

Gateways to Emergent Behavior in Science and Society:
an ICAM/SFI workshop to be held at SFI
September 23-26, 2013

Organizing Committee: John Holland, Michigan, Simon Levin, Princeton, David Pines, UC Davis, and Donald Saari, UC Irvine

Monday, September 23, 2013

6:00 pm Welcome reception and buffet

Tuesday, September 24, 2013

Session 1. Physical Systems

Co-Chairs: John Hopfield, Princeton, and David Campbell, Boston University

8:45 am Welcome and Introductory Remarks
9:00 am "Landscapes and Beyond—Glasses, Proteins, and the Cell"
Peter Wolynes, Rice University
9:45 am Discussion
10:30 am Coffee break
11:00 am "Patterns of Synchrony: From Animal Gaits to Binocular Rivalry"
Marty Golubitsky, Ohio State
11:45 am Discussion
12:30 pm Lunch

Session 2 Living Matter

*Co-Chairs: Marcus Feldman, Stanford and *Daniel Cox, UC Davis*

2:00 pm "Emergence in Physical and Biological Systems far from Equilibrium"
Nigel Goldenfeld, UIUC
2:45 pm Discussion
3:30 pm Break
4:00 pm "Insects in Free Flight: Movement and Thoughts"
Jane [Zheng] Wang, Cornell
4:45 pm Discussion
5:30 pm End of session
6:30 pm Dinner at Pranzo

Wednesday, September 25, 2013

Session 3 Natural Systems

Co-Chairs: Mimi Koehl, U C Berkeley and Jerry Sabloff, SFI

9:00 am	"Collective Phenomena, Collective Motion, and Collective Action in Ecological Systems " Simon Levin, Princeton
9:45 am	Discussion
10:30 am	Coffee break
11:00 am	"The Emergence of Multicellularity" Corina Tarnita, Princeton
11:45 am	Discussion
12:30 pm	Lunch

Session 4 Toward a Habitable Planet

Co-Chairs: Qing Tian, George Mason and Jennifer Dunne, Santa Fe Institute

2:00 pm	TBA Daniel Schrag, Harvard
2:45 pm	Discussion
3:30 pm	Break
4:00 pm	TBA John Schellnhuber, Potsdam
4:45 pm	Discussion
6:30 pm	Workshop Banquet at La Fonda

Thursday, September 26, 2013

Session 5 Emergence-based Science

Rapporteurs and Discussion Leaders: John Holland, Simon Levin, David Pines, and Donald Saari

9:00 am	John Holland
9:15 am	Discussion
9:45 am	Simon Levin
10:00 am	Discussion
10:30 am	Coffee break
11:00 am	David Pines
11:15 am	Discussion
11:45 am	Donald Saari
12:00 pm	Discussion
12:30pm	Workshop Concludes