



Workshop 4: ENGINE APPLICATIONS OF LASER IGNITION

Date: 8-9 January 2018

Place: University of Liverpool, School of Engineering, Liverpool L69 3GQ, UNITED KINGDOM

- PROGRAMME -

- DAY 1: 8 JANUARY 2018 -

- 09:00 – 9:30 Registration
- 09:30 – 9:45 **Welcome. Introduction**
Geoffrey DEARDEN, Prof. Dr. University of Liverpool, Liverpool, UK
- 09:45 – 10:15 **STATUS - Review of R&D progress in engine applications of laser ignition**
Nicolai PAVEL, Dr. INFLPR, Bucharest, Romania
- 10:15 – 10:45 **Laser beam engineering techniques for engine ignition applications**
Zheng KUANG, Dr. Advanced Laser Technology / University of Liverpool, UK
- 10:45 – 11:00 Coffee break
- 11:00 – 11:30 **Influence of focal point properties on the combustion of lean methane/air-mixtures**
Mark BARWINKEL, Dr. Bayreuth University, Bayreuth, Germany
- 11:30 – 12:00 **Overview of dual pulse laser ignition of an IC engine**
Vincent PAGE University of Liverpool, Liverpool, UK
- 12:00 – 12:30 **Future challenges for automobile engine combustion**
Nathan HINTON Jaguar Land Rover, Coventry, UK
- 12:30 – 13:15 Lunch (on site)
- 13:15 – 13:45 **Laser based ignition & diagnostics in power generation gas turbines**
Jonathan GRIFFITHS, Dr. University of Lincoln, Lincoln, UK
- 13:45 – 14:15 **Laser droplet spray interaction in aircraft turbine combustion**
Laurent ZIMMER, Prof. Dr. Laboratoire EM2C, CentraleSupélec, France
- 14:15 – 14:45 **Heavy duty engine design and potential opportunities for laser ignition**
Esmail KARIMI, Dr. Niro Engineering Ltd, Daresbury, UK
- 14:45 – 15:00 Coffee break
- 15:00 – 15:30 **Hollow core fibres for high intensity laser pulse delivery & diagnostics**
Francesco POLETTI, Prof. Dr. ORC, University of Southampton, UK
- 15:30 – 16:00 **Photonics technologies for laser beam engineering and optical diagnostics**
Nick BUTTENSCHAW Hamamatsu Photonics UK Ltd, Welwyn Garden City, UK
- 16:00 – 17:00 **Laboratory Tour**

- END OF DAY 1. DINNER -

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- DAY 2: 9 JANUARY 2018 -

- 09:15 – 09:45 **Technologies & materials for future manufacture of laser ignition systems**
Erik BECKERT, Dr. Fraunhofer IOF, Jena, Germany
- 09:45 – 10:15 **The Future - Technological Challenges for the Application of Laser Ignition**
Moderated Discussion Round
Moderator: Geoffrey DEARDEN, Prof. Dr. University of Liverpool, Liverpool, UK
- 10:15 – 10:45 **The Future - Road-mapping: Building a case for R&D in future LI systems**
Moderated Discussion Round
Moderator: Nicolaie PAVEL, Dr. INFLPR, Bucharest, Romania
- 10:45– 11:00 Coffee break
- 11:00 – 11:30 **Wrap-up, Outlook to the future workshop program & the next workshop #5 in Paris**
Geoffrey DEARDEN, Prof. Dr. University of Liverpool, Liverpool, UK
Nicolaie PAVEL, Dr. INFLPR, Bucharest, Romania
Laurent ZIMMER, Prof. Dr. Laboratoire EM2C, CentraleSupélec, France
- 11:30 – 12:15 Lunch (on site)
- 12:15 – 16:30 **Visit to Cockcroft Institute of Accelerator Science and Technology, Daresbury**
Including transport to/from Daresbury Laboratories by coach
- 18:00 **Social Program** (TBD)

- END OF THE WORKSHOP -

