

ICLASS 2012

September 2-6, 2012  
Heidelberg, Germany



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## 12<sup>th</sup> ICLASS – 2<sup>nd</sup> and Final Call for Papers



## International Conference on Liquid Atomization and Spray Systems

Heidelberg, Germany  
Sunday, September 2 – Thursday, September 6, 2012

### About the Conference

ICLASS 2012 is the 12<sup>th</sup> International Conference on Liquid Atomization and Spray Systems. ICLASS International is the umbrella organization for the European, American and Asian regional sections. Every three years the entire international community convenes to share information, experience and technical advances. ICLASS 2012 will continue this tradition by providing a venue for industrial and academic researchers, students and vendors to engage in the scientific development and practice of atomization and spray systems to meet and share recent developments in the field.

We would like to invite you to ICLASS 2012, an environment that promotes international communication and collaboration, enables the highest quality technical program and inspires you in the heart of Heidelberg's Old Town.

### Invited Speakers:

- Prof. Masataka Arai, Gunma University, Japan. Title: Physics Behind Diesel Sprays
- Dr. Thomas Dörr, Rolls-Royce Deutschland Ltd. & Co KG. Title: The Significance of Fuel Preparation for Low Emissions Aero-Engine Combustion Technology
- Prof. Marcus Herrmann, Arizona State University, USA. Title: On Using Detailed Simulations to Study Primary Atomization

**Topics:** All aspects of atomization and spray processes will be covered, including, but not limited to:

- Measurement instrumentation and diagnostic equipment development related to sprays for drop size, drop velocity and impact, drop concentration, patternation, film thickness, vapor concentration, etc.
- Computational modeling, fundamental analysis and simulation of flow phenomena inside and outside of atomizers
- Experimental design, operation, and performance of liquid (and metal) atomizers and spray systems
- Application areas
  - Rockets, turbines, and all other combustion engines
  - Spray systems as they relate to advanced energy conversion devices and processes
  - Food processing, agricultural and environmental (including reactors, spray dryers, humidifiers, coatings, etc.)
  - Medical, therapeutic and biological sprays
  - Liquid and powder metallurgy
  - Fire suppression, security and safety

<http://iclass2012.org/>

# ECN2

## 2<sup>nd</sup> Workshop on Spray Combustion

Heidelberg, Germany ■ 7-8 September 2012

### Engine Combustion Network

Save  
the dates  
in your diary  
now!

#### The Engine Combustion Network

is pleased to announce the second workshop on spray combustion organized by IFP Energies nouvelles at the University of Heidelberg in Germany, on 7 and 8 September 2012 (*directly after ICLASS 2012*).



#### Specific goals and activities for ECN2 include:

- Evaluation of modeling and experimental results at parametric conditions beyond Spray A. Ambient temperature (e.g., Spray A-800 K, Spray A-1000 K), injection pressure (e.g., Spray A-1000 bar), and multiple injections will be discussed.
- Direct comparison of modeling and experiment based on the topic, rather than conditions. Efforts to standardize and quantify experimental and modeling activities will be discussed. For example, given experimental and modeling limitations, best practices to ensure that models and experiments are really addressing the same metric will be discussed.
- Focus topics include: internal nozzle flow, spray development and vaporization, mixing and turbulence, ignition and lift-off length, soot formation, and so forth. Teams and coordinators will be organized around such topics, collecting and analyzing all experimental and modeling input data.
- Early results and planning activities for gasoline sprays and engine flows activities, including the selection of common hardware and operating conditions.

ECN2 will build upon recommendations determined at ECN1. Following the same format, organizers will gather experimental and modeling results prior to the workshop. Sharing results in an open exchange is expected to be one of the major benefits of the workshop, facilitating rapid evaluation of the state of experimental and modeling activities and pointing to needed future directions.

#### Scientific correspondents

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All information about ECN and the workshop is available on [www.sandia.gov/ecn](http://www.sandia.gov/ecn)

For any question, please contact  
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