

SOUTH CAROLINA BIOINFORMATICS SYMPOSIUM

APRIL 14-15, 2009
COLUMBIA METROPOLITAN CONVENTION CENTER
COLUMBIA, SC

PRELIMINARY PROGRAM

TUESDAY MORNING, APRIL 14, 2009

- 8:00 - 8:30 AM **Registration and Poster Setup**
- 8:30 **Bioinformatics and Bioengineering Symposia Joint Session:
Perspective on Collaborative Science in South Carolina**
Chairs: Scott Argraves (Bioinformatics Chair – MUSC)
 Roger Markwald (Bioengineering Co-Chair – MUSC)
 Richard Swaja (Bioengineering Co-Chair – SCBA)
- 8:45 **Bioinformatics Keynote:** Brian D. Athey, Ph.D., *Professor*, Department of
Psychiatry and Department of Internal Medicine Center for Computational
Medicine and Biology (CCMB), University of Michigan Medical School
- 9:15 **Bioengineering Keynote:** Wolf von Maltzahn, Ph.D., *Professor and Acting
Vice President for Research and Bioengineering*, Rensselaer Polytechnic
Institute
- 9:45 Break
- 10:15 **Collaborative Science: Regional and National Perspectives**
Kenneth Wingate, *Chair* of SC Commission on Higher Education (Invited)
James Barker, FAIA, *President*, Clemson University
Raymond S. Greenberg, M.D., Ph.D., *President*, Medical University of South
Carolina
Harris Pastides, Ph.D. *President*, University of South Carolina
- 11:00 **Bioengineering: Bridging the Sciences**
Semahat Demir, Ph.D., *Director* Bioengineering NSF
- 11:20 **Bioinformatics: Opportunities and Directions**
Karin Remington, Ph.D., *Chair* NIH BISTI Consortium
- 11:45 Lunch Break and Poster Viewing

TUESDAY AFTERNOON, APRIL 14, 2009 - Session A

- 1:30 - 4:30 PM **South Carolina Bioinformatics Infrastructure**
Chair:
- 1:30 *An IT Infrastructure to Support Clinical and Translational Research Across South Carolina - Progress.*
Iain C. Sanderson, M.D. Chief Medical Information Officer (CMIO), Medical University of South Carolina
- 2:00 *A Look at Discovery Informatics - An Exciting Area of Study and B.S. Degree.*
Renee McCauley, Ph.D., Computer Science, College of Charleston
- 2:30 *Cyberinfrastructure EcoSystem for South Carolina.*
Jill Gemmill, Ph.D., Clemson Computing and Information Technology, Clemson University
- 3:00 Break
- 3:30 *Medical Informatics Support for Clinical Research - Challenges and Options.*
Dr. Wenle Zhao, Ph.D., Biostatistics, Bioinformatics and Epidemiology, Medical University of South Carolina
- 4:00 **Open slot**

TUESDAY AFTERNOON, APRIL 14, 2009 - Session B

- 1:30 - 4:30 PM **Bioinformatics Tool Building: Database and Algorithm Development**
Chair:
- 1:30 *Construction and Tool Building for the Marine Genomics Database.*
Stephen Ficklin, Ph.D., Clemson University Genomics Institute
- 2:00 *Evaluating The Functional Coherence of Gene Sets With a Gene Ontology Graph-Based Approach.*
Adam Richards, Department of Biostatistics, Bioinformatics and Epidemiology, Medical University of South Carolina
- 2:30 *Evaluation Of Genome-Wide Association Study Results Through Development of Ontology Fingerprint.*
W. Jim Zheng, Ph.D., Department of Biostatistics, Bioinformatics and Epidemiology, Medical University of South Carolina
- 3:00 Break
- 3:30 *LEAP, A Computational Tool For Sliding Window Analysis and Visualization Of Array CGH Data.*
Chin-Fu Chen, Ph.D., Department of Genetics & Biochemistry, Clemson University
- 4:00 *Practical De Novo Sequencing: An Information Theoretic Approach.*

John R. Rose, Ph.D., Department of Computer Science and Engineering,
University of South Carolina

4:30 - 6:00 Poster Session
6:00 Adjourn for the Day

WEDNESDAY MORNING, APRIL 15, 2009

8:30 - 11:30 AM ***Advancing Discovery Through Applied Bioinformatics***

8:30 *Recognizing Patterns In Gene Expression Profiles Using Artificial Intelligence Algorithms.*
Robert Chapman, Ph.D., South Carolina Department of Natural Resources
Marine Resources Research Institute

9:00 *Development of The Fagaceae Genomics Web.*
Margaret E. Staton, Ph.D., Clemson University Genomics Institute

9:30 *Multiple Structure Alignment, its Applications in Discovery of Active Sites and Protein Engineering.* Homayoun Valafar, Ph.D., Department of
Computer Science and Engineering, University of South Carolina

10:00 Break

10:30 *Health Classification in California Sea Lions Using Cross Species Applications of Oligonucleotide Microarrays.*
Jimmy Ryan, Ph.D., National Ocean Service, NOAA

11:00 *Revealing The Role Of Phytosphingosine-1-Phosphate In Regulating HAP-Complex-Mediated Gene Regulation by An 'Integromics' Approach.*
Xinghua Lu, Ph.D., Department of Biostatistics, Bioinformatics and
Epidemiology, Medical University of South Carolina

11:30 Adjourn Symposium