Meeting on modelling of buoyancy driven and related turbulent mixing at interfaces

Dates, venue, fees, accommodation

The meeting will be held from April Monday 24th (afternoon) to Wednesday 26th (morning), 2017 at the historical site of “Réfectoire des Cordeliers” at the heart of the “Quartier Latin” in Paris (15 rue de l’École de Médecine, RER-B station “Saint-Michel–Notre-Dame” or métro stations “Odéon” and “Cluny–La Sorbonne”). The schedule will facilitate travelling (especially from the UK) on Monday morning and Wednesday afternoon.

No registration fee will be collected from the participants. Registration includes lunches. A dinner will be held on the evening of Tuesday 25th as a social event.

Participants are encouraged to find accommodation nearby.

Aims and scope

Despite the remarkable development of direct and large eddy numerical simulation of turbulent flows produced by the ever wider availability of high power computing, turbulence models will remain an important tool in industrial calculations for at least a couple of decades.

Interfacial baroclinic instabilities, as found in inertial confinement fusion and in astrophysical–geophysical systems, have received relatively little attention from the scientific community.

AWE and CEA, who are major actors in this field, organize this first meeting in order to examine the state of the art in the understanding and modelling of such flows, with emphasis on practical aspects in all forms of applied simulation.

Topics to be examined include:
— Rayleigh–Taylor and its variants such as variable acceleration (including inversion), Richtmyer–Meshkov and shock-driven ejection, mixed driven flows such as buoyant–sheared, and similar flows;
— Investigation of these flows through theory, experiments, and Direct Numerical or Large-Eddy Simulations and their variants;
— Practical modelling of these flows.

Organizing and scientific committee, participation and submissions

Participations and submissions must be requested to Benoît-Joseph Gréa, and will be submitted to approval by the organizing and scientific committee:
— Benoît-Joseph Gréa (CEA, benoit-joseph.grea@cea.fr);
— Robin J.R. Williams (AWE, robin.williams@awe.co.uk);
— Chris A. Batha (AWE, chris.batha@awe.co.uk);
— Antoine Llor (CEA, antoine.llor@cea.fr);
— Denis Souffland (CEA, denis.souffland@cea.fr).

Submission format and important dates

Overview lectures and research presentations in English are accepted (no poster session) for up to 30 slots of less than 40 mn duration including questions.

Material provided by lecturers (abstracts, slides, articles, videos, etc.) will be distributed to all participants on USB memory sticks. No other publication is considered.

Abstracts in English must be provided as either source LaTeX or PDF formatted files using the workshop template (sent upon request to B.-J. Gréa).

Important dates are:
— February 27th, 2017: deadline for abstract submissions;
— March 17th, 2017: deadline for participation requests and acceptance of submissions;
— March 31st, 2017: acceptance of participations and final program;
— April 24–26th, 2017: meeting.