## ISSUE 1

**Feedback Control of the Spray Liquid Distribution of Electrostatically Assisted Coaxial Atomization**  
*R. Osuna-Orozco, N. Machicoane, P.D. Huck, & A. Aliseda*

**Effect of Semicylindrical Counter Electrodes on the Cone-Jet Mode of Electrospray**  
*M. Shams, P. Naderi, & N. Ashgriz*

**Curvature-Based Interface Resolution Quality (IRQ) Indicator to Assess Simulation Accuracy**  
*R. Canu, B. Duret, J. Reveillon, & F.X. Demoulin*

**Effect of Internal Geometry of the Pressure-Swirl Duplex Nozzle on the Atomization Characteristics of Jet A-1 Fuel**  
*R.A. Dafsari, R. Chandrahasan, C. Ahn, & J. Lee*

## ISSUE 2

**Volume of Fluid Simulation of Sheet Formation and Primary Breakup of Non-Newtonian Propellants in a Pintle Injector with Variable Injection Areas**  
*K. Radhakrishnan, J. Koo, & Y. Hwang*

**Momentum Analyses for Determination of Drop Size and Distributions during Spray Atomization**  
*T.-W. Lee, J.E. Park, H. Bellerova, M. Hnizdl, & M. Raudensky*

**Experimental Study on the Effect of Cavitation on Pressure Fluctuations in Optical Diesel Nozzles and Spray Characteristics**  
*T. Cao, Z. He, L. Zhang, W. Guan, & Q. Wang*

**SPH Simulations of Drop Impact on Heated Walls and Determination of Impact Criteria**  
*Y. Pan, X. Yang, S.-C. Kong, & C.-B.M. Kweon*

## ISSUE 3

**Development of Drop/Wall Interaction Model for Application in Engine Conditions**  
*Y. Pan, X. Yang, S.-C. Kong, & C.-B.M. Kweon*

**Effects of Target and Projectile Parameters on Collision Characteristics of Water Droplets**  
*M.V. Piskunov, N.E. Shlegel, & P.A. Strizhak*

**Evaluations of the KH-RT Breakup and Dynamic Structure SGA Models for Evaporating Sprays under Diesel Engine-Like Conditions**  
*R. He, P. Yi, X. Zhou, Y. Gu*

