10AM-12 PM  
Session 1

**Genome Evolution** Chairs: Yuri Wolf and Lakshminarayan Iyer

**Max Burroughs** – The ubiquitin modification system: lessons for the evolution of protein modification systems

**Alex Lobkovsky** - Probing the mechanisms that shape the diversity of prokaryotes' gene repertoires

**Pere Puigbo** - Thinking in phylogenetic forests

**Eugene Koonin** - Comparative genomics rewrites evolution textbooks: a “postmodern synthesis” of Evolutionary Biology?

1PM-3PM  
Session 2

**Challenges in the comparative analysis of biomolecular sequences and structures**

Chairs: Mileidy Gonzalez Delgado and Aron Marchler-Bauer

**Stephen Altschul** - Dirichlet Mixtures and the Topography of Amino Acid Multinomial Space

**E. Michael Gertz** - Structure modeling of disease-causing human mutations in the interleukin-10 and interleukin-21 receptors

**Yongmei Pan** - Characterizing the protein-ligand interactions of the Cdc2-like kinase 4 (Clk4) chemical probe through molecular modeling

**Tom Madej** - A novel method for structural comparison of biological assemblies

3:30PM-5:30PM  
Session 3

**Biomedical Data Analysis: Text Mining, Topic Modeling, and Network Analysis** Chairs: Yoo-Ah Kim and Zhiyong Lu

**Haibin Liu** - Generalizing an Approximate Subgraph Matching-based System to Extract Events in Molecular Biology and Cancer Genetics

**Chih-Hsuan Wei** - Text Mining for Biocuration: automatic tools for annotating bio-entities from literature

**Dong-Yeon Cho** - Dissecting Cancer Heterogeneity with a Probabilistic Genotype-Phenotype Model

**Alexsandar Stojmirovic** - ITM Probe: a framework for information flow in networks