Turbulent Mixing and Beyond: Non-Equilibrium Transport Across the Scales

14 - 18 August 2017
Trieste, Italy

Further information:
Activity URL: http://indico.ictp.it/event/7985/
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The activity 'Turbulent Mixing and Beyond: Non-Equilibrium Transport Across the Scales' will focus on complex processes in fluids, plasmas and materials, including fundamentals of non-equilibrium dynamics, novel approaches of their studies, and applications in nature and technology.

Description:

Non-equilibrium processes control a broad range of phenomena in fluids, plasmas and materials, over celestial events to atoms. Examples include inertial confinement and magnetic fusion, supernovae and accretion disks, planetary convection and geophysics, reactive flows and super-critical fluids, formation of phases and material transformation, non-canonical turbulence and turbulent mixing, nano-technology and communications. In the vastly different physical regimes, the non-equilibrium dynamics exhibit certain features of universality and order thus offering new opportunities for comprehension and control of the complex processes in nature and technology. The Activity enables productive interactions of international researchers from different areas of science, mathematics, engineering. Participants are invited at advanced and early stages of their careers from academia, national laboratories, industry.

Topics:

- Non-equilibrium processes;
- Interfacial dynamics;
- Turbulence and mixing;
- Wall-bounded flows;
- High energy density physics;
- Material science;
- Astrophysics;
- Magneto-hydrodynamics;
- Canonical plasmas;
- Physics of atmosphere;
- Geophysics and earth science;
- Combustion;
- Mathematical aspects of non-equilibrium dynamics;
- Stochastic processes and probabilistic description;
- Advanced numerical simulations;
- Experimental diagnostics.

Directors:

Local Organizers:

How to apply:

Online application:
http://indico.ictp.it/event/7985/

Female scientists are encouraged to apply.

Grants:

The activity will be sponsored by several funding agencies and institutions. A limited number of grants are available to support the attendance of selected participants, with priority given to participants from developing countries. There is no registration fee."

Deadline:

15 May 2017

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