Combustion Chamber Geometry for Low Emissions," SAE Paper 2002-01-0958, 2002. DOI: 10.4271/2002-01-0958
1550. **Convergent Science; Caterpillar Inc.; Sandia National Laboratories**
Senecal, P.K., Pomraning, E., Anders, J.W., Weber, M.R., Gehrke, C.R., Polonowski, C.J., and Mueller, C.J., "Predictions of Transient Flame Lift-Off Length With Comparison to Single-Cylinder Optical Engine Experiments," *Proceedings of the ASME 2013 Internal Combustion Engine Division Fall Technical Conference*, ICEF2013-19129, Dearborn, MI, United States, Oct 13–16, 2013.
1551. **Convergent Science; Argonne National Laboratory; Cummins Inc.**
Senecal, P.K., Mitra, S., Pomraning, E., Xue, Q., Som, S., Banerjee, S., Hu, B., Liu, K., Rajamohan, D., and Deur, J.M., "Modeling Fuel Spray Vapor Distribution With Large Eddy Simulation of Multiple Realizations," *Proceedings of the ASME 2014 Internal Combustion Engine Division Fall Technical Conference*, ICEF2014-5488, Columbus, IN, United States, Oct 19–22, 2014.
1552. **Brandenburg University of Technology; LOGE AB; Chalmers University of Technology**
Seidel, L., Netzer, C., Hilbig, M., Mauss, F., Klauer, C., Pasternak, M., and Matrisciano, M., "Systematic Reduction of Detailed Chemical Reaction Mechanisms for Engine Applications," *Journal of Engineering for Gas Turbines and Power*, 139(9), 091701, 2017. DOI: 10.1115/1.4036093
1553. **University of Michigan; General Motors**
Schiffmann, P., Gupta, S., Reuss, D., Sick, V., Yang, X., and Kuo, T.-W., "TCCIII - Engine Benchmark for Large Eddy Simulation of IC Engine Flows," *Oil & Gas Science and Technology*, 71(1), 1-27, 2016. DOI: 10.2516/ogst/2015028
1554. **Argonne National Laboratory**
Scarcelli, R., Sevik, J., Wallner, T., Richards, K., Pomraning, E., and Senecal, P.K., "Capturing Cyclic Variability in EGR Dilute SI Combustion Using Multi-Cycle RANS," *Proceedings of the ASME 2015 Internal Combustion Engine Division Fall Technical Conference*, ICEF2015-1045, Houston, TX, United States, Nov 9–11, 2015.
1555. **Argonne National Laboratory; Convergent Science**
Scarcelli, R., Matthias, N.S., and Wallner, T., "Numerical and Experimental Analysis of Ignition and Combustion Stability in EGR Dilute GDI Operation," *Proceedings of the ASME 2014 Internal Combustion Engine Division Fall Technical Conference*, ICEF2014-5607, Columbus, IN, United States, Oct 19–22, 2014. DOI: 10.1115/ICEF2014-5607
1556. **Argonne National Laboratory; University of Perugia; Convergent Science**
Saha, K., Som, S., Battistoni, M., Li, Y., Quan, S., and Senecal, P.K., "Numerical Simulation of Internal and Near-Nozzle Flow of a Gasoline Direct Injection Fuel Injector," *Journal of Physics: Conference Series*, 656, 012100, 2015. DOI: 10.1088/1742-6596/656/1/012100
1557. **Argonne National Laboratory; University of Perugia; Convergent Science**
Saha, K., Som, S., Battistoni, M., Li, Y., Quan, S., and Senecal, P.K., "Modeling of Internal and Near-Nozzle Flow for a GDI Fuel Injector," *Proceedings of the ASME 2015 Internal Combustion Engine Division Fall Technical Conference*, ICEF2015-1112, Houston, TX, United States, Nov 9–11, 2015.
1558. **Argonne National Laboratory; Convergent Science**
Saha, K., Som, S., Battistoni, M., Li, Y., Pomraning, E., and Senecal, P.K., "Numerical Investigation of Two-Phase Flow Evolution of In- And Near-Nozzle Regions of a Gasoline Direct Injection Engine During Needle Transients," *SAE International Journal of Engines*, 9(2), 1230-1240, 2016. DOI: 10.4271/2016-01-0870

