

Conference Announcement

Collective Behavior: Macroscopic versus Kinetic Descriptions

May 19-23, 2014

Department of Mathematics
Imperial College London

Organizers

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Alina Chertock	North Carolina State University
Pierre Degond	Imperial College London
Marco Di Francesco	University of Bath
Eitan Tadmor	University of Maryland

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Scientific Background

Nonlinear nonlocal aggregation/diffusion equations are basic macroscopic models in many collective behavior applications such as bacterial chemotaxis, swarming, and computational neuroscience, to name a few. Kinetic modeling is being derived in these applications to include a mesoscopic level of description bridging the microscopic to the macroscopic scales.

Goals

To discuss recent developments of mathematical analysis tools and methods, design of suitable numerical schemes, and numerical simulation in some selected new applications in the field of aggregation/diffusion and kinetic PDEs. In particular, we will focus on the interplay between aggregation and interaction behavior in nonlocal/nonlinear transport and diffusion phenomena.

A limited number of openings are available.
To apply, complete the online application before
March 1, 2014.

For more information and to apply:
www.ki-net.umd.edu



Partial funding is also provided by:



In this conference we will also honor
Eitan Tadmor's 60th birthday.

