

## LIST OF WORKSHOP PARTICIPANTS

### IMA Workshop on Mathematics of DNA Structure, Function, and Interactions

September 16-21, 2007

- Pranav Agarwal, Department of Electrical Engineering, University of Minnesota
- Tanuj Aggarwal, Department of Electrical Engineering, University of Minnesota
- Ramzi Alsallaq, Institute of Molecular Biophysics, Florida State University
- Douglas N. Arnold, School of Mathematics, University of Minnesota
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- Nathan A. Baker, Department of Biochemistry and Molecular Biophysics, Washington University School of Medicine
- Daniel J. Bates, Institute for Mathematics and its Applications, University of Minnesota
- Peter W. Bates, Department of Mathematics, Michigan State University
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- Craig John Benham, UC Davis Genome Center, University of California, Davis
- Meredith Betterton, Department of Physics, University of Colorado
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- John Bida, Biochemistry Department, Mayo Clinic
- Betül Bilgin, University of Minnesota
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- Richard J. Braun, Department of Mathematical Sciences, University of Delaware
- Dorothy E. Buck, Department of Mathematics, Imperial College London
- Gregory Buck, Department of Mathematics, Saint Anselm College
- Maria-Carme T. Calderer, School of Mathematics, University of Minnesota

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- Bernard D. Coleman, School of Engineering, Rutgers University
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- John Crow, University of Minnesota
- Feng Cui, National Institutes of Health
- Jeremy Curuksu, School of Engineering and Science, Jacobs University
- Luke Czapla, Department of Chemistry and Chemical Biology, Rutgers University
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- Melanie DeVries, Department of Mathematics, University of Iowa
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- Christine E. Heitsch, School of Mathematics, Georgia Institute of Technology
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- Peter Hinow, Institute for Mathematics and its Applications, University of Minnesota
- Xia Hua, Department of Mathematics, Massachusetts Institute of Technology
- Richard D. James, Department of Aerospace Engineering and Mechanics, University of Minnesota
- Makkuni Jayaram, Section of Molecular Genetics and Microbiology, University of Texas at Austin
- Tiefeng Jiang, Department of Statistics, University of Minnesota
- Jason D. Kahn, Department of Chemistry and Biochemistry, University of Maryland
- George Karypis, Department of Computer Science and Engineering, University of Minnesota

- Alex Kasman, Department of Mathematics, College of Charleston
- Christopher Kauffman, Department of Computer Science, University of Minnesota
- Christine A. Kelley, Department of Mathematics, Ohio State University
- Soojeong Kim, Department of Mathematics, University of Iowa
- Debra Knisley, Department of Mathematics, East Tennessee State University
- Mark Kon, Department of Mathematics and Statistics, Boston University
- Christian E. Laing, Department of Mathematics, Chemistry, New York University,
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- Richard Lavery, Laboratoire de Biochimie Théorique, Centre National de la Recherche Scientifique (CNRS)
- Stephen D. Levene, Department of Molecular and Cellular Biology, University of Texas at Dallas
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- Sookkyung Lim, Department of Mathematical Sciences, University of Cincinnati
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- Laura Lurati, Institute for Mathematics and its Applications, University of Minnesota
- James Maher, Mayo Clinic
- Jennifer Mann, Department of Mathematics, University of Texas
- John F. Marko, Department of Physics and Astronomy and Department of Biochemistry, Molecular Biology and Cell Biology, Northwestern University
- Kyle McQuisten, Department of Mathematics, University of Iowa
- Ezra Miller, School of Mathematics, University of Minnesota
- Willard Miller, Jr., School of Mathematics, University of Minnesota
- Kenneth C. Millett, Department of Mathematics, University of California, Santa Barbara
- Hyeyoung Moon, Department of Mathematics, University of Iowa
- Maria Giovanna Mora, Department of Mathematics, International School for Advanced Studies (SISSA/ISAS)

