

Session Start			Sunday, May 19th, 2024
S	5:00 PM	EDT	Registration Opens, <i>Duffield Atrium</i> Welcome Reception, <i>Duffield Atrium</i>
S	7:00 PM	EDT	Reception Lecture Krishna Venkatesan (GE Aerospace Research) "Spray Combustion in Aero-Engine and High-speed Combustors" <i>Phillips 101</i>
S	8:00 PM	EDT	Meeting Adjourn

Session Start			Monday, May 20th, 2024
M	7:30 AM	EDT	Breakfast with the Exhibitors <i>Duffield Atrium</i>
M	8:30 AM	EDT	Welcome and Opening Remarks <i>Phillips 101</i>
M	8:45 AM	EDT	Keynote Lecture - Atieh Moridi (Cornell University) "Leveraging liquid atomization and precision droplet ejection to advance additive manufacturing" <i>Phillips 101</i>
M	9:45 AM	EDT	Exhibitor Showcase <i>Phillips 101</i>
M	10:40 AM	EDT	Break with the Exhibitors
M	11:00 AM	EDT	Advances in Numerical Methods I Session Chairs: Fabien Evrard & Mario Trujillo <i>Phillips 219</i> Focus Session: Shock-Droplet Breakup I Session Chairs: Jason Burr & Malissa Lightfoot <i>Upson 142</i>
M	11:00 AM	EDT	20. A Machine Learning Approach for 3D Interface Reconstructions in Volume of Fluid Methods A. Cahaly, F. Evrard, O. Desjardins Cornell University, University of Illinois at Urbana-Champaign 11. Droplet Breakup in Unsteady Accelerations V. Duke-Walker, C. Young, J. Keltz, S. Agee, P. Tarey, P. Ramaprabhu, J. McFarland Texas A&M University, University of North Carolina at Charlotte
M	11:20 AM	EDT	23. A hybrid ML-finite volume approach for subgrid scale surface tension modeling Z. Zou, O. Desjardins Cornell University 13. Shock-Driven Droplet Breakup at Transcritical Conditions P. Jangale, D. Jarrahbashi Texas A&M University

M	11:40 AM	EDT	51. Machine Learning-Driven Modeling of Real Fluid Properties for Hydrocarbons Relevant to Aviation Fuels C. Bhattacharya, J. Poblador Ibanez, D. Dasgupta, L. Nocivelli Argonne National Laboratory, Delft University of Technology	27. Investigation of Fixed-Droplet Wire Support Structures on the Morphology of Atomization S. Schroeder, M. Moran, S. Salaudhin, K. Ahmed University of Central Florida
M	12:00 PM	EDT	Lunch <i>Duffield Atrium</i>	Atomization and Sprays Editorial Board Meeting <i>Upson 106</i>
M	1:00 PM	EDT	Advances in Numerical Methods II Session Chair: Dominique Legendre & Lorenzo Nocivelli <i>Phillips 219</i>	Focus Session: Shock-Droplet Breakup II Session Chairs: Jason Burr & Jacob McFarland <i>Upson 142</i>
M	1:00 PM	EDT	25. Semi-Lagrangian Pressure Solver for Accurate, Consistent, and Conservative Volume-of-Fluid Simulations J. Fox, M. Owkes Montana State University	29. Experimental Investigation of Aerosolized Liquid Fuel Cloud Detonation T. Brown, R. Hytovick, J. Berson, S. Salaudhin, K. Ahmed University of Central Florida
M	1:20 PM	EDT	40. Conservative two-phase flow simulations using piecewise-quadratic interface reconstructions F. Evrard, B. van Wachem, O. Desjardins University of Illinois Urbana-Champaign, Otto-von-Guericke-Universität Magdeburg, Cornell University	34. Detonation enhanced secondary atomization of liquid droplets J. Burr, M. Maybee, B. Bigler, S. Beard, P. Rugel, R. Dave, A. Kastengren, J. Bennewitz Air Force Research Laboratory, University of Alabama in Huntsville, Jacobs Technology Group, Exquadrum Inc, Argonne National Laboratory
M	1:40 PM	EDT	55. Comparison of AMR-LES-DNS and dual-scale LES for normal propagating interfaces in turbulence N. Rameshbhai Thakkar, M. Herrmann Arizona State University	Moderated Discussion
M	2:10 PM	EDT	Technical Committee Meetings <i>Industrial & Agricultural Sprays, Phillips 219</i> <i>Aerospace Propulsion, Upson 142</i>	
M	3:00 PM	EDT	Break with the Exhibitors	

