

Massively Distributed Self-Organizing Networks

Monday May 13, 2002

- 8:30 *Tutorials: Communications Perspective*
- 8:30–9:00 *Check-In/Light Breakfast (Hosted by IPAM)*
- 9:00–9:15 *Welcome and Opening Remarks*
- 9:15–10:30 **Deborah Estrin** (UCLA)
Embedding the Internet: This Century Challenges
- 10:30–11:00 *Coffee Break*
- 11:00–12:00 **Urbashi Mitra** (University of Southern California)
Wireless Changes
- 12:00–1:30 *Lunch (on your own)*
- 1:30 *Tutorials: Systems and Technology Perspectives*
- 1:30–2:30 **David Culler** (Intel / UC Berkeley)
Technology Enabler
- 2:30–3:00 *Coffee Break*
- 3:00–4:00 **Kristofer Pister** (University of California at Berkeley)
Closing in on Smart Dust
- 4:00–5:00 *Group and Round Table Discussion*
- 5:00–7:00 *Wine/Cheese Reception (Hosted by IPAM)*



Tuesday May 14, 2002

- 8:30 *Tutorials: Physics and Biology Perspectives*
- 8:30–9:00 *Continental Breakfast*
- 9:00–10:00 **Jean Carlson** (UCSB)
Tutorial: Introduction to phase transitions and power laws
- 10:00–10:30 *Coffee Break*
- 10:30–11:30 **Evelyn Fox Keller** (Massachusetts Institute of Technology)
The history and prospects for mathematical biology
- 11:30–2:00 *Lunch (on your own)*
- 2:00 *Tutorials: Information Theoretic Perspectives*
- 2:00–3:00 **Michelle Effros** (California Institute of Technology)
Information Perspective
- 3:00–3:30 *Coffee Break*
- 3:30–4:30 **Greg Pottie** (UCLA)
Information Perspective

Wednesday May 15, 2002

- 8:30 *Tutorials: Physics and Biology Perspectives*
- 8:30–9:30 *Continental Breakfast*
- 9:30–10:30 **John Doyle** (California Institute of Technology)
Tutorial: Biological molecules, modules, and networks
- 10:30–11:00 *Coffee Break*
- 11:00–12:00 **John Doyle** (California Institute of Technology)
Tutorial: Emergence and self-organization in physics, biology, and engineering
- 12:00–2:00 *Lunch (on your own)*
- 2:00–3:00 **Reka Albert** (University of Minnesota)
Boolean modeling of genetic regulatory networks
- 3:00–3:30 *Coffee Break*
- 3:30–4:30 **P. R. Kumar** (University of Illinois at Urbana-Champaign)
Ad Hoc Wireless Networks: Protocols, Architecture, and Convergence

Thursday May 16, 2002

- 8:30 *Research Talks*
- 8:30–9:30 *Continental Breakfast*
- 9:30–10:30 **Bhaskar Krishnamachari** (Cornell University)
Critical Density Thresholds and Complexity in Wireless Networks
- 10:30–11:00 *Coffee Break*
- 11:00–12:00 **Tad Hogg** (Hewlett Packard Laboratories)
Multiagent control of modular self-reconfigurable robots
- 12:00–2:00 *Lunch (on your own)*
- 2:00–3:00 **Andrea Goldsmith** (Stanford University)
Robust multilayer design of wireless networks for massively distributed systems
- 3:00–4:00 **P. R. Kumar** (University of Illinois at Urbana-Champaign)
A Network Information Theory for Wireless Communications
- 4:00–4:30 *Coffee Break*
- 4:30–5:30
TBA
- 5:30–7:00 *Conference Dinner BBQ*

Friday May 17, 2002

- 8:30 *Research Talks*
- 8:30–9:00 *Continental Breakfast*
- 9:00–10:00 **Feng Zhao** (Xerox Palo Alto Research Center)
Collaborative Processing in Microsensor Networks
- 10:00–10:15 *Coffee Break*
- 10:15–11:15 **Gaurav Sukhatme** (University of Southern California)
Physics-based Sensing and State Estimation Algorithms for Robotic Sensor
- 11:15–12:15 **Kannan Ramchandran** (University of California at Berkeley)
- 12:15–2:00 *Lunch (on your own)*
- 2:00–3:00 **Massimo Franceschetti** (California Institute of Technology)
Wireless Networks: from Collective Behavior to Physical Models
- 3:00–3:15 *Conclusion*



