

# Research Computing Day 2011

## *Big Data and HPC*

### Research Computing Day September 15, 2011\*

**8:30 - 9:00**      **Registration**

**9:00 - 10:45**    **Welcome and Keynotes**

*Sustaining and Growing Research Computing Services at a Research University*

Ruth Marinshaw, Asst. Vice Chancellor  
Research Computing, ITS, UNC

*Galaxy: A Web-based Platform for Accessible, Reproducible, and Transparent High-throughput Biology*

Jeremy Goecks, PhD, Research Fellow  
in Taylor Lab at Emory University

**10:45 - 11:45**    **UAB IT Updates**

*Research Computing Services Update  
Strategic Plan for Research Community*

**11:45 - 1:15**      **Lunch and Poster Session**

**1:15 - 3:20**      **Biomedical Sciences and Engineering Applications**

*Genotype Calling for Next-gen Sequencing Data*

*Preferred Odorant Binding Sites and Olfactory Receptor Function*

*Challenges in Data Acquisition, Storage, and Processing for NIH Funded Studies*

*The Web of Linked Data and Informatics for the One Computer*

**3:20 - 4:30**      **Science and Engineering Applications**

*TAH - Update and Using the UAB MatLab Campus License*

*Computing in Network Modeling*

*Improving Application Performance*

### UAB HPC Bootcamp September 16, 2011\*

**8:30 - 9:00**      **Registration**

**9:00 - 9:05**      **Opening Remarks**

John-Paul Robinson,  
System Architect, ITRC

**9:05 - 11:00**    **Galaxy Introduction Next Generation Sequencing Analysis**

*Logging in and uploading data to Galaxy*

*NGS Genome Sequencing Analysis*

*NGS Transcriptome Sequencing Analysis (RNAseq)*

*Galaxy Workflows & Advanced Topics*

**11:00 - 1:00**    **Lunch on your own**

**1:00 - 2:10**      **Research Computing Resources Session**

*Overview of Research Computing Resources*

*Using Git for Development*

*Hadoop on Cheaha*

**2:10 - 3:20**      **Developing Research Computing Solutions Session**

*Scientific Python Programming and Application Performance*

*RESTful Web Service Interfaces*

*MatLab for Managing Workflows*