1559. **Argonne National Laboratory**
Saha, K., Som, S., and Battistoni, M., "Investigation of Homogeneous Relaxation Model Parameters and Their Implications for Gasoline Injectors," *Atomization and Sprays*, 27(4), 345-365, 2017. DOI: 10.1615/AtomizSpr.2017016338
1560. **Argonne National Laboratory; Convergent Science; University of Perugia**
Saha, K., Quan, S., Battistoni, M., Som, S., Senecal, P.K., and Promraning, E., "Coupled Eulerian Internal Nozzle Flow and Lagrangian Spray Simulation for GDI Systems," SAE Paper 2017-01-0834, 2017. DOI: 10.4271/2017-01-0834
1561. **Convergent Science**
Rowinski, D. and Davis, K., "Modeling Reciprocating Compressors Using a Cartesian Cut-Cell With Automatic Mesh Generation," *23rd International Compressor Engineering Conference at Purdue*, West Lafayette, IN, United States, Jul 11–14, 2016.
1562. **Convergent Science; Argonne National Laboratory**
Richards, K., Probst, D., Pomraning, E., Senecal, P.K., and Scarcelli, R., "The Observation of Cyclic Variation in Engine Simulations When Using RANS Turbulence Modeling," *Proceedings of the ASME 2014 Internal Combustion Engine Division Fall Technical Conference*, ICEF2014-5605, Columbus, IN, United States, Oct 19–22, 2014.
1563. **University of Waterloo**
Ren, Y., Abu-Ramadan, E., and Li, X., "Numerical Simulation of Biodiesel Fuel Combustion and Emission Characteristics in a Direct Injection Diesel Engine," SAE Paper 2010-01-1259, 2010. DOI: 10.4271/2010-01-1259
1564. **University of Waterloo**
Ren, Y., Abu-Ramadan, E., and Li, X., "Numerical Simulation of Biodiesel Fuel Combustion and Emission Characteristics in a Direct Injection Diesel Engine," *Frontiers in Energy Power Engineering China*, 4(2), 252-261, 2010.
1565. **Indian Institute of Technology Madras**
Reddy, A.A. and Mallikarjuna, J.M., "Parametric Study on a Gasoline Direct Injection Engine – a CFD Analysis," SAE Paper 2017-26-0039, 2017. DOI: 10.4271/2017-26-0039
1566. **LOGE AB; Groupe Renault**
Ravet, F., Dutfoy, L., Rathinam, B., Lehtiniemi, H., Seidel, L., Netzer, C., and Mauss, F., "Soot Modeling With Particle Sectional Model (PSM) in Diesel Engine. Results and Discussion," *THIESEL 2016*, Valencia, Spain, Sep 13–16, 2016.
1567. **Groupe Renault**
Rathinam, B., Subramanian, D., Naithani, U., Ravet, F., and Dutfoy, L., "Grid Size Optimization for Diesel Injection Spray Nozzle Using CFD Analysis," *Fluid Mechanics and Fluid Power – Contemporary Research; Lecture Notes in Mechanical Engineering*, eds. Saha, A., Das, D., Srivastava, R., Panigrahi, P., and Muralidhar, K., Springer, New Delhi, 2017. DOI: 10.1007/978-81-322-2743-4_67
1568. **Groupe Renault**
Rathinam, B., Ravet, F., Servant, C., Delahaye, L., and Naithani, U., "Experimental and Numerical Investigations of Tumble Motion on an Optical Single Cylinder Engine," SAE Paper 2015-01-1698, 2015. DOI: 10.4271/2015-01-1698
1569. **Convergent Science; Argonne National Laboratory**
Raju, R., Wang, M., Senecal, P.K., Som, S., and Longman, D.E., "A Reduced Diesel Surrogate Mechanism for Compression Ignition Engine Applications," *Proceedings of the ASME 2012 Internal Combustion Engine Division Fall Technical Conference*, ICEF2012-92045, Vancouver, BC, Canada, Sep 23–26, 2012.
1570. **Convergent Science**
Raju, M., Wang, M., and Senecal, P.K., "Dynamic Chemical Mechanism Reduction for Internal Combustion Engine Simulations," SAE Paper 2013-01-1110, 2013.

1571. **Convergent Science; Argonne National Laboratory; Lawrence Livermore National Laboratory**
Raju, M., Wang, M., Dai, M., Quan, S., Senecal, P.K., Som, S., McNenly, M., and Flowers, D., "Towards Accommodating Comprehensive Chemical Reaction Mechanisms in Practical Internal Combustion Engine Simulations," *8th U.S. National Combustion Meeting Organized by the Western States Section of the Combustion Institute*, 0701C-0326, Salt Lake City, UT, United States, May 19–22, 2013.
1572. **Convergent Science; Lawrence Livermore National Laboratory**
Raju, M., Wang, M., Dai, M., Piggott, W., and Flowers, D., "Acceleration of Detailed Chemical Kinetics Using Multi-Zone Modeling for CFD in Internal Combustion Engine Simulations," SAE Paper 2012-01-0135, 2012. DOI: 10.4271/2012-01-0135
1573. **Convergent Science**
Raju, M. and Wang, M., "Parallel Computation of Chemical Mechanism Reduction," *2011 Fall Technical Meeting of the Eastern States Section of the Combustion Institute*, Storrs, CT, United States, Oct 9–12, 2011.
1574. **Convergent Science; Cummins Inc.; Argonne National Laboratory**
Quan, S., Wang, M., Drennan, S., Strodbeck, J., and Dahale, A., "A Molten Solid Approach for Simulating Urea-Water Solution Droplet Depletion," *ILASS Americas 27th Annual Conference on Liquid Atomization and Spray Systems*, Raleigh, NC, United States, May 17–20, 2015.
1575. **Convergent Science; Cummins Inc.**
Quan, S., Senecal, P.K., Pomraning, E., Xue, Q., Hu, B., Rajamohan, D., Deur, J.M., and Som, S., "A One-Way Coupled Volume of Fluid and Eulerian-Lagrangian Method for Simulating Sprays," *Proceedings of the ASME 2016 Internal Combustion Engine Division Fall Technical Conference*, ICEF2016-9390, Greenville, SC, United States, Oct 9–12, 2016.
1576. **Convergent Science; Argonne National Laboratory; Sandia National Laboratories**
Quan, S., Dai, M., Pomraning, E., Senecal, P.K., Richards, K., Som, S., Skeen, S., Manin, J., and Pickett, L.M., "Numerical Simulations of Supersonic Diesel Spray Injection and the Induced Shock Waves," SAE Paper 2014-01-1423, 2014. DOI: 10.4271/2014-01-1423
1577. **Convergent Science; SmartUQ**
Probst, D.M., Senecal, P.K., Qian, P.Z., Xu, M.X., and Leyde, B.P., "Optimization and Uncertainty Analysis of a Diesel Engine Operating Point Using CFD," *Proceedings of the ASME 2016 Internal Combustion Engine Division Fall Technical Conference*, ICEF2016-9345, Greenville, SC, United States, Oct 9–12, 2016. DOI: 10.1115/ICEF2016-9345
1578. **Convergent Science**
Pomraning, E., Richards, K., and Senecal, P.K., "Modeling Turbulent Combustion Using a RANS Model, Detailed Chemistry, and Adaptive Mesh Refinement," SAE Paper 2014-01-1116, 2014. DOI: 10.4271/2014-01-1116
1579. **Aramco Research Center; Argonne National Laboratory; Convergent Science**
Pei, Y., Zhang, Y., Kumar, P., Traver, M., Cleary, D., Ameen, M., Som, S., Probst, D., Burton, T., Pomraning, E., and Senecal, P.K., "CFD-Guided Heavy Duty Mixing-Controlled Combustion System Optimization With a Gasoline-Like Fuel," SAE Paper 2017-01-0550, 2017. DOI: 10.4271/2017-01-0550
1580. **Argonne National Laboratory; Convergent Science; Sandia National Laboratories**
Pei, Y., Som, S., Pomraning, E., Senecal, P.K., Skeen, S.A., Manin, J., and Pickett, L.M., "Large Eddy Simulation of a Reacting Spray Flame With Multiple Realizations Under Compression Ignition Engine Conditions," *Combustion and Flame*, 162, 4442-4455, 2015.
1581. **Chiba University**
Hokimoto, S., Kuboyama, T., Moriyoshi, Y., and Yamada, T., "Combustion Analysis in a Natural Gas Engine With Pre-Chamber by Three-Dimensional Numerical Simulation," *Bulletin of the JSME*, 81, 830, 2015. DOI: 10.1299/transjsme.15-00154

