

# Overview of TACC

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Your instructors

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# So where is TACC?



# How do you get to TACC?



# Pickle Campus

Formerly Balcones Research Center,  
location of some of the best wildflowers in Austin.



# TACC

- Started in 2001 with 10-ish people
- History goes back approx 15 years.
- First major supercomputer in 2008: Ranger.

# TACC now

- 130-ish people, divided in Systems, High Performance Computing, Big Data, Visualization, Outreach (and more) groups.
- 15 platforms
- 200 public data collections
- 30 web portals with 35k users
- new 10MWatt data center
- second new building in 10 years

# Stampede

- Our current biggest machine: cost \$50M
- 6400 nodes with 2 Intel Sandybridge and 1 Intel Xeon Phi
- (also 100 or so GPUs)
- 75 miles of cabling, up to 4.5Mwatt power
- Used by 5000 users, up 98% of the time, so far 6 million jobs

# Stampede



# Stampede cabling



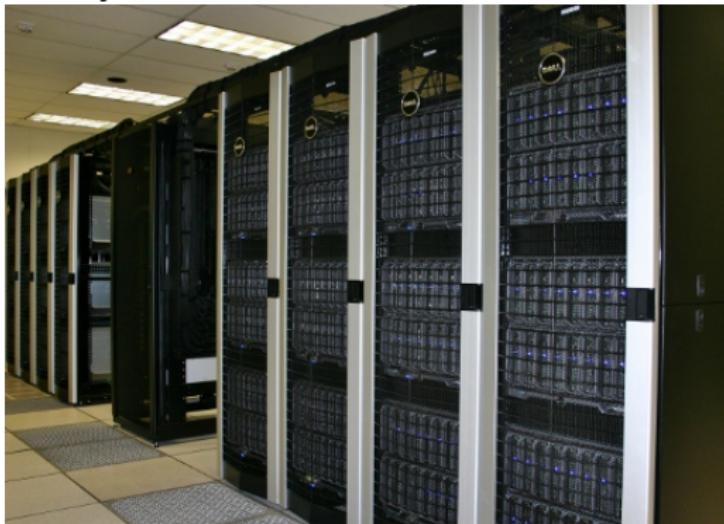
# Maverick

GPU machine



# Lonestar4

Finally been turned off . . .



(Want to guess how much a computer costs? How long it stays operational?)

# Lonestar5

Our new Cray



# Hikari



# Hikari cooling



# Big data

- Wrangler: big data machine with lots of SSDs
- Rustler: hadoop cluster
- Stockyard: 20Pbyte spinning disc (shared between all clusters)
- Ranch: 50Pbyte of tape

# Wrangler



# Clouds

- Rodeo: early cloud machine
- Chameleon: cloud research
- Jetstream: for educational use

