ETHzürich

Transport phenomena in collective dynamics: from micro to social hydrodynamics

1 to 4 November 2016, ETH Zürich

Abstract

In recent years there have been rapid developments in mathematical description of collective dynamics, driven by nonlinear transport equations with local and non-local means. This includes multi-scale phenomena ranging from agent-based through kinetic and hydrodynamics descriptions of models related to the emergence of coherent structures in crowd and traffic dynamics, flocking, swarming, ... The modeling, analysis and efficient computation of these phenomena are the main focus of this conference.

Goals

This aim of this conference is to bring together researchers working on different aspects of transport across multiple scales and present state of art theoretical and numerical results and their interplay with current applications.

Speakers

Yann Brenier, École Polytechnique



José Carrillo, Imperial College London **Alina Chertock**, North Carolina State University Maria Colombo, Universität Zürich **Rinaldo Colombo**, Università degli Studi di Brescia lain Couzin, Universität Konstanz, Max-Planck-Institut für Ornithologie **Pierre Degond**, Imperial College London Camillo De Lellis, Universität Zürich Guido De Philippis, SISSA Qiang Du, Columbia University Alessio Figalli, ETH Zürich Francis Filbet, Université Paul Sabatier, Toulouse III François Golse, École Polytechnique Nir Gov, Weizmann Institute Ilya Karlin, ETH Zürich **Govind Menon**, Brown University Sara Merino-Aceituno, Imperial College London Sébastien Motsch, Arizona State University Lorenzo Pareschi, Università degli Studi di Ferrara Laure Saint-Raymond, Université Pierre et Marie Curie Giuseppe Toscani, Università di Pavia Yao Yao, Georgia Institute of Technology

More information and the link to the registration can be found on https://www.math.ethz.ch/fim/conferences/hydrodynamics.html



