

Thursday, July 30th 2009

8:00 AM	<b>Breakfast/Exhibitors</b>				
		<b>Mini-Symposia on Cluster/Multi-Port Injection</b>	<b>Mini-Symposia on Sheet/Swirling Sprays</b>	<b>Flashing Sprays and Electrostatic Sprays</b>	<b>Cooling Sprays</b>
		<b>Session Chairs: Chris Edwards Grand Ballroom (Salon G-J)</b>	<b>Session Chairs: Marco Marengo and Christoph Hennig Grand Ballroom (Salon F)</b>	<b>Session Chairs Yun-feng Chang and Kyle Bade Blue Sky</b>	<b>Session Chairs Antonio Moreira Sun Down</b>
8:30 AM	Paper 1	Paper Number: 063 Paper Title: Microscopic Visualization of Transient Spray from Multi-hole Injector of DISI Engine Paper Authors: M. Esmail <sup>1</sup> , N. Kawahara <sup>1</sup> , E. Tomita <sup>1</sup> , M. Sumida <sup>2</sup> Affiliation: 1. Okayama University, 2. Mitsubishi Electric Corp	Paper Number: 024 Paper Title: The large aspect ratio air-blasted liquid sheet revisited Paper Authors: A. Lozano*, F. Barreras J.A. Garcia and E. Calvo Affiliation: LITEC, CSIC-Univ. Zaragoza	Paper Number: 236 Paper Title: Unsteadiness in Effervescent Sprays: Influence of Operational Conditions and Atomizer Design Paper Authors: J. Jedelsky, Z. Beinstein and M. Jicha Affiliations: Faculty of Mechanical Engineering, Brno University of Technology	Paper Number: 074 Paper Title: Droplet Cooling of Heated Surfaces: Experimental and Numerical Analysis Paper Authors: Paolo Tartarini, Mauro A. Corticelli, Paolo E. Santangelo Affiliation: Dipartimento di Ingegneria Meccanica e Civile (DI MeC), Università degli Studi di Modena e Reggio Emilia, Italy
8:55 AM	Paper 2	Paper Number: 004 Paper Title: X-Ray Measurements of Mass Distributions in the Near-Nozzle Region of Sprays from Standard Multi-Hole Common-Rail Diesel Injection Systems Paper Authors: Philippe Leick <sup>1</sup> , Alan L. Kastengren <sup>2</sup> , Zunping Liu <sup>3</sup> , Jin Wang <sup>3</sup> and Christopher F. Powell <sup>4</sup> Affiliation: 1 Robert Bosch GmbH, Corporate Research, Gerlingen, Germany. 2 Center for Transportation Research, Argonne National Laboratory 3. Advanced Photon Source, Argonne National Laboratory	Paper Number: 139 Paper Title: Promotion of Perforation in a Radial Liquid Sheet by Impingement of a Hot/Cold Airflow Paper Authors: T. Wakimoto <sup>1</sup> , K. Nishida and K. Katoh Affiliation: Osaka City University	Paper Number: 177 Paper Title: Simulation of Flash-Boiling in Pressure Swirl Injectors Paper Authors: K. D. Neroorkar <sup>1</sup> , S. Gopalakrishnan <sup>1</sup> , D. P. Schmidt <sup>1</sup> and R.O. Grover, Jr. <sup>2</sup> Affiliation: 1 Department of Mechanical and Industrial Engineering University of Massachusetts - 2 General Motors Research & Development Warren, Michigan	Paper Number: 092 Paper Title: Evaluation of the cooling performance of individual droplets impinging onto heated targets. Paper Authors: A. S. Moita <sup>1</sup> , M. Morais <sup>2</sup> , A. Spena <sup>2</sup> , A. L. N. Moreira <sup>1</sup> Affiliation: 1. Department of Mechanical Engineering, Technical University of Lisbon, Lisbon, Portugal. 2. Department of Enterprise Engineering, University of Rome, Italy
9:20 AM	Paper 3	Paper Number: 142 Paper Title: Fundamental Investigation of Diesel Spray-Spray Interaction for Cluster-Hole Nozzles Paper Authors: M. Gauding, A. Pawlowski, C. Felsch, B. Sonntag, R. Kneer and N. Peters Affiliations: Institut für Technische Verbrennung, Institut für Wärme- und Stoffübertragung	Paper Number: 018 Paper Title: OPTIMAL FLOWS IN SWIRL ATOMIZERS Paper Authors: L. Craig, N. Barlow, S. Patel, B. Kania, S.P. Lin Affiliation: Clarkson University	Paper Number: 254 Paper Title: Nanosized particle synthesis by Flash Boiling Atomization Paper Authors: Koji Sasaki, Jun Hayashi, Iino Kimio, Masahiko Shibahara, Fumiteru Akamatsu Affiliations: Department of Mechanical Engineering, Osaka University, Taiyo Nippon Sanso	Paper Number: 105 Paper Title: Multijet spray characteristics for spray cooling Paper Authors: M. R. O. Panão, J. L. C. V. Rosa and A. L. N. Affiliations: Moreira Department of Mechanical Engineering, Instituto Superior Técnico, Technical University of Lisbon