1582. **Woodward, Inc.; Colorado State University**
Hockett, A., Hampson, G., and Marchese, A.J., "Development and Validation of a Reduced Chemical Kinetic Mechanism for Computational Fluid Dynamics Simulations of Natural Gas/Diesel Dual-Fuel Engines," *Energy and Fuels*, 30(3), 2414-2427, 2016. DOI: 10.1021/acs.energyfuels.5b02655

1583. **Woodward, Inc.; Colorado State University**
Hockett, A., Hampson, G., and Marchese, A.J., "A Reduced Chemical Kinetic Mechanism for n-Heptane/Methane/Ethane/Propane Mixtures for Use in Multi-Dimensional CFD Simulations of Natural Gas/Diesel Dual Fuel Engines," *9th US National Combustion Meeting*, Cincinnati, OH, United States, May 17-20, 2015.

1584. **Volvo; Instituto Tecnológico de Aeronáutica**
Hindi, G. and Pimenta, A.P., "3D Modeling of Mixture Formation and Combustion in a DISI Engine at Part Load Under Stratified Operation," *Proceedings of COBEM 2011: 21st International Congress of Mechanical Engineering*, Natal, RN, Brazil, Oct 24-28, 2011.

1585. **Volvo; Instituto Tecnológico de Aeronáutica**
Hindi, G. and Pimenta, A., "Numerical Simulation on Influence of the Spray Injector Type in a DISI Engine at Part-Load Under Stratified Operation," SAE Paper 2011-01-0839, 2011. DOI: 10.4271/2011-01-0839

1586. **Indian Institute of Technology Bombay**
Harshvardhan, A. and Sreedhara, S., "Effect of Spray Parameters on Diesel Engine Performance and Emissions: A Parametric Study Using CFD," *Proceedings of the 22nd National Conference on IC Engines and Combustion*, 502-509, NIT-Calicut, Kerala, India, Dec 10-13, 2011.

1587. **Carnegie Mellon University; Convergent Science**
Han, J., Singh, S., and Pomraning, E., "Assessment of Large-Eddy Simulation (LES) Models for Engine Type Flows: Effect of Model Type and Grid Size," *Proceedings of the ASME 2013 Internal Combustion Engine Division Fall Technical Conference*, ICEF2013-19018, Dearborn, MI, United States, Oct 13-16, 2013. DOI: 10.1115/ICEF2013-19018

1588. **Texas A&M University**
Griffin, A.A., Mashayekh, A.S., and Jacobs, T.J., "Experimental and Simulated Pressure Measurements of a Two-Stroke Large Bore Natural Gas Spark-Ignited Engine," *24th Gas Machinery Conference*, Austin, TX, United States, Oct 4-7, 2015.

1589. **Wayne State University**
Goyal, A., Abianeh, O.S., and Bravo, L., "Dependency of Turbulent Spray Combustion Modeling on Mesh Resolution Using Flamelet Generated Manifolds," *10th National Combustion Meeting of the Eastern States Section of the Combustion Institution*, College Park, MD, United States, Apr 23-26, 2017.

1590. **Convergent Science; Chrysler Group LLC**
Givler, S.D., Raju, M., Pomraning, E., Senecal, P.K., Salman, N., and Reese, R., "Gasoline Combustion Modeling of Direct and Port-Fuel Injected Engines Using a Reduced Chemical Mechanism," SAE Paper 2013-01-1098, 2013. DOI: 10.4271/2013-01-1098

1591. **Michigan State University**
Gholamisheeri, M., Wichman, I.S., and Toulson, E., "A Study of the Turbulent Jet Flow Field in a Methane Fueled Turbulent Jet Ignition (JTI) System," *Combustion and Flame*, 183, 194-206, 2017. DOI: 10.1016/j.combustflame.2017.05.008

1592. **Michigan State University**
Gholamisheeri, M., Thelen, B., and Toulson, E., "CFD Modeling and Experimental Analysis of a Homogeneously Charged Turbulent Jet Ignition System in a Rapid Compression Machine," SAE Paper 2017-01-0557, 2017. DOI: 10.4271/2017-01-0557

