

## HPCCOMB2019 - 2nd Edition of the HPC Spanish Combustion Workshop

### – Agenda –

09:00 – 09:30h – Registration

09:30 – 09:40h – Welcome (Daniel Mira & CASE Dpt. Director Jose M. Cela)

09:40 – 10:00h – David Vicente (User support manager - BSC & RES)

10:00 – 10:30h – Vision and Welcome (Prof. Jose M. Desantes, Research Deputy Director CMT-Motores Térmicos)

10:30 – 11:10h – Prof. Salvador Martínez-Navarro, Imperial College (UK)

11:10 – 11:40h – *Coffee break*

11:40 – 12:20h – Prof. Edward Richardson, University of Southampton (UK)

12:20 – 13:20h – Technical sessions Afternoon I (20 min/talk)

- 1) Influence of heat-losses on the shape of isobaric freely propagating premixed flames in narrow channels, Vadim N. Kurdyumov
- 2) Active research lines on combustion by the Fluid Mechanics Group at UC3M, Inmaculada Iglesias
- 3) Analysis of flame dynamics of a technically premixed hydrogen flame under conditions close to flashback, Daniel Mira

13:20 – 14:30h – *Lunch and Visit Marenostrium IV*

- 13:20 – 14:10 *Lunch*
- 14:10 – 14:30 *Visit Marenostrium IV*

14:30 – 15:30h – Flash talks (5 min/talk, x 9)

- Extinction limits in counter-flow heat-recirculating flames, Francisco J. Bosh Calvo
- Large Eddy Simulations of advanced gas turbine burners: velocity and mixing field assessment, Ivan Olmeda
- Simulación numérica de un horno de incineración, Teide Refractory Solutions.
- Skeletal and augmented reduced mechanisms for methane and hydrogen oxidation based on the San Diego detailed mechanism, Bertrand Naud
- Saiph as DSL for HPC Combustion Problems, Sandra Maciá
- Conditional Moment Closure developments in the framework of Large Eddy Simulations for the multiphysics code Alya, Eduardo J. Pérez-Sánchez
- Theoretical and numerical study of shock-wave impingement on shear layers, Pedro Martínez-Ferrer
- Flame-acoustics interaction of symmetric and non-symmetric flames propagating in a narrow duct, Carmen Jiménez
- Assessment of dynamic adaptive chemistry methods for multiregime combustion phenomena, Anurag Surapaneni

15:30 – 16:10h – Technical sessions Afternoon II (20 min/talk)

- 4) Numerical study of the Cambridge swirl burner using flamelet modelling, Ambrus Both
- 5) A CFD modeling study for improving the understanding of the Turbulent Jet Ignition concept for next generation SI engines, Ricardo Novella

16:10 – 16:45h – *Coffee break*

16:45 – 17:25h – Technical sessions Afternoon III (20 min/talk)

- 6) Accurate Multicomponent Fick Diffusion at the Cost of Mixture Averaged Transport, Manuel Arias-Zugasti
- 7) Numerical simulations of flame dynamics in narrow gaps, Daniel Fernández-Galisteo

17:25 – 17:30h – Closing