



UNIVERSITY OF
MARYLAND



*Joint NSF and NIH Symposium on
Accelerating Mathematical-Biological Linkages*

February 12, 2003

Natcher Conference Center, National Institutes of Health

8:30 Coffee & pastries

9:00 Welcoming Remarks: **Dr. Margaret Palmer**, Professor, University of Maryland

Organizing Committee: National Science Foundation - Drs. Samuel Scheiner & Michael Steuerwalt
National Institutes of Health – Drs. James Cassatt, Michael Marron & John Whitmarsh

9:15 Opening Comments: **Dr. Mary Clutter**, Assistant Director of NSF, Directorate for Biological Sciences
Dr. Michael Gottesman, Deputy Director of Intramural Research, NIH

9:45 Keynote address **Dr. Joel E. Cohen**, Professor and Director of the Laboratory of Populations,
Rockefeller and Columbia Universities

*"Mathematics Is Biology's Next Microscope, Only Better;
Biology Is Mathematics' Next Physics, Only Better"*

10:30 - 10:45 Break

Topic I - Conservation Ecology

Session Chair: Dr. Bob Holt, University of Florida

10:45 - 11:15 **Dr. Michael Neubert**, Woods Hole Oceanographic Institution

"Advancing Our Understanding of Ecological Invasions: Mathematics and Ecological Theory"

11:15 - 11:45 **Dr. Leah Gerber**, Arizona State University

"Understanding Disease Spread Using Models and Population Viability Analysis"

11:45 - 12:00 Open Discussion

12:15 - 1:30 Lunch

Topic 2 - Cell Structure and Function

Session Chair: Dr. Zan Luthey-Schulten, University of Illinois at Urbana-Champaign

1:30 – 2:00 **Dr. Alex Mogilner**, University of California, Davis

"Mathematics and a Force Balance Model to Understand Mitotic Spindles"

2:00 – 2:30 **Dr. Sharon Lubkin**, North Carolina State University

"Bio-Math Linkages in the Study of Cell and Tissue Structure and Function"

2:30 – 2:45 Open Discussion

2:45 – 3:15

Break

Topic 3 - Bioinformatics and Computational Problems

Session Chair: Dr. De Witt Sumners, Florida State University

3:00 – 3:30

Dr. Chuck Delwiche, University of Maryland

“Bioinformatics and Graphing the history of dinoflagellate gene transfer”

3:30 – 4:00

Monica Hurdal, Florida State University

“Mapping the Human Brain with Mathematical and Computational Modeling”

4:00 – 4:15

Open Discussion

4:15 – 5:30

Panel Discussion: Drs. Bob Holt, Zan Luthey-Schulten, and De Witt Sumners

Summaries by rapporteurs followed by open discussion

URL for information and registration: <http://www.bisti.nih.gov/mathregistration/>

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