



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

An NSF Research Network in Mathematical Sciences



Conference Announcement

Mathematical and Numerical Aspects of Quantum Dynamics

June 19–21, 2018

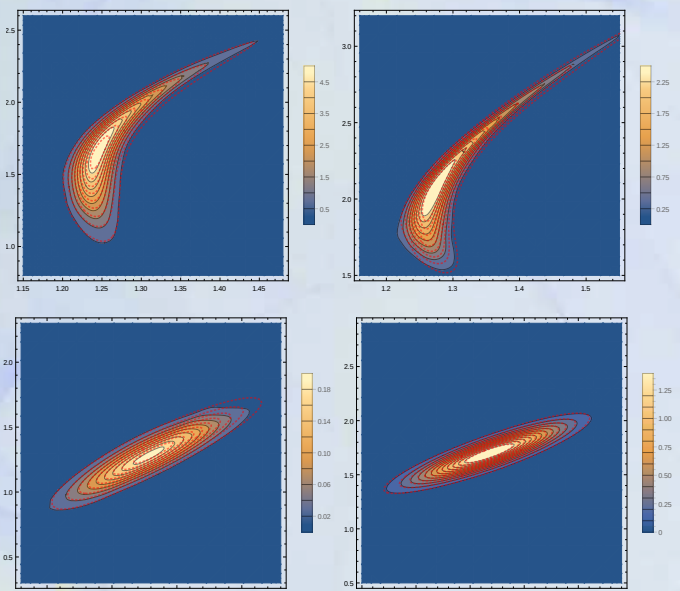
Center for Scientific Computation And Mathematical Modeling
University of Maryland

Organizers

Jianfeng Lu Duke University
Eitan Tadmor University of Maryland

Confirmed Participants

Weizhu Bao	National University of Singapore
Thomas Barthel	Duke University
Victor Batista	Yale University
Roberto Car	Princeton University
Eric A. Carlen	Rutgers University
Thomas Chen	University of Texas at Austin
Giovanni Ciccotti	Sapienza University of Rome
Gero Friesecke	Technical University of Munich
François Golse	École Polytechnique
Christopher Jarzynski	University of Maryland
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Tom Markland	Stanford University
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Numerical simulation for the quantum-classical Liouville equation
by Zhenning Cai and Jianfeng Lu.

Scientific Background

Understanding and numerically simulating quantum dynamics remains one of the great outstanding scientific challenges. This workshop aims to gather a group of mathematicians, physicists, and chemists to exchange ideas and foster collaborations on various topics related to quantum dynamics. Potential topics include adiabatic theory, topological insulators, semiclassical analysis. Numerical methods to be discussed include surface hopping, path-integral, quantum Monte Carlo, and tensor network methods.

Goals

Bringing together chemists and physicists with focus on topics in chemical and quantum dynamics with potential intercation for applied math, in particular, issues that can benefits from further impact using kinetic theories. The goal is to have a forward-looking workshop that establishes long term interactions between communities.

A limited number of openings are available.
To apply, complete the online application before
March 31, 2018.

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