# Jetstream



# Catapult

Microsoft FPGA machine learning platform

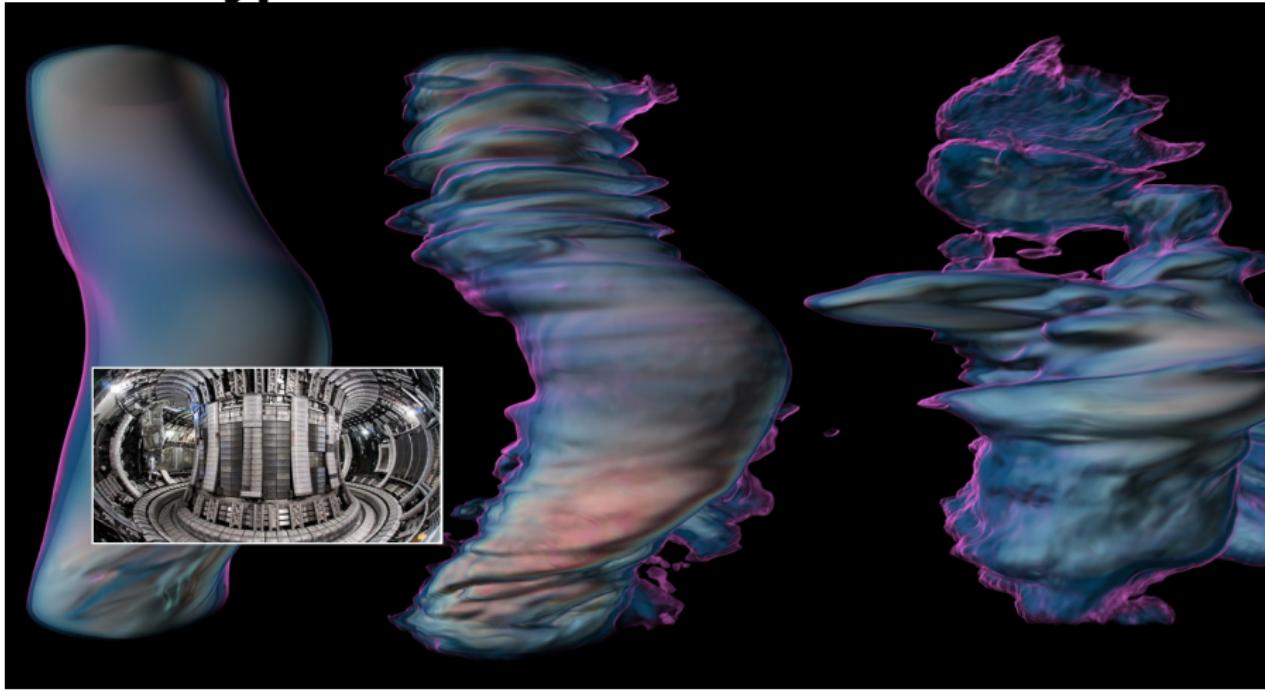


# Stockyard

Mass storage



# Typical academic customer



# Non-typical academic customer



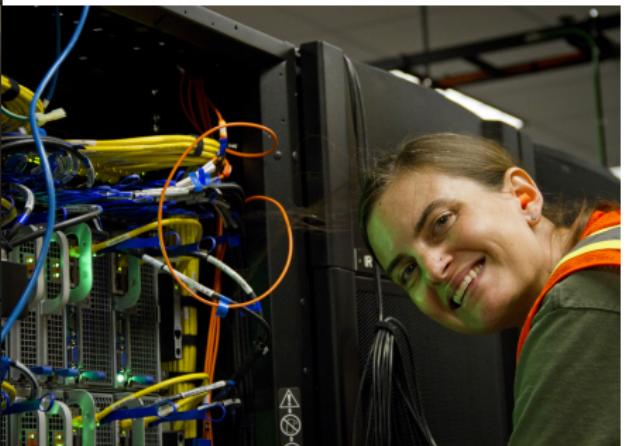
# Typical non-academic customer



# We're very hands-on



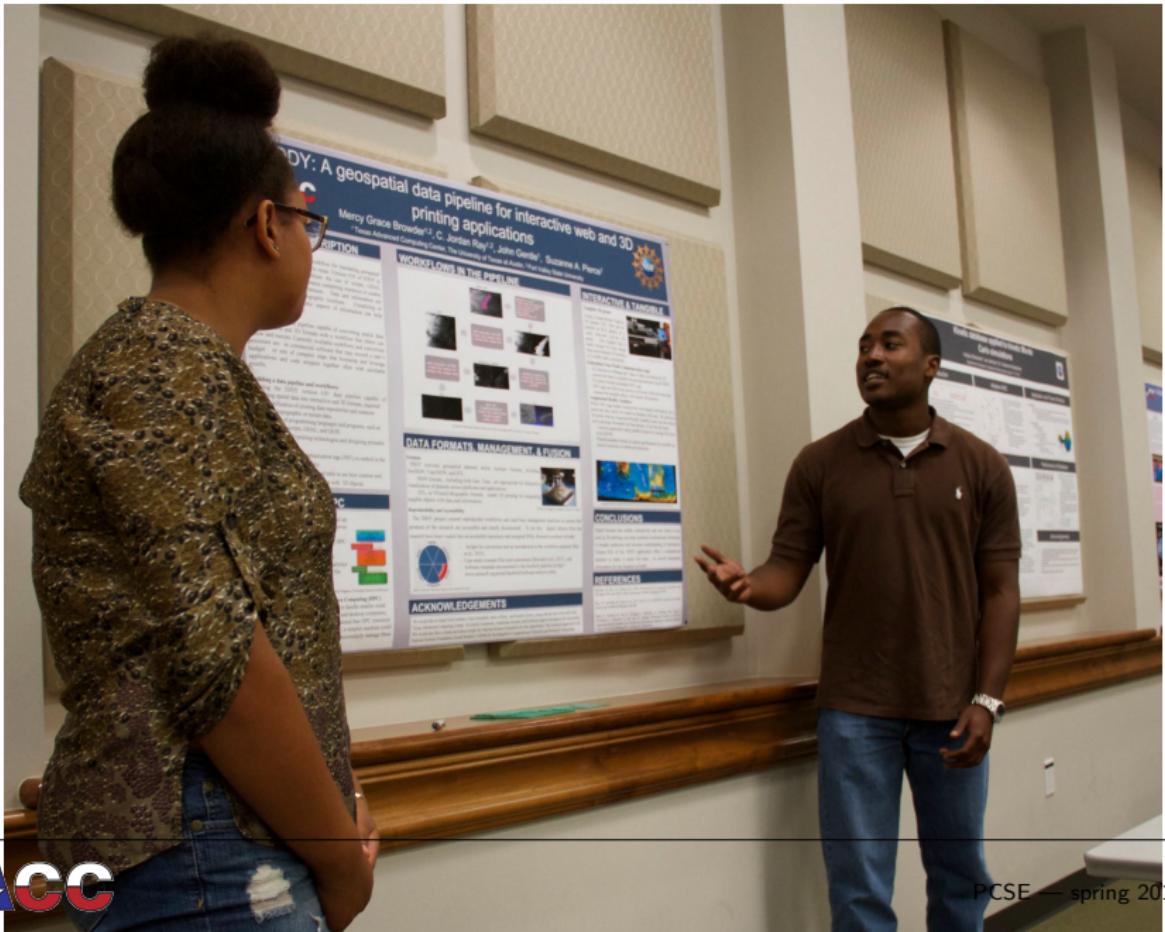
# We're very hands-on



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# Student activities: REU



# Student cluster competition



**OVERALL WINNER**

*UNIVERSITY OF TEXAS -  
AUSTIN*



# Outreach: Code at TACC



# A year ago...



# Our new building



# TACC is a nice place to be