1593. **Michigan State University**
Gholamisheeri, M., Thelen, B., Gentz, G., and Toulson, E., "CFD Modeling of an Auxiliary Fueled Turbulent Jet Ignition System in a Rapid Compression Machine," SAE Paper 2016-01-0599, 2016. DOI: 10.4271/2016-01-0599
1594. **University of Waterloo; General Motors**
Ghasemi, A., Pereira, A., Li, X., and Ren, Y., "Multi-Plume Sprays Interacting With Subsonic Compressible Gas Jets," *Applied Energy*, 190, 623-633, 2017. DOI: 10.1016/j.apenergy.2017.01.008
1595. **University of Waterloo**
Ghasemi, A., Pereira, A., and Li, X., "Large Eddy Simulation of Compressible Subsonic Turbulent Jet Starting From a Smooth Contraction Nozzle," *Flow, Turbulence and Combustion*, 2016, 1-26, 2016. DOI: 10.1007/s10494-016-9749-y
1596. **University of Waterloo**
Ghasemi, A. and Li, X., "Vortex Break-Down During Impact of a Starting Subsonic Compressible Gas Jet on a Multi-Plume Spray," *Journal of Visualization*, 2016, 1-11, 2016. DOI: 10.1007/s12650-016-0345-y
1597. **Mainstream Engineering Corporation**
Gattoni, J.M., Sykes, D.M., and Yelvington, P.E., "Advanced Fuel Injection System Using a Supercavitating Fuel Injector," *Proceedings of the ASME 2015 Internal Combustion Engine Division Fall Technical Conference*, ICEF2015-1021, Houston, TX, United States, Nov 9-11, 2015. DOI: 10.1115/ICEF2015-1021
1598. **National Institute of Technology, Warangal, India**
Ganji, P.R., Raju, V.R.K., and Rao, S.S., "Computational Optimization of Biodiesel Combustion Using Response Surface Methodology," *Thermal Science*, 21(1B), 465-473, 2017. DOI: 10.2298/TSCI161229031G
1599. **National Institute of Technology, Warangal, India**
Ganji, P.R., Mahmood, A.-Q.A.S., Kandula, A., Raju, V.R.K., and Surapaneni, S.R., "Parametric Optimization Through Numerical Simulation of VCR Diesel Engine," *Journal of the Institution of Engineers (India)*, Series C, 1-7, 2016. DOI: 10.1007/s40032-016-0298-x
1600. **National Institute of Technology, Warangal, India**
Ganji, P.R., Chintala, K.P., Raju, V.R.K., and Surapaneni, S.R., "Parametric Study and Optimization Using RSM of DI Diesel Engine for Lower Emissions," *Journal of the Brazilian Society of Mechanical Sciences and Engineering*, 2016, 1-10, 2015. DOI: 10.1007/s40430-016-0600-0
1601. **IFP Energies nouvelles; Groupe Renault**
Galpin, J., Colliou, T., Laget, O., Rabeau, F., De Paola, G., and Rahir, P., "Design of a Fuel-Efficient Two-Stroke Diesel Engine for Medium Passenger Cars: Comparison Between Standard and Reverse Uniflow Scavenging Architectures," SAE Paper 2017-01-0645, 2017. DOI: 10.4271/2017-01-0645
1602. **Ford Motor Company; Chalmers University of Technology; LOGE AB; Brandenburg University of Technology**
Franken, T., Sommerhoff, A., Willems, W., Matrisciano, A., Lehtiniemi, H., Borg, A., Netzer, C., and Mauss, F., "Advanced Predictive Diesel Combustion Simulation Using Turbulence Model and Stochastic Reactor Model," SAE Paper 2017-01-0516, 2017. DOI: 10.4271/2017-01-0516
1603. **FEV**
Franke, M., Lierz, K., Heuser, P., Geiger, J., Jagodzinski, B., and Schlemmer-Kelling, U., "Development Strategies for Gas Engines in High- And Medium-Speed Applications," *Proceedings of the ASME 2014 Internal Combustion Engine Division Fall Technical Conference*, ICEF2014-5564, Columbus, IN, United States, Oct 19-22, 2014. DOI: 10.1115/ICEF2014-5564
1604. **Gamma Technologies; Politecnico di Torino**
Fogla, N., Bybee, M., Mirzaei, M., Mollo, F., and Wahiduzzaman, S., "Development of a K-K-ε Phenomenological Model to Predict In-Cylinder Turbulence," SAE Paper 2017-01-0542, 2017. DOI: 10.4271/2017-01-0542

1605. **Lawrence Livermore National Laboratory**
Flowers, D., "Simulation of High Efficiency Clean Combustion Engines and Detailed Chemical Kinetic Mechanisms Development," *17th Directions in Engine-Efficiency and Emissions Research Conference*, Detroit, MI, United States, Oct 3–6, 2011.
1606. **Southwest Research Institute**
Florea, R., Neely, G., Abidin, Z., and Miwa, J., "Efficiency and Emissions Characteristics of Partially Premixed Dual-Fuel Combustion by Co-Direct Injection of NG and Diesel Fuel (DI2)," SAE Paper 2016-01-0779, 2016. DOI: 10.4271/2016-01-0779
1607. **Oak Ridge National Laboratory**
Finney, C.E.A., Edwards, K.D., Stoyanov, M.K., and Wagner, R.M., "Application of High Performance Computing for Studying Cyclic Variability in Dilute Internal Combustion Engines," *Proceedings of the ASME 2015 Internal Combustion Engine Division Fall Technical Conference*, ICEF2015-1172, Houston, TX, United States, Nov 9–11, 2015. DOI: 10.1115/ICEF2015-1172
1608. **Carnegie Mellon University**
Fang, T. and Singh, S., "Predictions of Flow Separation at the Valve-Seat for Steady-State Port-Flow Simulation," *Proceedings of the ASME 2014 Internal Combustion Engine Division Fall Technical Conference*, ICEF2014-5667, Columbus, IN, United States, Oct 19–22, 2014. DOI: 10.1115/ICEF2014-5667
1609. **Cameron**
Etcheverry, J., Patterson, M., and Grauer, D., "Virtual Design of an Industrial, Large-Bore, Spark-Ignited, Natural Gas, Internal Combustion Engine for Reduction of Regulated Pollutant Emissions," *Proceedings of the ASME 2013 Internal Combustion Engine Division Fall Technical Conference*, ICEF2013-19138, Dearborn, MI, United States, Oct 13–16, 2013. DOI: 10.1115/ICEF2013-19138
1610. **Cameron**
Etcheverry, J., Patterson, M., and Grauer, D., "Modern Design Methods Applied to the Redesign of a Legacy Large Bore, Two-Stroke Cycle, Spark Ignited Gas Engine," *Proceedings of the ASME 2013 Internal Combustion Engine Division Fall Technical Conference*, ICEF2013-19141, Dearborn, MI, United States, Oct 13–16, 2013. DOI: 10.1115/ICEF2013-19141
1611. **Argonne National Laboratory; Università degli Studi di Perugia; University of Massachusetts**
Duke, D., Battistoni, M., Swantek, A., Sovis, N., Kastengren, A., Powell, C., Som, S., and Schmidt, D., "Validation of Cavitation Simulations in Submerged Nozzles," *ILASS Americas 27th Annual Conference on Liquid Atomization and Spray System*, Raleigh, NC, United States, May 17–20, 2015.
1612. **Convergent Science**
Drennan, S.A., Kumar, G., Wang, M., and Quan, S., "Application of Automatic Meshing to Urea-Water Injection Simulation for Engine Aftertreatment," SAE Paper 2015-01-1057, 2015. DOI: 10.4271/2015-01-1057
1613. **Convergent Science; Parker Hannifin Corporation**
Drennan, S.A., Kumar, G., Steinthorsson, E., and Mansour, A., "Unsteady Simulations of a Low NOx LDI Combustor for Environmentally Responsible Aviation Engines," *Proceedings of the ASME Turbo Expo 2015: Turbine Technical Conference and Exposition*, GT2015-43802, Montreal, Canada, Jun 15–19, 2015. DOI: 10.1115/GT2015-43802
1614. **Convergent Science**
Drennan, S.A., Kumar, G., and Liu, S., "Developing Grid-Convergent LES Simulations of Augmentor Combustion With Automatic Meshing and Adaptive Mesh Refinement," *55th AIAA Aerospace Sciences Meeting*, AIAA 2017-1574, Grapevine, TX, United States, Jan 9–13, 2017. DOI: 10.2514/6.2017-1574
1615. **Convergent Science**
Drennan, S.A. and Kumar, G., "Using LES Simulations to Predict Pilot Fuel Split Emissions Effects in an Industrial Gas Turbine Combustor With Automatic Meshing," *55th AIAA Aerospace Sciences Meeting*, AIAA 2017-1059, Grapevine, TX, United States, Jan 9–13, 2017. DOI: 10.2514/6.2017-1059

