

# Modern Trends in PDE's, Geometric Analysis and Mathematical Physics



5 – 6 SEPTEMBER 2011

THE AIM OF THIS TWO-DAY CONFERENCE IS TO HIGHLIGHT THE STATE-OF-THE-ART AND PERSPECTIVES OF VARIOUS DOMAINS OF PDE'S, GEOMETRIC ANALYSIS, AND MATHEMATICAL PHYSICS. EIGHT ONE-HOUR LECTURES WILL BE DELIVERED BY WORLD-LEADING EXPERTS OF THESE DOMAINS.

## DAY 1 - PDE'S AND GEOMETRIC ANALYSIS

**Camillo De Lellis** (University of Zürich, Switzerland)

*Quantitative rigidity estimates*

**Eduard Feireisl** (Mathematics Institute, Czech Republic)

*Singular limits in thermodynamics of viscous fluids*

**Claude Le Bris** (École Nationale des Ponts et Chaussées, France)

*Some recent progress in deterministic and stochastic homogenization of elliptic PDE's*

**Robert McCann** (University of Toronto, Canada)

*Geometric Variational Problems in Economics*



## DAY 2 - MATHEMATICAL PHYSICS

**Jean Bellissard** (Georgia Institute of Technology, USA)

*Wannier transform for aperiodic solids: preliminary results*

**Jürg Fröhlich** (ETH Zürich, Switzerland)

*Friction and diffusion in models of particles interacting with a dispersive medium*

**Christian Gérard** (University of Paris-XI, France)

*Existence and non-existence of ground states in Quantum Field Theory models*

**Wendelin Werner** (ENS d'Ulm, France)

*Random surfaces and random geometry*

Financial support covering the accommodation is available for PhD students, postdocs, and young lecturers. To apply for a grant, please, contact one of the organisers.

Organising and scientific committee: Emmanuel Hebey, Vladimir Georgescu, Armen Shirikyan