**A Generalized Ohnesorge Nomogram for Liquid Jet Breakup Regimes**  
*G. Brenn & M. Stelter*
<table>
<thead>
<tr>
<th>Issue</th>
<th>Title</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Atomization Modeling using Surface Density and Stochastic Fields</td>
<td>239</td>
</tr>
<tr>
<td></td>
<td>A. Ahmed, G. Tretola, S. Navarro-Martinez, K. Vogiatzaki, B. Duret, J. Reveillon,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&amp; F.X. Demoulin</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>A Nonlinear Model for Oscillations of a Droplet Impacting a Solid Surface</td>
<td>267</td>
</tr>
<tr>
<td></td>
<td>G. Amini</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Spatio-Temporal Analysis of Correlation between Cavitation in a Multi-Hole Injector</td>
<td>287</td>
</tr>
<tr>
<td></td>
<td>and Progress of Liquid Jet Atomization</td>
<td></td>
</tr>
<tr>
<td></td>
<td>H. Munemura, S. Nishio, A. Sou, K. Nishida, Y. Wada, Y. Ueki, &amp; H. Yokohata</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Instability of a Viscous Shear Layer under Supercritical Conditions</td>
<td>301</td>
</tr>
<tr>
<td></td>
<td>R. Duan, H. Wang, H. Zhang, H. Duan, L. Liu, &amp; F. Zhao</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Special Issue: ILASS 2020</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Guest Editors: Mark Owkes and Kyle M. Bade</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Preface: ILASS 2020</td>
<td>v</td>
</tr>
<tr>
<td></td>
<td>M. Owkes &amp; K.M. Bade</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>A Computational Protocol for Simulation of Liquid Jets in Crossflows with Atomization</td>
<td>319</td>
</tr>
<tr>
<td></td>
<td>T.-W. Lee, B. Greenlee, J.E. Park, H. Bellarová, &amp; M. Raudenský</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Exploration of Water Jets in Supersonic Crossflow using X-ray Diagnostics</td>
<td>331</td>
</tr>
<tr>
<td></td>
<td>K.-C. Lin, A. Kastengren, S. Hammack, &amp; C. Carter</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Influence of Flash Boiling on Spray Morphology using a Prototype Injector for</td>
<td>351</td>
</tr>
<tr>
<td></td>
<td>Gasoline Compression Ignition (GCI) Application</td>
<td></td>
</tr>
<tr>
<td></td>
<td>J. Du, B. Mohan, J. Sim, T. Fang, J. Chang, &amp; W.L. Roberts</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Liquid Spray Penetration Measurements using High-Speed Backlight Illumination in a</td>
<td>371</td>
</tr>
<tr>
<td></td>
<td>Small-Bore Compression Ignition Engine</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Y. Zhang, S. Meng, S. Kook, K.S. Kim, &amp; C.-B. Kweon</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Special Issue: ILASS 2020, Part II</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Guest Editors: Mark Owkes and Kyle M. Bade</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Preface: ILASS 2020</td>
<td>v</td>
</tr>
<tr>
<td></td>
<td>M. Owkes &amp; K.M. Bade</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Determining Spray Axial Velocity from Focused X-Ray Radiography</td>
<td>389</td>
</tr>
<tr>
<td></td>
<td>J.K. Bothell, T.B. Morgan, A.L. Kastengren, &amp; T.J. Heindel</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Data-Driven Model Reduction of Multiphase Flow in a Single-Hole Automotive Injector</td>
<td>401</td>
</tr>
<tr>
<td></td>
<td>P.J. Milan, R. Torelli, B. Lusch, &amp; G.M. Magnotti</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Utilization of Fine Water Sprays in Explosion Mitigation: Cold Trial</td>
<td>431</td>
</tr>
<tr>
<td></td>
<td>S.A. Johnston, G.G. Nasr, &amp; A. Nourian</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Effervescent Spray Measurement in an 80-Barg Cold-Flow Test Facility</td>
<td>451</td>
</tr>
<tr>
<td></td>
<td>P. Geddis &amp; A. Corber</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>The Effect of Nozzle Geometry and Injection Pressure Fluctuation on the In-Nozzle</td>
<td>473</td>
</tr>
<tr>
<td></td>
<td>Flow and Jet Breakup Based on the Multi-Fluid-LES Model</td>
<td></td>
</tr>
</tbody>
</table>
ISSUE 8

Impacting of Droplets on Moving Surface and Inclined Surfaces
S. Buksh, M. Marengo, & A. Amirfazli

Conditional Damped Random Surface Velocity Model of Turbulent Jet Breakup
B. Trettel

Atomizing and Distribution of Droplets in Gas-Liquid Sprays by Coaxial Swirl Injectors
G. Jeong, Y. Lee, J. Yoon, H. Jo, & Y. Yoon

ISSUE 9

Special Issue: ILASS 2020, Part III
Guest Editors: Mark Owkes and Kyle M. Bade

Preface: ILASS 2020
M. Owkes & K.M. Bade

Experimental and Computational Study of Diesel Spray under NonEvaporating Conditions-Effects of Nozzle Hole Diameter and Injection Pressure
Safiullah, R. Mahmud, K. Nishida, & Y. Ogata

Evaluating the Importance of Drop Size and Spreading Angle in Near-Field Spray Calculations
M. Mason, R. Hessel, A. Ravindran, S. Kokjohn, & M.F. Trujillo

S. Zou, D. Zhou, & S. Yang

ISSUE 10

Effect of Fuel Temperature on the Atomization Characteristics for Swirl Injector
W. Li, W. Cai, Z. Duan, D. Di, & Y. Yan

About the Morphology of Flash Boiling Liquid Nitrogen Sprays
A. Rees, H. Salzmann, J. Sender, & M. Oschwald

Measurement of Liquid and Vapor Penetration of Evaporating Methanol Sprays
A. Ghosh, P. Boggavarapu, & R.V. Ravikrishna

Multi-Zone Sauter Mean Diameter Model for Fuel Spray Under Cross-Flow Conditions
C. Wang, J. Yang, J. Zhu, W. Long, & K. Nishida

