Frontiers in Mathematical Biology  
NSF-NIH PIs Meeting 2010  
University of Maryland, College Park

CONFERENCE AGENDA

All events (unless noted otherwise) will be taking place in the *Grand Ballroom*

**Sunday, April 25**

5 pm – 8 pm  Registration (*Marriott hotel*)

**Monday, April 26**

7:30 – 8:30  Registration & Breakfast (*Grand Ballroom*)

8:30 – 9  Opening  
*Nariman Farvardin*, Provost, University of Maryland, College Park  
*Jeremy Berg*, Director, National Institute of General Medical Sciences  
*Clifford Gabriel*, Executive Officer, Mathematical & Physical Sciences, NSF  
Chair: *Doron Levy* (University of Maryland)

9 – 10  Keynote Speaker  
*David Botstein* (Princeton)  
*Genomics, Computation, and the Nature of Biological Understanding*  
Chair: *William Hayton* (Ohio State)

10 – 10:30  Coffee Break

10:30 – 11:30  PI Talks  
Chair: *Ann Rundell* (Purdue)  

*Paul Lindahl* (Texas A&M)  
*Whole Cell Mathematical Modeling*

*Suncica Canic* (University of Houston)  
*Mathematical Methods for Cardiovascular Stenting*

*Carlos Bustamante* (Stanford)  
*Complete Genome Sequencing and Analysis of a Diploid African-American and Mexican-American Genome*
11:30 – 12  Directions of the NSF-NIGMS Program  
Introduction to the Breakout Sessions  
**John Whitmarsh** (NIGMS) & **Tanya Kostova-Vassilevska** (NSF)

12 – 1:30  Lunch

1:30 – 2:30  Keynote Speaker  
**Bin Yu** (UC Berkeley)  
*Seeking Interpretable Models for High Dimensional Data*  
*Chair: Radu Balan* (University of Maryland)

2:30 – 3  Coffee Break

3 – 4  PI Talks  
*Chair: Gregory Chirikjian* (Johns Hopkins)

  - **Samuel Kou** (Harvard)  
    *From Michaelis-Menten to Subdiffusion: the Single Molecule Story*
  - **Mohsin Jafri** (George Mason)  
    *Stochastic Events in Cardiac Excitation-Contraction Coupling*
  - **Robert Eisenberg** (Rush University Medical Center)  
    *Energetic Variational Analysis of Ions in Solutions and Channels*

4 – 4:15  Break

4:15 – 5:15  Breakout Sessions

  - Room 0105  **Gilles Clermont** (University of Pittsburgh)
  - Room 0109  **Robert Dillon** (Washington State)
  - Room 1105  **Jacquelyn Fetrow** (Wake Forest)
  - Room 1109  **Lora Billings** (Montclair State)
  - Room 1123  **Jay Breidt** (Colorado State)
  - Room 2110  **John Fricks** (Penn State)

5:15 – 5:30  Break

5:30 – 7  Reception & Poster Session

7  Dinner
Tuesday, April 27

7:30 – 8:30  Registration & Breakfast

8:30 – 9:30  Keynote Speaker
Philip Maini (Oxford)
*Modelling Aspects of Cancer Progression and Therapy*
Chair: Larry Taber (Washington University)

9:30 – 10:30  PI Talks
Chair: Meera Sitharam (University of Florida)

David Hunter (Penn State University)
*Statistical Inference to Advance Network Models in Epidemiology*

Christine Heitsch (Georgia Tech)
*Strings, Trees, and RNA Folding*

Erik Herzog (Washington University)
*Wavelet Analysis Reveals Period Wandering in Circadian Neurons*

10:30 – 11  Coffee Break

11 – 12  Presentations of Panel Leaders
Chair: L. Ridgway Scott (University of Chicago)

12 – 1:30  Lunch

1:30 – 2:30  PI Talks
Chair: Qing Nie (UC Irvine)

John Doyle (Caltech)
*Universal Architectures of Robust Networks*

Abel Rodriguez (University of California Santa Cruz)
*Bayesian Protein Structure Alignment*

Fengzhu Sun (University of Southern California)
*Protein Interaction Networks and Their Applications*

2:30 – 3  Coffee Break

3 – 4  Panel of Program Officers from Federal Agencies
Officers from Air Force OSR, Army Research Office, NIH, NSF

4  Meeting Ends