

IPAM's 10th Anniversary Conference

Tuesday November 2, 2010

- 8:30–9:30 *Check-In/Light Breakfast (Hosted by IPAM)*
- 9:30–9:45 *Welcome and Opening Remarks*
- 9:45–10:35 **Emmanuel Candes** (Stanford University)
Robust Principal Component Analysis?
- 10:45–11:00 *Break*
- 11:00–11:50 **Joseph Teran** (University of California, Los Angeles (UCLA))
Virtual Surgery: Scientific Computing in Real Time
- 12:00–2:00 *Lunch (on your own)*
- 2:00–2:50 **George Papanicolaou** (Stanford University)
Systemic risk
- 3:00–3:15 *Break*
- 3:15–4:05 **P. Jeffrey Brantingham** (University of California, Los Angeles (UCLA))
Equal Opportunity Dynamics in Crime
- 4:15–4:30 *Break*
- 4:30–5:45 **Tony Chan** (Hong Kong University of Science and Technology)
PUBLIC LECTURE: IPAM: Historical, UCLA, NSF and Global Perspectives
- 5:45–7:30 *Reception (Location: IPAM Lobby)*

Wednesday November 3, 2010

- 8:30–9:30 *Continental Breakfast*
- 9:30–10:20 **Cecilia Clementi** (Rice University)
A multiscale approach to characterize macromolecular dynamics and functions.
- 10:30–11:00 *Break*

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- 11:00–11:50 **Andrea Bertozzi** (University of California, Los Angeles (UCLA))
Multidimensional aggregation equations - patterns and finite time blowup
- 12:00–2:00 *Lunch (on your own)*
- 2:00–2:50 **Eitan Tadmor** (University of Maryland)
Images, PDEs and critical regularity spaces: Hierarchical construction of their nonlinear solutions
- 3:00–3:15 *Break*
- 3:15–4:05 **John Doyle** (California Institute of Technology)
Universal laws and architectures
- 4:15–4:30 *Break*
- 4:30–5:45 **Claire Tomlin** (University of California, Berkeley (UC Berkeley))
PUBLIC LECTURE: Mathematics for Air Traffic Control and Other Hybrid Systems
- 5:45–7:30 *Reception (Location: IPAM Lobby)*

Thursday November 4, 2010

- 8:00–9:00 *Continental Breakfast*
- 9:00–9:50 **Ilya Gruzberg** (University of Chicago)
Random and complex encounters: physics meets math
- 10:00–10:15 *Break*
- 10:15–12:00 *PANEL SESSION: "The Future of Interdisciplinary Research" PANELISTS: Mark Green (UCLA/IPAM Director Emeritus), Frank Graziani (Lawrence Livermore National Laboratory), Rafael Ostrovsky (UCLA), Peter Jones (Yale), Dave Levermore (University of Maryland)*
- 12:00–2:00 *Lunch (on your own)*
- 2:00–2:50 **Timothy Tangherlini** (University of California, Los Angeles (UCLA))
The Trouble with House Elves
- 3:00–3:15 *Break*
- 3:15–4:05 **Yuval Peres** (Microsoft Research)
Laplacian growth and the mystery of the abelian sandpile: A visual tour.
- 4:15–4:30 *Break*
- 4:30–5:20 **Stanley Osher** (University of California, Los Angeles (UCLA))
New Algorithms in Information Science