1616. **Convergent Science**
Drennan, S.A. and Kumar, G., "Demonstration of an Automatic Meshing Approach for Simulation of a Liquid Fueled Gas Turbine With Detailed Chemistry," *50th AIAA/ASME/SAE/ASEE Joint Propulsion Conference*, AIAA 2014-3628, Cleveland, OH, United States, Jul 28–30, 2014. DOI: DOI:10.2514/6.2014-3628
1617. **Electro-Motive Diesel Inc.**
Dolak, J. and Bandyopadhyay, D., "A Computational Investigation of Modified Intake Ports to Improve Scavenging in a Heavy-Duty Two-Cycle Diesel Engine," *Proceedings of the ASME 2012 Internal Combustion Engine Division Fall Technical Conference*, ICEF2012-92046, Vancouver, BC, Canada, Sep 23–26, 2012. DOI: 10.1115/ICEF2012-92046
1618. **Westport Fuel Systems**
Draper, R., Lenski, B., Foltz, F.-J., Beazley, and Tenny, W., "Measured and Predicted Performance of a Downsized, Medium Duty, Natural Gas Engine," SAE Paper 2017-01-0775, 2017. DOI: 10.4271/2017-01-0775
1619. **Electro-Motive Diesel Inc.**
Dolak, J. and Bandyopadhyay, D., "A Computational Investigation of Piston Bowl Geometry for a Large Bore Two Cycle Diesel Engine," *Proceedings of the ASME 2011 Internal Combustion Engine Division Fall Technical Conference*, ICEF2011-60155, Morgantown, WV, United States, Oct 2–5, 2011. DOI: DOI:10.1115/ICEF2011-60155
1620. **General Motors**
De la Morena, J., Vassallo, A., Peterson, R.C., Gopalakrishnan, V., and Gao, J., "Influence of Swirl Ratio on Combustion System Performance of a 0.4L Single-Cylinder Diesel Engine," *THIESEL 2014*, Valencia, Spain, Sep 9–12, 2014.
1621. **Southwest Research Institute**
Das, S., Neely, G.D., and Mehta, D., "CFD Study of Multiple Injectors in a Diesel Engine," *ILASS Americas 25th Annual Conference on Liquid Atomization and Spray System*, Pittsburg, PA, United States, May 5–8, 2013.
1622. **Michigan Technological University; WM International Engineering**
Cung, K., Zhu, X., Moiz, A.A., Lee, S.-Y., and De Ojeda, W., "Characteristics of Formaldehyde (CH₂O) Formation in Dimethyl Ether (DME) Spray Combustion Using PLIF Imaging," *SAE International Journal of Fuels and Lubricants*, 9(1), 138-148, 2016. DOI: 10.4271/2016-01-0864
1623. **Michigan Technological University**
Cung, K., Moiz, A.A., Zhu, X., and Lee, S.-Y., "Ignition and Formaldehyde Formation in Dimethyl Ether (DME) Reacting Spray Under Various EGR Level," *Proceedings of the Combustion Institute*, 36(3), 3605-3612, 2017. DOI: 10.1016/j.proci.2016.07.054
1624. **MAHLE Powertrain**
Chinnathambi, P., Bunce, M., and Cruff, L., "RANS Based Multidimensional Modeling of an Ultra-Lean Burn Pre-Chamber Combustion System With Auxiliary Liquid Gasoline Injection," SAE Paper 2015-01-0386, 2015. DOI: 10.4271/2015-01-0386
1625. **Woodward, Inc.**
Chiera, D., Riley, M., and Hampson, G.J., "Mechanism for High Velocity Turbulent Jet Combustion From Passive Prechamber Spark Plug," *Proceedings of ASME 2012 Internal Combustion Engine Fall Technical Conference*, ICEF2012-92030, Vancouver, BC, Canada, Sep 23–26, 2012. DOI: 10.1115/ICEF2012-92030
1626. **IFP Energies nouvelles; Convergent Science**
Chevallard, S., Colin, O., Bohbot, J., Wang, M., Pomraning, E., and Senecal, P.K., "Advanced Methodology to Investigate Knock for Downsized Gasoline Direct Injection Engine Using 3D RANS Simulations," SAE Paper 2017-01-0579, 2017. DOI: 10.4271/2017-01-0579