- Tolkynay Myrzakul, Physics Department, Kazakh Al-Farabi State National University
- Junalyn Navarra-Madsen, Department of Mathematics and Computer Science, Texas Woman's University
- Timothy Newman, Department of Physics, Arizona State University
- Olalla Nieto Faza, Department of Chemistry, University of Minnesota
- Duane Nykamp, School of Mathematics, University of Minnesota
- Wilma K. Olson, Department of Chemistry and Chemical Biology, Rutgers University
- Isamu Onishi, Department of Mathematical and Life Sciences, Hiroshima University
- John Oprea, Department of Mathematics, Cleveland State University
- Hans G. Othmer, Department of Mathematics, University of Minnesota
- Jinhae Park, Department of Mathematics, Purdue University
- Ariel Prunell, Genome Biology, Institut Jacques Monod
- Teresita Ramirez-Rosas, Department of Mathematics, University of California, Santa Barbara
- Graham L. Randall, Department of Molecular Virology and Microbiology, Baylor College of Medicine
- Huzefa Rangwala, Department of Computer Science, University of Minnesota
- Eric J. Rawdon, Department of Mathematics, University of St. Thomas
- Dale Rolfsen, Department of Mathematics, University of British Columbia
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- Andrew Travers, LBPA, Institut d'Alembert, ENS de Cachan
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- Alexander Vologodskii, Department of Chemistry, New York University
- Haiyan Wang, Department of Mathematical Sciences and Applied Computing, Arizona State University
- Zhian Wang, Institute for Mathematics and its Applications, University of Minnesota
- Annika Wedemeier, Biophysics of Macromolecules Department, German Cancer Research Center
- Guowei Wei, Department of Mathematics, Michigan State University
- Shimon Weiss, Department of Chemistry and Biochemistry, University of California, Los Angeles
- Jonathan Widom, Department of Chemistry, Northwestern University
- Peng Wu, Rockefeller University
- Zhijun Wu, Department of Mathematics, Iowa State University
- Yanji Xu, Minnesota Supercomputing Institute
- Lynn Zechiedrich, Department of Molecular Virology and Microbiology, Baylor College of Medicine
- Hongchao Zhang, Institute for Mathematics and its Applications, University of Minnesota
- Guohui Zheng, Department of Chemistry and Chemical Biology, Rutgers University
- Victor B. Zhurkin, Laboratory of Cell Biology, National Cancer Institute

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- 1997–1998 Emerging Applications of Dynamical Systems
- 1998–1999 Mathematics in Biology
- 1999–2000 Reactive Flows and Transport Phenomena
- 2000–2001 Mathematics in Multimedia
- 2001–2002 Mathematics in the Geosciences
- 2002–2003 Optimization
- 2003–2004 Probability and Statistics in Complex Systems: Genomics, Networks, and Financial Engineering
- 2004–2005 Mathematics of Materials and Macromolecules: Multiple Scales, Disorder, and Singularities
- 2005–2006 Imaging
- 2006–2007 Applications of Algebraic Geometry
- 2007–2008 Mathematics of Molecular and Cellular Biology
- 2008–2009 Mathematics and Chemistry
- 2009–2010 Complex Fluids and Complex Flows
- 2010–2011 Simulating Our Complex World: Modeling, Computation and Analysis

### **IMA SUMMER PROGRAMS**

- 1987 Robotics
- 1988 Signal Processing
- 1989 Robust Statistics and Diagnostics
- 1990 Radar and Sonar (June 18–29)  
New Directions in Time Series Analysis (July 2–27)
- 1991 Semiconductors
- 1992 Environmental Studies: Mathematical, Computational, and Statistical Analysis
- 1993 Modeling, Mesh Generation, and Adaptive Numerical Methods for Partial Differential Equations
- 1994 Molecular Biology
- 1995 Large Scale Optimizations with Applications to Inverse Problems, Optimal Control and Design, and Molecular and Structural Optimization
- 1996 Emerging Applications of Number Theory (July 15–26)  
Theory of Random Sets (August 22–24)
- 1997 Statistics in the Health Sciences
- 1998 Coding and Cryptography (July 6–18)  
Mathematical Modeling in Industry (July 22–31)
- 1999 Codes, Systems, and Graphical Models (August 2–13, 1999)
- 2000 Mathematical Modeling in Industry: A Workshop for Graduate Students (July 19–28)
- 2001 Geometric Methods in Inverse Problems and PDE Control (July 16–27)
- 2002 Special Functions in the Digital Age (July 22–August 2)

