

Midwest Quantitative Biology Conference

Mission Point Resort, Mackinac Island, Michigan
September 29 – October 1, 2006

PROGRAM

Friday, September 29

11:00-3:30	Registration	Sound Stage
1:00-2:00	Lunch (box lunches available for 1:28pm Pellston flight arrivals)	Sound Stage
1:55-2:00	<i>Conference Introduction & Welcome</i>	Peter Bates Sound Stage
Structural Biology 1 – Sound Stage		Leslie Kuhn Session Chair
2:00-2:40	<i>Shape and Search in Protein Docking, Using Radial Basis Functions</i>	Arthur Olson, Plenary The Scripps Research Institute
2:40-3:05	<i>Molecular Dynamics of apo-Adenylate Kinase: A Distance Replica Exchange Method for the Free Energy of Conformational Fluctuations</i>	Robert Cukier Michigan State University
3:05-3:30	<i>Role of Conformational Dynamics in Enzymatic Catalysis – A Tale of 6-Hydroxymethyl-7,8-Dihydropterin Pyrophosphokinase</i>	Honggao Yan Michigan State University
3:30-3:55	<i>Implementing Non-Pairwise Statistical Potentials for Computational Protein Design</i>	Jack Snoeyink University of North Carolina, Chapel Hill
3:55-4:15	Refreshment Break	
Systems Biology 1 – Sound Stage		Peter Bates Session Chair
4:15-4:55	<i>Dynamic Clustering in a Model for an Insect's Antennal Lobe</i>	David Terman, Plenary The Ohio State University
4:55-5:20	<i>Resource Quality Dynamics and Its Implications</i>	Yang Kuang Arizona State University
5:20-5:45	<i>Quantitative Modeling of a cis-Regulatory Transcriptional Grammar</i>	David Arnosti Michigan State University
5:45-6:10	<i>Specificity and Robustness in Cell Signaling</i>	Qing Nie University of California, Irvine
6:30	Cash Bar (continuing until 7:30, during dinner)	Atrium Lounge
6:45-8:30	Dinner	Atrium Lounge
	After-dinner Demonstration <i>Tangible Interfaces for Molecular Biology</i>	Arthur Olson The Scripps Research Institute

Saturday, September 30

7:30-8:30	Full Breakfast	Sound Stage
Structural Biology 2 – Sound Stage		Guowei Wei Session Chair
8:30-9:10	<i>Simulations of Complex Biological Systems with Quantum Mechanics and Statistical Mechanics</i>	Weitao Yang, Plenary Duke University
9:10-9:35	<i>Knowledge-based Approaches to Predicting Protein Interface Hot Spots</i>	Julie Mitchell University of Wisconsin, Madison
9:35-10:00	<i>A New Paradigm for Biomolecular Electrostatics</i>	Guowei Wei Michigan State University
10:00-10:25	<i>Improving Protein-ligand Scoring Using a Correlation-based Method</i>	Maria Závodszy Michigan State University
10:25-10:45	Refreshment Break	
Systems Biology 2		Phillip Duxbury Session Chair
10:45-11:25	<i>Homogenized Limits in Visual Transduction: The Role of the Incisures in the Variability of Single Photon Response</i>	Emmanuele DiBenedetto, Plenary Vanderbilt University
11:25-11:50	<i>Temporal and Spatial Specificity of Gene Expression Regulated by Sp1 and Sp3</i>	Moxun Tang Michigan State University
11:50-12:15	<i>Constraint Counting and Flexibility in Protein Networks</i>	Leslie Kuhn Michigan State University
12:15-1:15	Lunch	
1:15-4:30	Free Time	
Systems Biology 3 – Sound Stage		Chichia Chiu Session Chair
4:30-5:10	<i>Dynamics in Genetic Networks</i>	Leon Glass, Plenary McGill University
5:10-5:35	<i>Stability of Intracellular Growth Factor Complexes</i>	Rami Tzafri Massachusetts Institute of Technology
5:35-6:00	<i>Many Numbers at Many Levels: Intradisciplinary Thoughts on Gene Regulatory Networks</i>	Titus Brown Caltech
6:00-6:25	<i>Modeling Signalling Statistics and Selectivity of Cell Death in Heterogeneous Populations</i>	Phillip Duxbury Michigan State University
6:30	Cash Bar (continuing until 7:30, during dinner)	Summit
6:45-7:45	Dinner	Summit
7:45-9:15	Poster Session – with snacks, beverages, and cash bar	Sound Stage

Sunday, October 1

7:30-8:30	Full Breakfast	Sound Stage
Systems Biology 4 – Sound Stage		Moxun Tang Session Chair
8:30-9:10	<i>Nonlinear Dynamics and Systems Biology</i>	Bard Ermentrout, Plenary University of Pittsburgh
9:10-9:35	<i>Using Molecular Data to Estimate the Evolution of Species – Not Just the Phylogeny of Genes</i>	Dennis Pearl The Ohio State University
9:35-10:00	<i>Homology Modeling of a Mixed-Lineage Kinase (MLK3) Involved in Signal Transduction: Theoretical/Experimental Studies</i>	Steve Seibold Michigan State University
10:00-10:25	<i>Computational Methods for Predicting cis-Regulatory Modules</i>	Saurabh Sinha University of Illinois, Champaign-Urbana
10:25-10:45	Refreshment Break	
Structural Biology 3 – Sound Stage		Robert Cukier Session Chair
10:45-11:25	<i>A Framework for Analyzing Topological Folding Barriers in Protein Folding</i>	Todd Yeates, Plenary University of California, Los Angeles
11:25-11:50	<i>Prediction of Lipid Accessibility and Protein-Protein Interaction Sites in Membrane Proteins</i>	Jarek Meller Cincinnati Children's Hospital Research Foundation
11:50-12:15	<i>On the Force Dependence of Biomolecular Conformational Kinetics</i>	Ioan Andricioaei University of Michigan
12:15-12:40	<i>Loop Closure Methods for Proteins</i>	Bill Wedemeyer Michigan State University
12:40-1:40	Lunch (Box lunches available at noon for guests leaving on 2:41pm flight from Pellston)	Sound Stage