1627. **Sandia National Laboratories; Lawrence Livermore National Laboratory; Massachusetts Institute of Technology**
Chen, Y., Wolk, B., Mehl, M., Cheng, W.K., Chen, J.-Y., and Dibble, R.W., "Development of a Reduced Chemical Mechanism Targeted for a 5-Component Gasoline Surrogate: A Case Study on the Heat Release Nature in a GCI Engine," *Combustion and Flame*, 178, 268-276, 2017. DOI: 10.1016/j.combustflame.2016.12.018
1628. **SAIC Motor Corporation Ltd**
Chen, M., Wang, Y., Wu, W., Cui, Q., Wang, K., and Wang, L., "Thermal-Mechanical Fatigue Prediction of Aluminum Cylinder Head With Integrated Exhaust Manifold of a Turbo Charged Gasoline Engine," SAE Paper 2016-01-1085, 2016. DOI: 10.4271/2016-01-1085
1629. **JP SCOPE, Inc.; Czero Inc.; University of Bath; Anderson Consulting**
Charlton, S.J., Price, C.E., Rogers, J., Turner, J.W.G., Wijetunge, R.S., and Anderson, W., "DigitalAirTM Camless FVVA System – Part 2, Gasoline Engine Performance Opportunities," SAE Paper 2017-01-0641, 2017. DOI: 10.4271/2017-01-0641
1630. **Clemson University**
Callies, J.D., Anderson, D.E., and Prucka, R.G., "Design of a Stepped Tube Exhaust Primary for High Performance Applications Using Unsteady Computational Fluid Dynamics," *Proceedings of the ASME 2012 Internal Combustion Engine Division Fall Technical Conference*, ICEF2012-92102, Vancouver, BC, Canada, Sep 23–26, 2012. DOI: 10.1115/ICEF2012-92102
1631. **Indian Institute of Technology Bombay**
Brijesh, P., Abhishek, S., and Sreedhara, S., "Numerical Investigation of Effect of Bowl Profiles on Performance and Emission Characteristics of a Diesel Engine," SAE Paper 2015-01-0402, 2015. DOI: 10.4271/2015-01-0402
1632. **University of Maryland**
Bravo, L., Xue, Q., Murugan, M., Ghoshal, A., Walock, M., and Flatau, A., "Particle Transport Analysis of Sand Ingestion in Gas Turbine Jet Engines," *53rd AIAA/SAE/ASEE Joint Propulsion Conference*, AIAA 2017-4818, Atlanta, GA, United States, Jul 10–12, 2017. DOI: 10.2514/6.2017-4818
1633. **U.S. Army Research Laboratory; Convergent Science**
Bravo, L., Wijeyakulasuriya, S., Pomraning, E., Senecal, P., and Kweon, C.-B., "Large Eddy Simulation of High Reynolds Number Non-Reacting and Reacting JP8 Sprays With a Kerosene Surrogate and Detailed Chemistry," *Proceedings of the ASME 2015 Internal Combustion Engine Division Fall Technical Conference*, ICEF2015-1114, Houston, TX, United States, Nov 9–11, 2015.
1634. **U.S. Army Research Laboratory; U.S. Military Academy**
Bravo, L., Kweon, C.-B., Nelson, T., Benson, M., and Van-Poppel, B., "Eulerian Modeling of Hollow Cone Sprays," *22nd ARL/USMA Symposium*, Aberdeen, MD, United States, Oct 29, 2014.
1635. **U.S. Army Research Laboratory; Convergent Science**
Bravo, L., Kurman, M., Kweon, C., Wijeyakulasuriya, S., and Senecal, P.K., "Lagrangian Modeling of Evaporating Sprays at Diesel Engine Conditions: Effects of Multi-Hole Injector Nozzles With JP-8 Surrogates," *ILASS Americas 26th Annual Conference on Liquid Atomization and Spray Systems*, Portland, OR, United States, May 18–21, 2014.
1636. **University of Kansas**
Bramlette, R., Langness, C., Mangus, M., and Depcik, C., "Employing Adaptive Mesh Refinement for Simulating the Exhaust Gas Recirculation Mixing Process," *Proceedings of ASME 2014 International Mechanical Engineering Congress and Exposition*, IMECE2014-36464, Montreal, Canada, Nov 14–20, 2014. DOI: 10.1115/IMECE2014-36464
1637. **University of Kansas**
Bramlette, R.B., Barrett, R.M., Depcik, C., and Gluhareff, I.E., "The Effects of Scaling on the Design and Performance of the Brayton-Gluhareff Cycle Pressure Jet Engine," *55th AIAA Aerospace Sciences Meeting*, AIAA 2017-0120, Grapevine, TX, United States, Jan 9–13, 2017. DOI: 10.2514/6.2017-1539