9:45 AM	Paper 4	Paper Number: 125 Paper Title: Spray-Spray and Spray-Wall Interactions in Diesel Sprays from Micro-Hole Nozzles under Ultra-High Injection Pressures Paper Authors: Wu Zhang <sup>1</sup> , Keiya Nishida <sup>1</sup> , and Jiang-Ping Tian <sup>2</sup> Affiliation: 1. Department of Mechanical System Engineering, University of Hiroshima, Japan 2. Institute of Internal Combustion Engine, Dalian University of Technology, China	Paper Number: 058 Paper Title: Experimental Evaluation of a Film Separation Criterion Paper Authors: J. L. Wegener, M. A. Friedrich, J. A. Drallmeier and B. F. Armaly Affiliations: Department of Mechanical and Aerospace Engineering, Missouri University of Science and Technology	Paper Number: 016 Paper Title: Further Development in Actuators Designs for Flashing Household Aerosols- Hair Spray Paper Authors: Rajab Shjarief Affiliation: Lionstarcorp /Stockport, England, UK	Paper Number: 144 Paper Title: An experimental study of intermittent spray cooling above the Leidenfrost point Paper Authors: S. Fest, J. Schmidt Affiliation: Otto-von-Guericke University Magdeburg, Magdeburg, Germany
10:10 AM	Paper 5	Paper Number: 148 Paper Title: Investigation of Particulate Emissions for Cluster-Nozzle Concepts in DI Diesel Engines Paper Authors: Hyun Woo Won <sup>1</sup> , Abhinav Sharma <sup>1</sup> , Peter Hottenbach <sup>1</sup> , Michael Gauding <sup>1</sup> , F. X. Robert <sup>1</sup> , Norbert Peters <sup>1</sup> , Gerd Gruenfeld <sup>1</sup> , Russell Durrett <sup>2</sup> , Alejandro H. Plazas T. <sup>2</sup> and Satbir Singh <sup>2</sup> Affiliation: 1. RWTH Aachen University, 2. Powertrain Systems Research Laboratory, General Motors	Paper Number: 174 Paper Title: Experimental Analysis and 3D-Visualization of Oscillating Hollow-Conical Liquid Sheets in Quiescent Air Paper Authors: E. Musemic, A. Rojek, M. Gaspar, F. Weichert, H. Müller and P. Walzel Affiliations: Technical University of Dortmund	Paper Number: 100 Paper Title: Secondary Atomization of Electrostatically Charged Drops Paper Authors: Daniel R. Gueldenbecher, Paul E. Sojka Affiliation: School of Mechanical Engineering, Purdue University,	Paper Number: 192 Paper Title: Single Droplet Heat Transfer through Shallow Liquid Pools Paper Author: Henry Vu, Guillermo Aguilar and Richard Jepsen Affiliations: University of California, Riverside, Sandia National Laboratories, Albuquerque
10:35 AM	Paper 6	Paper Number: 156 Paper Title: GDI Multi-Hole Injector: Particle Size and Velocity Distribution for Single and Jet-to-Jet Evolution Analysis Paper Authors: L. Allocca, S. Alfuso, L. Marchitto, G. Valentino Affiliation: Istituto Motori, CNR - Via Marconi, 8 - 80125 Napoli, ITALY	Paper Number: 220 Paper Title: Experiment Study on the Internal Flow Stability for Tangential Entry Conditions in a Swirl Injector Paper Authors: Sunghyuk Kim, Taeock Khil, Hyeon Choi and Youngbin Yoon Affiliation: School of Mechanical and Aerospace Engineering, Seoul National University, Seoul, 151-742, Korea	Paper number: 229 Paper title: The Flow Dynamic Simulation and Experiment of Piezoelectric Printhead Paper authors: Wei-Hsiang Lai, Yeong-Jen Wu Author affiliation: Institute of Aeronautics and Astronautics, National Cheng Kung University, Taiwan	Paper Number: 241 Paper Title: Dynamics of the Liquid Film produced by Spray Impact under Various Gravity Levels Paper Authors: O. Kyriopoulos, I. V. Roisman, C. Tropea Affiliations: Chair of Fluid Mechanics and Aerodynamics, Technische Universität Darmstadt, 64287 Darmstadt, Germany
11:00 AM	<b>Break/Exhibitors</b>				

Thursday, July 30th 2009 continued AFTER BREAK...

