

Mercoledì 18 Maggio 2016, ore 9:30-12:30 Campus di Ingegneria, viale Marconi 5, Dalmine, aula 23

Nell'ambito del progetto **Erasmus Exchange Programme 2015-2016**, promosso in collaborazione con il Dottorato di ricerca in Ingegneria e scienze applicate, i **Prof. S. Sazhin, Dr C. Crua and Dr V. Zubkov** dell'University of Brighton, Sir Harry Ricardo Laboratories, School of Computing, Engineering and Mathematics, terranno i seguenti seminari:

Prof. Sergei Sazhin

Hydrodynamic and kinetic models for droplet heating and evaporation: recent results

Heating and evaporation of liquid drop in gaseous environment will be analysed from the modelling point of view. Recent advances on the modelling of multi-component drop evaporation and non-equilibrium conditions at liquid/gas interface will be treated with a special attention on engine spray applications.

Dr. Cyril Crua

Optical diagnostics applied to internal combustion engines

The seminar will provide an overview of the main laser based measurement techniques for internal combustion engine applications. LDV, PDA and PIV techniques will be described with more details, with particular emphasis on the physical foundations and on the main application issues.

Dr. Vladmir Zubkov

Mathematical modelling of kidney development

The seminar will focus on the modelling of growing kidney in culture medium, where the epithelium is described as a continuous medium with elastic boundary using Navier-Stokes equations. Stability of growing kidney with the use of analytical and numerical methods is studied, explaining the archetypal mechanism of branching. The mathematical model and its predictions are validated against experimental data collected from developing mouse kidneys.

I seminari sono aperti a tutti gli interessati.

Per ragioni organizzative, si chiede gentilmente a chi fosse interessato di inviare una e-mail al Prof. G.E. Cossali <u>cossali@unibg.it</u>.