1638. **University of Kansas**
Bramlette, R.B., Depcik, C., and Barrett-Gonzalez, R.M., "The Effects of Planar Symmetry and Radiative Heat Losses in a Three-Dimensional Transient CFD Simulation of Right Angle Flow Through a Brayton-Gluhareff Cycle Pressure Jet Engine," *55th AIAA Aerospace Sciences Meeting*, AIAA 2017-1539, Grapevine, TX, United States, Jan 9–13, 2017. DOI: 10.2514/6.2017-0120
1639. **Laboratoire de Recherche en Technologie de l'Environnement; École des Mines de Nantes**
Bousbaa, H., Liazid, A., Sary, A., and Tazerout, M., "Numerical Investigations on the Use of Waste Animal Fats as Fuel on DI Diesel Engine," *Journal of Petroleum Technology and Alternative Fuels*, 4(7), 131-142, 2013.
1640. **Laboratoire de Recherche en Technologie de l'Environnement; École des Mines de Nantes**
Bousbaa, H., Sary, A., Tazerout, M., and Liazid, A., "Investigations on a Compression Ignition Engine Using Animal Fats and Vegetable Oil as Fuels," *Journal of Energy Resources Technology*, 134(2), 022202, 2012.
1641. **Convergent Science**
Bohbot, J., Colin, O., Velghe, A., Michel, J.-B., Wang, M., Senecal, P.K., and Pomraning, E., "An Innovative Approach Combining Adaptive Mesh Refinement, the ECFM3Z Turbulent Combustion Model, and the TKI Tabulated Auto-Ignition Model for Diesel Engine CFD Simulations," SAE Paper 2016-01-0604, 2016. DOI: 10.4271/2016-01-0604
1642. **Universitat Politècnica de València; Groupe Renault**
Benajes, J., Novella, R., De Lima, D., and Tribotte, P., "Analysis of Combustion Concepts in a Newly Designed Two-Stroke High-Speed Direct Injection Compression Ignition Engine," *THIESEL 2014*, Valencia, Spain, Sep 9–12, 2014.
1643. **Universitat Politècnica de València; Groupe Renault**
Benajes, J., Novella, R., De Lima, D., and Tribotte, P., "Investigation on Multiple Injection Strategies for Gasoline PPC Operation in a Newly Designed 2-Stroke HSDI Compression Ignition Engine," SAE Paper 2015-01-0830, 2015. DOI: 10.4271/2015-01-0830
1644. **Altronic Hoerbiger**
Bell, D., Lepley, J.M., Lepley, D.T., and Porter, M.B., "Field Validation of a Direct Energy Ignition System on Large Bore Natural Gas Fueled Reciprocating Engines," *2012 Gas Machinery Conference*, Austin, TX, United States, Oct 1–3, 2012.
1645. **Università degli Studi di Perugia; Argonne National Laboratory; Convergent Science**
Battistoni, M., Xue, Q., Som, S., and Pomraning, E., "Effect of Off-Axis Needle Motion on Internal Nozzle and Near Exit Flow in a Multi-Hole Diesel Injector," *SAE International Journal of Fuels and Lubricants*, 7(1), 167-182, 2015. DOI: 10.4271/2014-01-1426
1646. **Università degli Studi di Perugia; Argonne National Laboratory**
Battistoni, M., Som, S., and Longman, D.E., "Comparison of Mixture and Multifluid Models for In-Nozzle Cavitation Prediction," *Journal of Engineering for Gas Turbines and Power*, 136(6), 061506, 2014. DOI: 10.1115/1.4026369
1647. **Università degli Studi di Perugia**
Battistoni, M., Mariani, F., Risi, F., and Poggiani, C., "Combustion CFD Modeling of a Spark Ignited Optical Access Engine Fueled With Gasoline and Ethanol," *Energy Procedia*, 82, 424-431, 2015. DOI: 10.1016/j.egypro.2015.11.829
1648. **Argonne National Laboratory**
Bartolucci, L., Scarcelli, R., Wallner, T., Swantek, A., Powell, C.F., Kastengren, A., and Duke, D., "CFD and X-Ray Analysis of Gaseous Direct Injection From an Outward Opening Injector," SAE Paper 2016-01-0850, 2016. DOI: 10.4271/2016-01-0850
1649. **Electro-Motive Diesel Inc.**
Bandyopadhyay, D., "Optimization of Injection Strategies to Reduce Emission for 2-Cycle Engine," SAE Paper 2011-01-0839, 2011. DOI: 10.4271/2011-01-0839

1650. **Saudi Aramco; King Abdullah University of Science and Technology**
Badra, J., Viollet, Y., Elwardany, A., Hong, G., Im, H., and Chang, J., "Physical and Chemical Effects of Low Octane Gasoline Fuels on Compression Ignition Combustion," *Applied Energy*, 183, 1197-1208, 2016. DOI: 10.1016/j.apenergy.2016.09.060
1651. **Saudi Aramco; King Abdullah University of Science and Technology**
Badra, J.A., Sim, J., Elwardany, A., Jaasim, M., Viollet, Y., Chang, J., Chang, A.A., and Im, H.G., "Numerical Simulations of Hollow Cone Injection and Gasoline Compression Ignition Combustion With Naphtha Fuels," *Journal of Energy Resources Technology*, 138(5):052202, 2016. DOI: 10.1115/1.4032622
1652. **Saudi Aramco; King Abdullah University of Science and Technology**
Badra, J.A., Elwardany, A., Sim, J., Viollet, Y., Im, H.G., and Chang, J., "Effects of In-Cylinder Mixing on Low Octane Gasoline Compression Ignition Combustion," SAE Paper 2016-01-0762, 2016. DOI: 10.4271/2016-01-0762
1653. **JP SCOPE, Inc.; Czero Inc.**
Babbitt, G.R., Rogers, J., Weyer, K.M., Cohen, D., and Charlton, S.J., "DigitalAir™ Camless FVVA System – Part 1, Valve Train Design, Capability and Performance," SAE Paper 2017-01-0635, 2017. DOI: 10.4271/2017-01-0635
1654. **University of Michigan**
Assanis, D. and Wooldridge, M.S., "On the Development of a Rapid Compression Facility CFD Model to Complement the Analysis of Experimental Studies," *2014 Spring Technical Meeting of the Canadian Section of the Combustion Institute*, Windsor, ON, Canada, May 12–15, 2014.
1655. **University of Michigan**
Assanis, D., Engineer, N., Neuman, P., and Wooldridge, M., "Computational Development of a Dual Pre-Chamber Engine Concept for Lean Burn Combustion," SAE Paper 2016-01-2242, 2016. DOI: 10.4271/2016-01-2242
1656. **ISUZU Advanced Engineering Center Ltd.**
Arato, K. and Takashima, T., "A Study on Reduction of Heat Loss by Optimizing Combustion Chamber Shape," *SAE International Journal of Engines*, 8(2), 596-608, 2015. DOI: 10.4271/2015-01-0786
1657. **Tianjin University; Tianjin Internal Combustion Engine Magnetic Motor Co., Ltd.; Chongqing Changan Automobile Co., Ltd.; Changan Automobile Engineering Institute**
An, Y., Teng, S., Li, X., Qin, J., Zhao, H., Zhan, Z.S., Hu, T.G., Liu, B., and Zhong, J., "Study of Polycyclic Aromatic Hydrocarbons Evolution Processing in GDI Engines Using TRF-PAH Chemical Kinetic Mechanism," SAE Paper 2016-01-0690, 2016. DOI: 10.4271/2016-01-0690
1658. **Argonne National Laboratory; General Motors R&D**
Ameen, M.M., Yang, X., Kuo, T.-W., Xue, Q., and Som, S., "LES for Simulating the Gas Exchange Process in a Spark Ignition Engine," *Proceedings of the ASME 2015 Internal Combustion Engine Division Fall Technical Conference*, ICEF2015-1002, Houston, TX, United States, Nov 9–11, 2015.
1659. **Argonne National Laboratory**
Ameen, M.M. and Som, S., "Capturing Cyclic Variability in SI Engines With High-Fidelity LES Using a New Parallel Perturbation Approach," *2017 International Multidimensional Engine Modeling User's Group Meeting at the SAE Congress*, Detroit, MI, United States, Apr 3, 2017. DOI: <https://imem.cray.com/2017/Meeting-2017/10--Paper8-Ameen-and-Som.pdf>
1660. **Argonne National Laboratory**
Ameen, M., Pei, Y., and Som, S., "Computing Statistical Averages From Large Eddy Simulation of Spray Flames," SAE Paper 2016-01-0585, 2016. DOI: 10.4271/2016-01-0585
1661. **Southwest Research Institute**
Abidin, Z., Hoag, K., McKee, D., and Badain, N., "Port Design for Charge Motion Improvement Within the Cylinder," SAE Paper 2016-01-0600, 2016. DOI: 10.4271/2016-01-0600