- 2003 Probability and Partial Differential Equations in Modern Applied Mathematics (July 21–August 1)
- 2004 n-Categories: Foundations and Applications (June 7–18)
- 2005 Wireless Communications (June 22–July 1)
- 2006 Symmetries and Overdetermined Systems of Partial Differential Equations (July 17–August 4)
- 2007 Classical and Quantum Approaches in Molecular Modeling (July 23–August 3)
- 2008 Geometrical Singularities and Singular Geometries (July 14–25)
- 2009 Nonlinear Conservation Laws and Applications (July 13–31)

### **IMA “HOT TOPICS/SPECIAL” WORKSHOPS**

- Challenges and Opportunities in Genomics: Production, Storage, Mining and Use, April 24–27, 1999
- Decision Making Under Uncertainty: Energy and Environmental Models, July 20–24, 1999
- Analysis and Modeling of Optical Devices, September 9–10, 1999
- Decision Making under Uncertainty: Assessment of the Reliability of Mathematical Models, September 16–17, 1999
- Scaling Phenomena in Communication Networks, October 22–24, 1999
- Text Mining, April 17–18, 2000
- Mathematical Challenges in Global Positioning Systems (GPS), August 16–18, 2000
- Modeling and Analysis of Noise in Integrated Circuits and Systems, August 29–30, 2000
- Mathematics of the Internet: E-Auction and Markets, December 3–5, 2000
- Analysis and Modeling of Industrial Jetting Processes, January 10–13, 2001
- Special Workshop: Mathematical Opportunities in Large-Scale Network Dynamics, August 6–7, 2001
- Wireless Networks, August 8–10 2001
- Numerical Relativity, June 24–29, 2002
- Operational Modeling and Biodefense: Problems, Techniques, and Opportunities, September 28, 2002
- Data-driven Control and Optimization, December 4–6, 2002
- Agent Based Modeling and Simulation, November 3–6, 2003
- Enhancing the Search of Mathematics, April 26–27, 2004
- Compatible Spatial Discretizations for Partial Differential Equations, May 11–15, 2004
- Adaptive Sensing and Multimode Data Inversion, June 27–30, 2004
- Mixed Integer Programming, July 25–29, 2005

- New Directions in Probability Theory, August 5–6, 2005
- Negative Index Materials, October 2–4, 2006
- The Evolution of Mathematical Communication in the Age of Digital Libraries, December 8–9, 2006
- Math is Cool! and Who Wants to Be a Mathematician?, November 3, 2006
- Special Workshop: Blackwell-Tapia Conference, November 3–4, 2006
- Stochastic Models for Intracellular Reaction Networks, May 11–13, 2008
- Multi-Manifold Data Modeling and Applications, October 27–30, 2008
- Mixed-Integer Nonlinear Optimization: Algorithmic Advances and Applications, November 17–21, 2008
- Higher Order Geometric Evolution Equations: Theory and Applications from Microfluidics to Image Understanding, March 23–26, 2009
- Career Options for Women in Mathematical Sciences, April 2–4, 2009
- MOLCAS, May 4–8, 2009
- IMA Interdisciplinary Research Experience for Undergraduates, June 29–July 31, 2009

### **SPRINGER LECTURE NOTES FROM THE IMA:**

*The Mathematics and Physics of Disordered Media*

Editors: Barry Hughes and Barry Ninham  
(Lecture Notes in Math., Volume 1035, 1983)

*Orienting Polymers*

Editor: J.L. Ericksen  
(Lecture Notes in Math., Volume 1063, 1984)

*New Perspectives in Thermodynamics*

Editor: James Serrin  
(Springer-Verlag, 1986)

*Models of Economic Dynamics*

Editor: Hugo Sonnenschein  
(Lecture Notes in Econ., Volume 264, 1986)