KI-Net: Kinetic description of emerging challenges in multiscale problems of natural sciences

An NSF Research Network in Mathematical Sciences

Young Researchers Workshop:
Stochastic and deterministic methods in kinetic theory
### November 28 - December 2, 2016

Department of Mathematics
Duke University

Organizers

Jacob Bedrossian	University of Maryland
Alina Chertock	North Carolina State University
Jianfeng Lu	Duke University
Zhennan Zhou	Duke University

Confirmed Participants

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Zhenning Cai	Duke University
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Ricardo A. Delgadillo	UC, Santa Barbara
Helge Dietert	University of Cambridge
Amic Frouvelle	Paris Dauphine University
Siming He	University of Maryland
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Tong Wu	North Carolina State University
Xiaoqian Xu	University of Wisconsin-Madison
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Yao Yao	Georgia Tech
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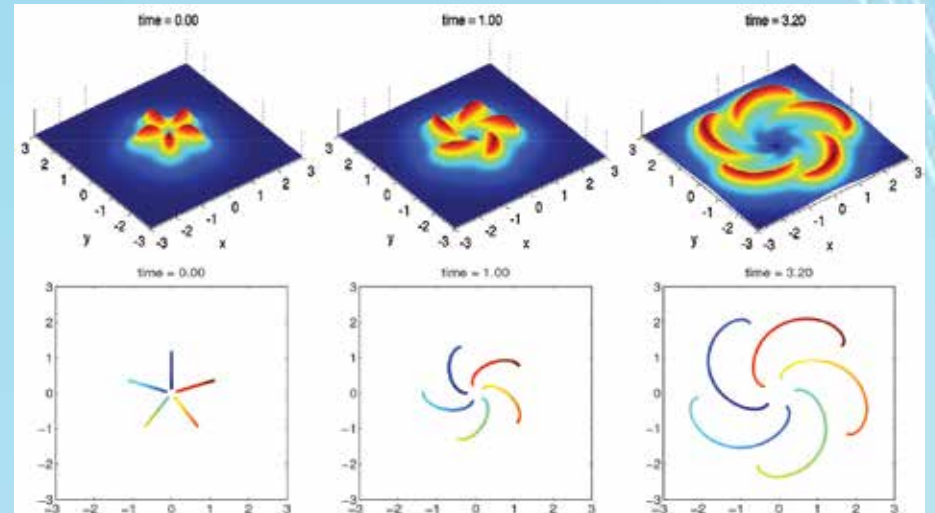
Simulation of the Euler-Poincaré equation by Chertock, Du Toit, and Marsden

Scientific Background

The workshop will focus on the fascinating interplay between analysis of kinetic theory, deterministic and stochastic modeling, multiscale analysis and methods, with applications in physical, biological and social sciences. In particular, there will be discussion on developments from modeling of gas molecules and mesoscopic description of collective behavior to uncertainty quantification in kinetic models, from direct simulation Monte Carlo methods to recent developments in deterministic methods for kinetic theory and stochastic systems.

Goals

The goal of this conference is to bring together young researchers working in kinetic theory and related fields to exchange ideas and facilitate collaborations. The focus will include stochastic modeling in kinetic theory, multiscale modelling, quantum dynamics, uncertainty quantification and stochastic and deterministic numerical methods.

A limited number of openings are available.
To apply, complete the online application before **October 30, 2016**.

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

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