

SIAM Life Sciences Meeting  
Boston Park Plaza Hotel  
Boston, Massachusetts  
4-6 March 2002

## FINAL TECHNICAL REPORT

The First SIAM Conference on Life Sciences was held in Boston, MA, from March 6-8, 2002. The conference enjoyed participation from outstanding research groups from both the United States as well as from overseas. The highlight of the meeting was the outstanding talks given by the 7 invited speakers:

Wednesday, March 6

8:30 AM - 9:30 AM

IP1 Functional Imaging in Space and Time  
Bruce R. Rosen, Harvard Medical School

1:00 PM - 2:00 PM

IP2 A New Dimension to DNA Sequence Analysis  
Wilma K. Olson, Rutgers University

Thursday, March 7

8:30 AM - 9:30 AM

IP4 Spatio-Temporal Pattern Formation in Neuronal Networks  
G Bard Ermentrout, University of Pittsburgh

1:00 PM - 2:00 PM

IP5 Mathematical Models of Progression and Therapy of the HIV Infected Immune System  
Glenn Webb, Vanderbilt University

4:45 PM - 5:45 PM

IP6 A Mathematical Approach to the Self-nonsel Problem of Immunology and T-Cell Repertoires  
David Rand, University of Warwick, United Kingdom

Friday, March 8

8:30 AM - 9:30 AM

IP7 The Mechanism and Dynamics of Defibrillation  
James P. Keener, University of Utah

1:00 PM - 2:00 PM

## **DISCLAIMER**

**This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency Thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.**

## **DISCLAIMER**

**Portions of this document may be illegible in electronic image products. Images are produced from the best available original document.**

IP8 Transformation of the Life Sciences Through Deep Computing  
William Pulleyblank, IBM T.J. Watson Research Center

Surveyed feedback from the almost 300 attendees gave a strong positive impression of these sessions.

Organizing Committee

James Collins (Chair), Boston University  
Carson Chow, University of Pittsburgh  
Bijoy Ghosh, Washington University  
Kevin Hall, Entelos, Inc.  
Wing Hung Wong, University of California, Los Angeles  
Clem Karl, Boston University  
Denise Kirschner, University of Michigan, Ann Arbor  
Mark Lewis, University of Utah  
Martin Nowak, Institute for Advanced Study  
Sharon Nunes, IBM Computational Biology Center  
Tamar Schlick, Courant Institute of Mathematical Sciences, New York University  
Rai Winslow, Johns Hopkins University

Each of the 7 speakers was invited by someone on this committee. In addition, the members of the organizing committee were central to organizing the 32 minisymposia. The program also included 145 poster presentations of high quality.

The conference themes included; Ecology, Environmental and Evolutionary, Biology, Genomics, Imaging, Neuroscience, Physiology and Immunology, Structural Biology, Modeling Diseases, and Biomathematics in Industry.

Submitted by:

Jim J. Collins  
University Professor  
Professor of Biomedical Engineering  
Co-Director, Center for BioDynamics  
Boston University  
44 Cummington Street, Boston, MA 02215  
Tel: 617-353-0390, Fax: 617-353-5462, email: jcollins@bu.edu