		<b>Mini-Symposia on Cluster/Multi-Port Injection</b>	<b>Mini-Symposia on Sheet/Swirling Sprays</b>	<b>Spray Measurements and Validation</b>	<b>Spray Control</b>
		<b>Session Chairs: Yasuo Moriyoshi and Greg Smallwood</b>	<b>Session Chairs: Stephanie Fest</b>	<b>Session Chairs : Vince McDonell</b>	<b>Session Chairs: Terry Parker</b>
		<b>Grand Ballroom (Salon G-J)</b>	<b>Grand Ballroom (Salon F)</b>	<b>Blue Sky</b>	<b>Sun Down</b>
11:25 AM	Paper 7	<p>Paper number: 119</p> <p>Paper Title: Effect of injection conditions on the spray characteristics of gasoline direct injection (GDI) injectors with different multi-hole configuration</p> <p>Paper authors: Hyung Jun Kim, Su Han Park, and Chang Sik Lee</p> <p>Affiliation: Department of Mechanical Engineering, Hanyang University Seoul, Republic of Korea</p>	<p>Paper Number: 093</p> <p>Paper Title: Image particle sizing of an air blasted liquid sheet of kerosene at intermediate pressure</p> <p>Paper Authors: Christoph Hennig<sup>1</sup>, Fabrice Giuliani<sup>1</sup>, Stefan Freitag<sup>2</sup>, Christoph Hassa<sup>2</sup></p> <p>Affiliation: 1Graz University of Technology, Graz, Austria; 2German Aerospace Center (DLR), Cologne, Germany</p>	<p>Paper number: ICLASS2009-094</p> <p>Paper title: Spray Plume Characteristics at Multiple Cross-Flow Angles, Experimental and Computational Assessments</p> <p>Paper authors: K. M. Bade, W. Kalata, and R. J. Schick</p> <p>Author affiliation: Spray Analysis and Research Services, Spraying Systems Co., Wheaton, IL USA</p>	<p>Paper Number: 115</p> <p>Paper Title: Applying Composite Disturbances to Control Breakup of Capillary Circular Liquid Jets.</p> <p>Paper Authors: Mina Rohani, Derek Dunn-Rankin, Faryar Jabbari</p> <p>Affiliation: University of California, Irvine</p>
11:50 AM	Paper 8	<p>Paper Number: 135</p> <p>Paper Title: Optimization of Orifices Arrangement for the Maximized Spray Tip Penetration of Wall-Impinging Sprays Injected by Group-Hole Nozzles</p> <p>Paper Authors: S. Moon, Y. Matsumoto and K. Nishida, J. Gao</p> <p>Affiliations: Department of Mechanical System Engineering, University of Hiroshima, Department of Mechanical Engineering, University of Wisconsin-Madison</p>	<p>Paper Number: 050</p> <p>Paper Title: Primary Atomization in Water and Kerosene Liquid Sheets At High Pressure</p> <p>Paper Authors: V. G. Fernandez*, P. Berthoumieu, G. Lavergne</p> <p>Affiliation: ONERA (French National Aerospace Research Centre), Heterogeneous Multiphase Flows Unit , Aerodynamic and Energetic Models Department, France</p>	<p>Paper Number: 223</p> <p>Paper Title: Quantification of the Transient Mass Flow Rate in a Simplex Swirl Injector</p> <p>Paper Authors: T. Khil, S. Kim, S. Cho and Y. Yoon</p> <p>Affiliation: School of Mechanical and Aerospace Engineering, Seoul National University, Seoul, Korea</p>	<p>Paper Number: 075</p> <p>Paper Title: Feasible Study of Spray and Combustion Control Using Dual Component Fuel Based on Multicomponent Spray Model</p> <p>Paper Authors: Yoshimitsu KOBASHI, Jiro SENDA</p> <p>Affiliation: 1 Department of Mechanical Engineering, Kanazawa Institute of Technology. 2 – Department of Mechanical Engineering, Doshisha University</p>
12:15 PM	<b>CLOSE of Conference</b>				