1662. **Indian Institute of Technology Bombay**
Ali, F., Saha, V., Brijesh, P., and Sreedhara, S., "Effect of Compression Ratio and Inlet Conditions on the CI Engine Performance and NO Emission," *Proceedings of the International Conference on Design and Advances in Mechanical Engineering*, Tiruvannamalai, India, Dec 16–17, 2011.
1663. **King Abdullah University of Science and Technology**
Ali, M.J.M., Hernandez Perez, F., Vedharaj, S., Vallinayagam, R., Dibble, R., and Im, H., "Effect of Timing and Location of Hotspot on Super Knock During Pre-Ignition," SAE Paper 2017-01-0686, 2017. DOI: 10.4271/2017-01-0686
1664. **King Abdullah University of Science and Technology**
Ali, M.J.M., Hernandez Perez, F., Vallinayagam, R., Vedharaj, S., Johansson, B., and Im, H., "A Computational Study of a Stratified Combustion in an Optical Diesel Engine," SAE Paper 2017-01-0573, 2017. DOI: 10.4271/2017-01-0573
1665. **University of Illinois at Chicago; Convergent Science**
Aggarwal, S.K., Fu, X., and Wijeyakulasuriya, S., "Effects of Fuel Reactivity and Injection Timing on Diesel Engine Combustion and Emissions," *International Journal of Green Energy*, 13(5), 431-445, 2016. DOI: 10.1080/15435075.2014.961469
1666. **Indian Institute of Technology Madras**
Addepalli, K.S. and Mallikarjuna, J.M., "Parametric Analysis of a 4-Stroke GDI Engine Using CFD," *Alexandria Engineering Journal*, 2016. DOI: 10.1016/j.aej.2016.10.007
1667. **Indian Institute of Technology Madras**
Addepalli, K.S. and Mallikarjuna, J.M., "Effect of Engine Parameters on Mixture Stratification in a Wall-Guided GDI Engine – a Quantitative CFD Analysis," SAE Paper 2017-01-0570, 2017. DOI: 10.4271/2017-01-0570
1668. **Southwest Research Institute**
Abidin, Z., Florea, R., and Callahan, T., "Dual Fuel Combustion Study Using 3D CFD Tool," SAE Paper 2016-01-0595, 2016. DOI: 10.4271/2016-01-0595
1669. **Southwest Research Institute**
Abidin, Z., Hoag, K., and Badain, N., "Dilute Combustion Assessment in Large Bore, Low Speed Engines," SAE Paper 2017-01-0580, 2017. DOI: 10.4271/2017-01-0580
1670. **Georgia Southern University; Rensselaer Polytechnic Institute; University of Connecticut**
Abianeh, S.O., Oehlschlaeger, M.A., and Sung, C.-J., "Turbulent Spray Combustion Simulations Based on a New Skeletal Mechanism for n-Dodecane," *ILASS Americas 27th Annual Conference on Liquid Atomization and Spray Systems*, Raleigh, NC, United States, May 17–20, 2015.
1671. **Wayne State University; Georgia Southern University; Shanghai Jiao Tong University**
Abianeh, S.O., Levins, M., and Chen, C.P., "Pressure-Based Ignition Delay Times of Non-Premixed Turbulent Jet Flames Using Various Turbulence Models," *Proceedings of the ASME 2016 Internal Combustion Engine Division Fall Technical Conference*, ICEF2016-9307, Greenville, SC, United States, Oct 9–12, 2016.
1672. **Georgia Southern University; Army Research Laboratory**
Abianeh, S.O. and Bravo, L., "A Comparison Study of Predicted Pressure-Based Ignition Delay Time of n-Dodecane Fuel Using Various Skeletal Kinetic Mechanisms," *46th AIAA Fluid Dynamics Conference*, AIAA 2016-3961, Washington, D.C., United States, Jun 13–17, 2016. DOI: 10.2514/6.2016-3961
1673. **Georgia Southern University**
Abianeh, S.O., "Study of a Turbulent Spray Combustion of n-Dodecane Fuel," *Proceedings of the ASME 2015 Internal Combustion Engine Division Fall Technical Conference*, ICEF2015-1018, Houston, TX, United States, Nov 9–11, 2015. DOI: 10.1115/ICEF2015-1018