

International Workshop on Multiscale Modeling and Simulation

Friday April 25, 2014

- 8:00–8:45 *Check-In/Light Breakfast (Hosted by IPAM)*
- 8:45–9:00 *Opening remarks, dedication of new lecture room*
- 9:00 *Session Chair: Christian Ratsch*
- 9:00–9:50 **George Papanicolaou** (Stanford University)
Instabilities in financial markets
- 10:00–10:15 *Break*
- 10:15–11:05 **William Morokoff** (Standard and Poor's)
Evaluation of Performance Measures for Probability of Default and Related Credit Risk Assessment Models
- 11:15–11:30 *Break*
- 11:30–12:20 **Tony Chan** (Hong Kong University of Science and Technology)
Image Denoising Using Mean Curvature of Image Surface
- 12:30–2:00 *Lunch (on your own)*
- 2:00 *Session Chair: Stan Osher*
- 2:00–2:50 **John Lowengrub** (University of California, Irvine (UCI))
Numerical simulation of endocytosis
- 3:00–3:30 *Break*
- 3:30–4:20 **Andrea Bertozzi** (University of California, Los Angeles (UCLA))
Geometric methods in image processing, networks, and machine learning
- 4:30–4:45 *Break*
- 4:45–5:20 *TBA*
- 4:45–5:35 **Sam Howison** (University of Oxford)
Swinging 60: a kiiking tribute to Russ Caflisch
- 5:45–7:00 *Reception (Location: IPAM Lobby)*



Saturday April 26, 2014

- 8:00–9:00 *Continental Breakfast*
- 9:00 *Session Chair: Tom Hou*
- 9:00–9:50 **David Levermore** (University of Maryland)
Scattering Theory for the Boltzmann Equation and the Arrow of Time
- 10:00–10:15 *Break*
- 10:15–11:05 **Bruce Cohen** (Lawrence Livermore National Laboratory)
Improving the Efficiency of Kinetic Simulation of Plasmas
- 11:15–11:30 *Break*
- 11:30–12:20 **Mike Siegel** (New Jersey Institute of Technology)
An efficient boundary integral method for stiff 3D interfacial flow problems
- 11:45–12:20 *TBA*
- 12:30–2:00 *Lunch (Hosted by IPAM)*
- 2:00 *Session Chair: Hongkai Zhao*
- 2:00–2:50 **Christian Ratsch** (Institute for Pure and Applied Mathematics)
A Levelset Method for Modeling Epitaxial Growth
- 3:00–3:15 *Break*
- 3:15–4:05 **Lorenzo Pareschi** (Università di Ferrara)
Numerical fluid dynamic limit of the Boltzmann equation and beyond
- 4:15–4:30 *Break*
- 4:30–5:20 **Thomas Hou** (California Institute of Technology)
Recent Progress on the Search of 3D Euler Singularities
- 6:00–8:30 *Banquet - UCLA Faculty Center*

Sunday April 27, 2014

- 8:00–9:00 *Continental Breakfast*
- 9:00 *Session Chair: John Lowengrub*
- 9:00–9:50 **Bjorn Engquist** (University of Texas at Austin)
Wasserstein metric and Texas oil
- 10:00–10:15 *Break*

(Sunday schedule continued on next page)

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10:15–11:05 **Hongkai Zhao** (University of California, Irvine (UCI))
Approximate separability of Green's function for Helmholtz equation in the high frequency limit

11:15–11:30 *Break*

11:30–12:20 **Stan Osher** (University of California, Los Angeles (UCLA))
What Sparsity and L1 Optimization Can Do For You