ISSUE 11

Special Issue: ILASS Europe 2020
Guest Editors: Tali Bar-Kohany & Eran Sher

Preface
T. Bar-Kohany & E. Sher

Drop Dynamics in Heterogeneous Spray Flames for Nanoparticle Synthesis
M.F.B. Stodt, J. Kiefer, & U. Fritsching
Planar Laser-Induced Fluorescence for Quantification of Liquid Removal and Deposition during Spray Wall Film Interaction
L. Schumacher, M. Zuschlag, M. Bieber, M.A. Reddemann, & R. Kneer

The Influence of Viscosity on the Outcome of Collisions between Liquid Droplets and Another Immiscible Liquid Jet
D. Baumgartner, G. Brenn, & C. Planchette

Comparative Study of an Industrial Rotary Bell Spray Painting Atomization Process Using Laser Diffraction and Time-Shift Techniques
D. Weich, O. Tiedje, P. Knee, & B. Mayer

Mixture Formation Analysis of Polyoxymethyleneether Injection
A. Peter, B. Siewer, S. Riess, L. Strauss, C. Pastoetter, & M. Wensing

**ISSUE 12**

Special Issue: ILASS Europe 2020, Part II
Guest Editors: Tali Bar-Kohany & Eran Sher

Preface
T. Bar-Kohany & E. Sher

Numerical Simulation and Uncertainty Quantification of a Generic Droplet Evaporation Validation Test Case
S. Ruoff, M. Stöhr, B. Rauch, G. Eckel, P. Le Clercq, W. Meier, & M. Aigner

Enhanced Rayleigh Scattering in Supercritical Fluid Injection Across the Widom Line
V. Gerber, S. Baah, B. Weigand, & G. Lamanna

An Improved Model for Investigating the Effect of Spray Polydispersity on Laminar Premixed Spray Flame Ignition
G. Kats & J.B. Greenberg

Mesh Resolution Effects on Primary Atomization Simulations
C.I. Pairetti, S.M. Damián, N.M. Nigro, S. Popinet, & S. Zaleski

Index, Vol. 12, 2020
Stöhr, M., 861
Strauss, L., 843
Strizhak, P.A., 171
Torelli, R., 401
Tretola, G., 239
Trettel, B., 517, 575
Trujillo, M.F., 651
Ueki, Y., 287
Vogiatzaki, K., 239
Wada, Y., 287
Wang, C., 759
Wang, H., 301
Wang, Q., 111
Wei, X., 495
Weigand, B., 881
Wensing, M., 843
Xi, X., 473
Xie, R., 473
Yan, Y., 697
Yang, J., 759
Yang, S., 675
Yang, X., 131
Yang, X., 153
Yi, P., 189
Yokonata, H., 287
Yoon, J., 607
Zaleski, S., 913
Zhang, H., 301
Zhang, L., 111
Zhang, W., 473
Zhang, Y., 371
Zhao, F., 301
Zhao, Z., 495
Zhou, D., 675
Zhou, X., 189
Zhu, J., 759
Zou, S., 675
Zuo, Y., 495
Zuschlag, M., 799
ATOMIZATION AND SPRAYS
SUBJECT INDEX, VOLUME 30, 2020


adaptive mesh refinement
(AMR), 913
alternative jet fuels, 861
ambient gas
temperature/density, 371
atomization characteristics,
697, 825
atomization, 239, 287, 319,
389, 517, 651, 913
autoencoders, 401
backlight illumination, 371
Basilisk, 913
Bond number, 11
Box-Behnken design, 189
breakup length, 575
breakup mechanism, 213
breakup onset location, 575
cavitation, 287, 401, 473
child droplets, 171
coaxial atomization, 779
cold flow, 451
combustion, 431
computational fluid
dynamics, 319, 627
critical Reynolds number,
517
crossflow, 319, 495
cross-flow, 759
cryogenic, 713
curved counter electrode, 11
diesel injector nozzle, 111
diesel injector, 627
diesel spray, 473
diffused backlight illumination
(DBI), 351
DNS, 31
double pulse structured laser
illumination planar imaging
(2p-SLPI), 607
dripping, 517
drop extension, 811
drop fragmentation, 811
drop impact, 131, 153, 557
drop size distribution, 97
drop size, 651
drop, 811
drop-jet collision, 811