M	3:20 PM	EDT	Spray Applications - Biomedical and Viral Transport Session Chair: Jennifer O'Neil & Brandon Sforzo <i>Phillips 219</i>	Spray Characterization and Measurements Session Chairs: Ashwini Karmarkar & Julien Manin <i>Upton 142</i>
M	3:20 PM	EDT	14. Investigation of Fluid on Resulting Performance in a Jet Nebulizer J. Brener, W. Beckson, L. Villasmil-Urdaneta, J. O'Neil Rochester Institute of Technology	3. Investigation of Liquid Film on the Airfoil Surface and Spray from Trailing Edge in a high-speed flow-Effect of Airfoil Geometry S. Safiullah, V. McDonell University of California, Irvine
M	3:40 PM	EDT	15. Investigation of Jet Nebulizer Orientation on Resulting Performance A. Gress, L. Villasmil-Urdaneta, J. O'Neil Rochester Institute of Technology	4. Investigation of Liquid Film on the Airfoil Surface and Spray from Trailing Edge in a high-speed flow-Effect of Liquid Physical Properties S. Safiullah, V. McDonell University of California, Irvine
M	4:00 PM	EDT	33. Sheet thickness and hole opening measurement of sprays for blood backspatter L. Imtiaz Kaya, S. Bentil, J. Michael Iowa State University	17. Effect of injector protrusion on jet fuel spray penetrations in an optically accessible, ignition-assisted compression ignition engine J. Yang, D. Kim, S. Kook, K. S. Kim, C. Kweon The University of New South Wales, DEVCOM Army Research Laboratory
M	4:20 PM	EDT	36. Influence of air source, pulsating vs. continuous, in the performance of a commercial drug (jet) nebulizer A. Bezie, J. O'Neil, L. Villasmil Rochester Institute of Technology	49. Quantification of secondary droplets formed by thermal atomization during droplet impact on a heated surface A. Oliveira, Ã. Felipe Campos Araya University of Sao Paulo
M	4:40 PM	EDT	54. Fabrication of Dynamic Airway Pulmonary Deposition Experimental Setup B. Oliverio, L. Villasmil-Urdaneta, J. O'Neil Rochester Institute of Technology	
M	5:00 PM	EDT	Meeting Adjourn	

Session Start			Tuesday, May 21st, 2024	
T	7:30 AM	EDT	Breakfast with the Exhibitors <i>Duffield Atrium</i>	
T	8:30 AM	EDT	Opening Remarks <i>Phillips 101</i>	
T	8:45 AM	EDT	Keynote Lecture - Fabian Denner (Polytechnique Montréal) "Mitigating the capillary time-step constraint of gas-liquid flow simulations" <i>Phillips 101</i>	
T	9:45 AM	EDT	Break with the Exhibitors	
T	10:10 AM	EDT	Atomization & Spray Simulations I Session Chairs: Joe Giliberto & Austin Han <i>Phillips 219</i>	Symposium on Spray Measurement Techniques I Session Chairs: Kyle Bade & Robert La Foy <i>Upson 142</i>
T	10:10 AM	EDT	64. Liquid film burst caused by perpendicularly blowing gas jet S. Wang, Y. Zhang, X. Li, M. Xu Shanghai Jiao Tong University	6. Simultaneous X-ray and Visible Light Quantitative Imaging for Multiphase Flow R. La Foy, E. Hall, B. Halls Sandia National Laboratories
T	10:30 AM	EDT	22. Advanced Numerical Simulations of Airtanker Firefighting: A Quantitative Analysis of Liquid Breakup Dynamics B. Christensen, D. Legendre, M. Owkes Montana State University, Université de Toulouse	7. PDI Instrument Developments, Functionality, and Capabilities W. Bachalo, G. Payne, K. Ibrahim, M. Leandro Artium Technologies, Inc.
T	10:50 AM	EDT	39. Large-scale instabilities observed in the breakup of high-speed 3D cylindrical jets inject-ed into quiescent gas M. Ananth, M. F. Trujillo University of Wisconsin-Madison	65. Instrument Settings and Their Impact on the Quality of Phase-Doppler Data C. Sipperley Step 2 Consulting, Inc.
T	11:10 AM	EDT	48. Framework for Analyzing Atomization in Electrically charged Diesel-type Jets B. Van Poppel, B. Christensen, M. Owkes, V. Krishna U.S. Military Academy, Montana State University, COMSOL, inc.	9. Applications of X-Ray Diagnostics for Spray Research A. Kastengren Argonne National Laboratory

