

Cornell University  
Center for Advanced Computing



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**Welcome!**

# **Parallel Computing on Ranger and Longhorn**

May 16-17, 2012



## Center for Advanced Computing (CAC)

- Mission:
  - *To Enable the Success of Cornell Researchers, Collaborators, and Supporters whose Work Demands Advanced-Computing Solutions*
- Organization:
  - Cornell core facility
  - Staff of expert consultants, systems administrators & programmers
  - CAC Director reports to the Vice Provost for Research-
  - CAC has a Faculty Oversight Committee, chaired by VPR
    - Includes leaders in the fields of engineering, life sciences, social sciences, computer science, & business



## CAC Services

- Maintenance and support of general-purpose, high-performance computing systems
  - <http://www.cac.cornell.edu/services/HPCsystemsList.aspx>
  - Faculty and research group assistance in the preparation of proposals
- Research project participation and consulting
  - Parallel code development/optimization/extensive debugging or development
  - Database design, implementation and maintenance
  - Develop pipelines for data intensive research

## ranger.tacc.utexas.edu

- Ranger is a open science research XSEDE resource built and operated by TACC as the first of the new NSF Track2 HPC acquisitions.
- <http://www.tacc.utexas.edu/resources/hpc>
- Operating System: Linux
  - Number of Nodes: 3,936
  - Number of Processing Cores: 62,976
  - Total Memory: 123TB
  - Peak Performance: 579.4TFlops
  - Total Disk: 1.73PB (shared)  
31.4TB (local)



# Computing Accounts

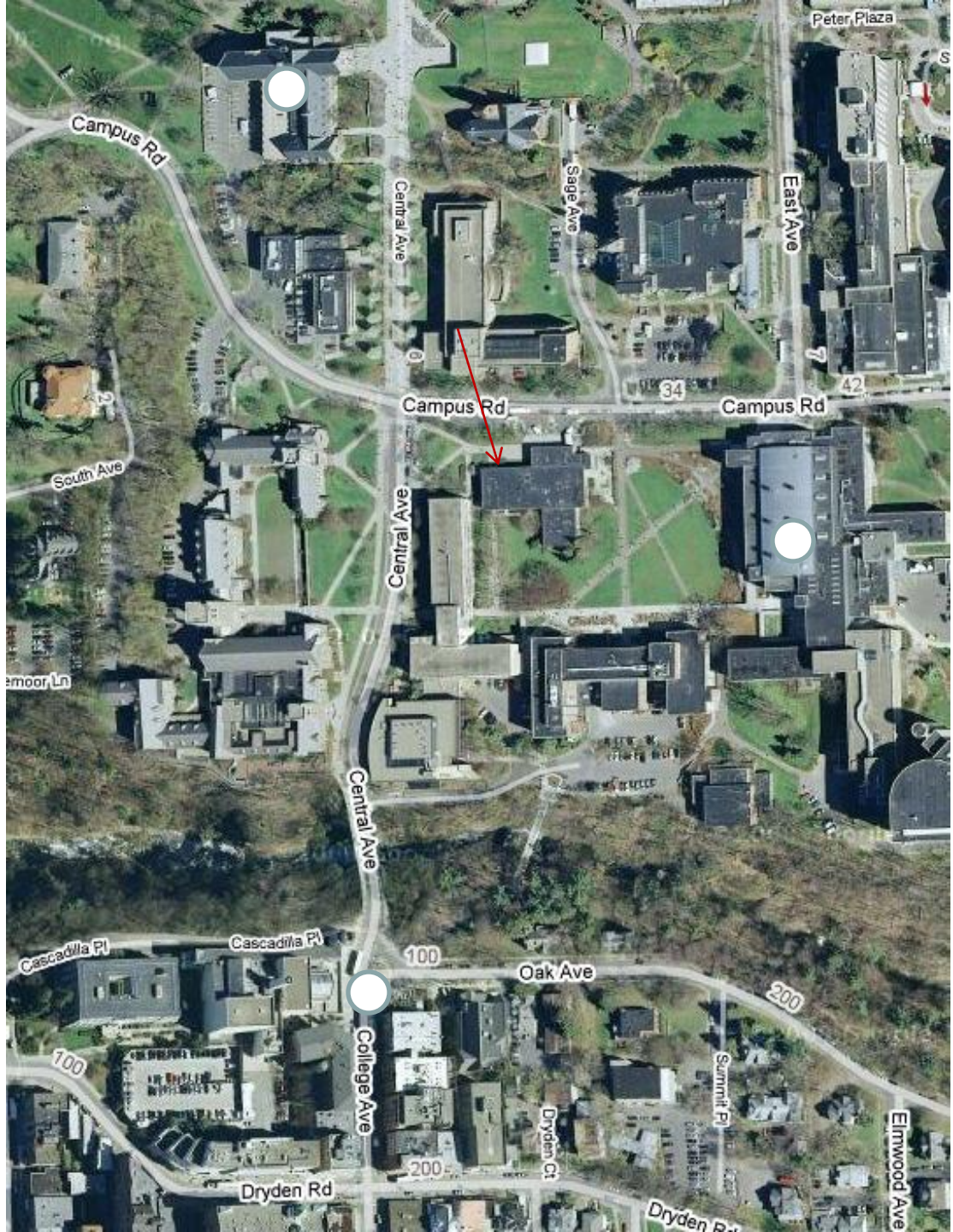
- Workshop/training accounts
  - Access to [ranger.tacc.utexas.edu](http://ranger.tacc.utexas.edu) and [longhorn.tacc.utexas.edu](http://longhorn.tacc.utexas.edu)
  - ssh required
  - Account will be deleted after one week
- XSEDE Allocations
  - PIs may request Startup, Education, or Research allocations.
  - <https://portal.xsede.org/>
  - Go to Allocations tab
- CAC Services
  - PI may set up projects for
    - compute time
    - consulting time
    - Maintenance
    - Storage
    - Red Cloud
  - <http://www.cac.cornell.edu/services/>



# Workshop Logistics

- Refreshments
  - Morning and afternoon breaks provided
  - No food or beverages permitted in training room
  - Lunch on your own
- Restrooms
- Room access









# Workshop Web Page

<http://www.cac.cornell.edu/education/training/parallelMay2012.aspx>

- Agenda
- Lecture slides
- Links