

**Frontiers of Biomolecular Engineering:**  
**A Symposium Celebrating Temple Smith's Retirement & Emeritus Appointment**  
**September 25, 2009**

8:30 am Opening Remarks – **David Campbell, PhD**, Provost, Boston University

**SESSION #1** **Franco Cerrina, Professor & Chair, Dept. of Electrical & Computer Engineering, moderator**

8:45 am Engineering Self-Assembled Nanoscaled Lipid Bilayers for the Study of Membrane Protein Structure and Function  
**Stephen Sligar, PhD**, *Director, School of Molecular and Cellular Biology, I.C. Gunsalus Professor of Biochemistry, University of Illinois Urbana-Champaign*

9:20 Euler's Konigsberg Bridges and DNA Sequence Assembly  
**Michael Waterman, PhD**, *University Professor; USC Associates Chair in Natural Sciences; and Professor of Biological Sciences, Computer Science and Mathematics, University of Southern California*

9:55 Transcriptional Complexity in the Human Cell  
**Roderic Guigó, PhD**, *Coordinator, Bioinformatics and Genomics Program, Centre de Regulació Genòmica, Barcelona, Spain*

10:30 **Break**

**SESSION #2** **Jim Collins, Professor, Dept. of Biomedical Engineering, moderator**

10:55 Systems Biology and Systems Medicine: Catalyzing the Transformation from Reactive to P4 Medicine (predictive, personalized, preventive and participatory)  
**Lee Hood, MD, PhD**, *President and Co-Founder, Institute for Systems Biology, Seattle*

11:30 Machine Learning and P53 Cancer Rescue Mutants  
**Rick Lathrop, PhD**, *Professor, Computer Science Department, Donald Bren School of Information and Computer Sciences, University of California, Irvine*

12:05 The Dynamic Programming of DNA in Cells  
**George Church, PhD**, *Professor of Genetics, Director of the Center for Computational Genetics, Harvard Medical School*

12:40 pm **Lunch on your own**

**SESSION #3** **James Galagan, Associate Professor, Dept. of Biomedical Engineering, moderator**

2:00 Genetics, microRNA and the Complexity of Disease: Is it Converging?  
**David Galas, PhD**, *Senior Vice President for Strategic Partnerships, Institute for Systems Biology, Seattle*

2:35 Targeted Therapies - Target What and How  
**Xiaolin Zhang, PhD**, *Vice President and Head of AstraZeneca Innovation Center China (ICC) Shanghai, China*

3:10 Genome-wide Genetic Variant Detection with Affymetrix® Microarrays  
**Teresa A. Webster, PhD**, *Principal Biostatistician, Affymetrix, Inc.*

3:45 **Break**

SESSION #4 Daniel Segré, Assistant Professor, Dept. of Biology, moderator

- 4:10 Identifying Long Range Correlations in Proteins using HMMs and Physical Energy Functions  
**Collin M. Stultz, MD, PhD**, *W. M. Keck Associate Professor of Biomedical Engineering at Massachusetts Institute of Technology, MIT*
- 4:45 Genomes on the Fly  
**William M. Gelbart, PhD**, *Professor of Molecular and Cellular Biology, Harvard University*
- 5:20 Concluding Remarks – **Ken Lutchen, PhD**, Dean, College of Engineering
- 5:30 Cocktail reception