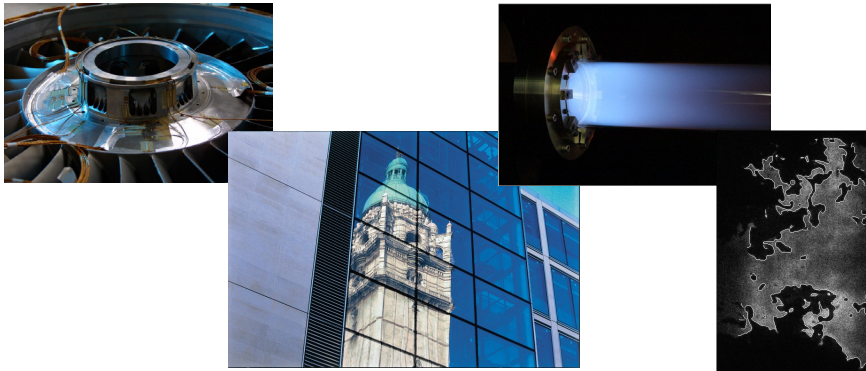


“Optical Diagnostics for Gas Turbine Combustion”

September 28 & 29, 2011
London

A workshop in the framework of, and sponsored by the FP7 project LIMOUSINE, a Marie Curie initiative

Frank Beyrau, Yannis Hardalupas, Alex Taylor
Department of Mechanical Engineering, Imperial College London



Introduction

There is continuing pressure on the manufacturers of gas turbines to further reduce pollutant emissions and fuel consumption by operating in fuel lean premixed mode, close to the lean flammability limit. Operating in this regime can result pressure and temperature fluctuations in the combustion chamber which can reduce the life of engine components or result in catastrophic engine failure. Further research into these thermoacoustic oscillations is necessary, in particular involving studies based on sophisticated laser measurement techniques. In this workshop, several such laser based diagnostic techniques are introduced, the principles will be explained and results from practical applications are shown.

VENUE

The Workshop will take place in the lecture theatre 342 in the Mechanical Engineering building, Imperial College London, Exhibition Road, SW7 2AZ London

TRAVELLING TO THE COLLEGE CAMPUS

Travel information and a map of the South Kensington Campus can be found under: www3.imperial.ac.uk/campusinfo/southkensington

And some useful information for your stay in London:
www3.imperial.ac.uk/summeraccommodation/usefullinks

REGISTRATION

A workshop fee applies to non-LIMOUSINE participants (VAT incl.). PhD students £150, Other £300. Registration (free for LIMOUSINE fellows) includes lectures, material, refreshments, lunches and workshop dinner. A registration form is attached to this program.

ACCOMMODATION

We recommend the Premier Inn in Hammersmith (appr. £90 a night)
<http://www.premierinn.com/en/hotel/LONHAM/london-hammersmith>

Alternatively, follow the college hotel directory under
<http://www3.imperial.ac.uk/conferenceandevents/accommodation/hotel/accommodation>

CONTACT

Mr. Sebastian Henkel sebastian.henkel@imperial.ac.uk
Dept of Mechanical Engineering
Imperial College London

SPONSORS AND SUPPORT



PROGRAMME – WEDNESDAY, SEPTEMBER 28TH

9:00	Welcome and Registration
9:30	Introduction <i>Frank Beyrau, Yannis Hardalupas, Alex Taylor</i>
10:30	Laser Induced Fluorescence Imaging for Mixing Studies <i>Frank Beyrau</i> <i>Imperial College London, United Kingdom</i>
11:30	Coffee break
12:00	Chemiluminescence Detection for the Measurement of Stoichiometry and Heat Release Rate <i>Yannis Hardalupas</i> <i>Imperial College London, United Kingdom</i>
13:00	Lunch break
14:30	Raman-Spectroscopy in Gas Turbine Combustors <i>Wolfgang Meier</i> <i>Deutsches Zentrum für Luft- und Raumfahrt, Stuttgart, Germany</i>
15:30	Laser induced Phosphorescence for Combustor Surface Temperatures <i>Andy Heyes</i> <i>Imperial College London, United Kingdom</i>
16:30	Coffee break
17:00	Tour through the Thermofluids labs
19:00	Dinner <i>The Polish Club Ognisko Restaurant, 55 Exhibition Road</i>

PROGRAMME – THURSDAY, SEPTEMBER 29TH

9:00	Flow Field Measurements in Reactive Flows <i>Frank Beyrau</i> <i>Imperial College London, United Kingdom</i>
10:00	Flame Structure Analysis in an Oscillating Flame <i>Alex Taylor</i> <i>Imperial College London, United Kingdom</i>
11:00	Coffee break
11:30	High Speed Diagnostics in Gas Turbine Combustors <i>Isaac Boxx</i> <i>Deutsches Zentrum für Luft- und Raumfahrt, Stuttgart, Germany</i>
12:30	Lunch break
14:00	Online Fuel Gas Analysis for Gas Turbines by Raman Scattering <i>Thomas Seeger</i> <i>Universität Siegen, Germany</i>
15:00	Infrared Absorption Spectroscopy and Tomography <i>Yannis Hardalupas</i> <i>Imperial College London, United Kingdom</i>
16:00	Coffee break
16:30	Coherent Raman and Laser Induced Fluorescence Diagnostics for the Study of Spray Combustion <i>Frédéric Grisch</i> <i>Université de Rouen, France</i>
17:30	Closing of the workshop