T	11:30 AM	EDT	Lunch / ILASS-Americas Annual Business Meeting <i>Duffield Atrium</i>	
T	12:30 PM	EDT	Technical Committee Meetings <i>Physics of Atomization, Phillips 219</i> <i>Diesel & Automotive, Upson 142</i>	
T	1:20 PM	EDT	Break with Exhibitors	
T	1:40 PM	EDT	Spray Modeling Session Chair: Mark Owkes <i>Phillips 219</i>	Symposium on Spray Measurement Techniques II Session Chairs: Kyle Bade & Robert La Foy <i>Upson 142</i>
T	1:40 PM	EDT	63. Modeling of ligament dynamics in a linear shear flow N. Thakkar, A. Alshehri, M. Herrmann, S. Apte Arizona State University, Oregon State University	57. Image-Based Measurement of Sprays C. Gray, W. Logan LaVision Inc
T	2:00 PM	EDT	24. Investigation of Compressibility Effects on the Growth of a Multiphase Shear Layer C. Lee, O. Desjardins Cornell University	56. Combining experiments and theory to build an optimal diffuse back-illumination extinction imaging system J. Manin, B. Lehnert, L. Pickett Sandia National Laboratories, Friedrich Alexander University of Erlangen- Nurmberg
T	2:20 PM	EDT	41. An examination of the maximum entropy formalism approach to secondary atomization A. Faraz Badar, M. Trujillo University of Wisconsin-Madison	46. Developments in imaging diagnostics for the characterization of high-speed droplet and particle fields: A focus on cloud physics J. Manin, W. D. Bachalo, G. Payne, M. Fidrich, K. Ibrahim Artium Technologies, Inc.
T	2:50 PM	EDT	Technical Committee Meeting Computation & Modeling, <i>Phillips 219</i> <i>Spray Measurements, Upson 142</i>	
T	3:40 PM	EDT	Break	
T	4:30 PM	EDT	Departure to Banquet, from Hotel	Break
T	5:00 PM	EDT	Visit Taughannock State Park	
T	5:30 PM	EDT		Departure to Banquet, from Hotel
T	6:00 PM	EDT	Banquet and Awards Ceremony <i>Inn at Taughannock Falls</i>	
T	9:00 PM	EDT	Banquet Ends	

Session Start	Wednesday, May 22nd, 2024
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W	7:30 AM	EDT	Breakfast with the Exhibitors <i>Duffield Atrium</i>	
W	8:30 AM	EDT	Opening Remarks <i>Duffield Atrium</i>	
W	8:40 AM	EDT	Spray Applications - Industrial Session Chairs: Sanjeev Chandra & Andy Thistle <i>Phillips 219</i>	Spray Applications - Automotive Session Chairs: Noah Van Dam & Christopher Powell <i>Upson 142</i>
W	8:40 AM	EDT	5. Deposition Efficiency of Spray Droplets Impacting a Planar Surfaces M. Tahir, K. Sidawi, S. Chandra University of Toronto	60. Computational Evaluation of Spray-Jet Impingement Concepts for Improved Thermal Management of Electric Vehicle Power Modules R. Grover, A. Coppola, S. Parrish General Motors R&D
W	9:00 AM	EDT	35. Understanding The Effect of Viscosity on Droplet Breakup Mechanism for an Unsteady Oscillating Spray Nozzle A. Hossain, J. Theuerkauf DOW Chemical	8. Liquid Ammonia Sprays for Engine Applications A. Kumar, N. Van Dam University of Massachusetts Lowell
W	9:20 AM	EDT	52. Computational Optimization of Supercritical CO2-Assisted Atomization for Precision Cellulose Nanocrystal Deposition P. Jangale, D. Jarrahbashi, A. Asadi, R. Schick Texas A&M University, Spraying Systems Co.	18. Gasoline Fuel Spray Dynamics in Direct Injection Systems: A Computational Study Using VOF-DPM Transition Model with AMR S. Khan, F. Alzahrani, J. W.G. Turner King Fahd University of Petroleum and Minerals, King Abdullah University of Science and Technology
W	9:40 AM	EDT	59. Spray Drift of Mosquito Larvicide Applied With a Multirotor Drone. A. Thistle, J. Bonds, B. Fritz, H. Thistle mdot technologies, Bonds Consulting Group, USDA Agricultural Research Service, Teals, LLC	50. Temperature Effects on Plume Dynamics of MeOH Injection S. Luna, L. Pickett, R. Clemente, Z. Buen, M. Dhanji Sandia National Laboratories, University of Erlangen-Nuremberg
W	10:00 AM	EDT	Break with the Exhibitors	
W	10:25 AM	EDT	Atomization & Spray Simulations II Session Chairs: Marcus Herrmann & Roberto Torelli <i>Phillips 219</i>	Spray Characterization and Measurements Session Chairs: Alan Kastengren & Safiullah <i>Upson 142</i>

W	10:25 AM		19. Disintegration of a thin liquid sheet by hole collision R. Allen, G. Gilou Agbaglah Wayne State University	47. Characterization of fuel effects on jet trajectory and atomization of aviation fuel sprays using x-ray diagnostics A. Karmarkar, C. Young Moon, A. Kastengren, A. Kimber Ehlich, C. Powell, B. Sforzo Argonne National Laboratory, Woodward Inc
W	10:45 AM		37. Modeling the break-up of thin films in pressure-swirl atomization J. Giliberto, O. Desjardins Cornell University	31. Large scale liquid column fragmentation in a wind tunnel airflow D. Legendre, C. Khoneisser, M. Landreau, S. Cazin, J. Sebilliau, F. Risso, C. Colin IMFT
W	11:05 AM		21. Subgrid scale modeling of droplet bag breakup in VOF simulations A. Han, O. Desjardins Cornell University	61. The effect of temperature on post-secondary breakup of liquid jet in cross flow R. Kang, J. Lee University of Cincinnati
W	11:25 AM	EDT	Boxed Lunch / Exhibitor Passport Drawing / Meeting Adjourn	