

# ECN2

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

Heidelberg, Germany ■ 7-8 September 2012

### Engine Combustion Network

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**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*).**



The Engine Combustion Network met for its first workshop on 13-14 May 2011 in Ventura, California, shortly before the ILASS 2011 conference.

Organizers gathered experimental and modeling results at two target diesel spray conditions, Spray A (900 K, 60 bar) and baseline n-heptane, to permit side-by-side comparisons in a unique framework different than most conferences.

Experimental contributions were made by 6 different groups, and more than 10 institutions submitted modeling results. Two new working groups were also formed: gasoline sprays and engine flows. Proceedings from the workshop are available on [www.sandia.gov/ecn](http://www.sandia.gov/ecn).

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.

### 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.



## Tentative Program

### Friday 7 September 2012

8:00 - 9:00	Registration
9:00 - 9:20	Introduction and mechanics
9:20 - 10:20	Engine flows
10:30 - 11:30	Gasoline spray combustion
11:30 - 13:30	Lunch and discussion
Spray A with parametric variation	
13:30 - 14:30	Internal flow and geometry
14:30 - 15:30	Spray development and vaporization
15:30 - 16:00	Break
16:00 - 17:30	Mixing and velocity
17:30 - 17:45	Conclusion

### Saturday 8 September 2012

9:00 - 10:00	Ignition and lift-off length
10:00 - 11:00	Soot
11:00 - 11:30	Break
11:30 - 12:30	Discussion
12:30 - 14:00	Lunch
14:00 - 15:00	Future directions
15:00 - 15:15	Conclusion

## Contacts

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### Workshop organization

*with the support of ICLASS 2012 chair*

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