

#### Introduction to Research Consulting

#### Henry Neeman, University of Oklahoma

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At the end of this session, we're going to go around the room, and each of us will (a) say whether we've done research consulting before and (b) if so, tell a story about a research consulting experience you had and what you learned from it.





### **Some History at OU**

- In 2001, even before we founded the OU Supercomputing Center for Education & Research (OSCER), I was already going around to researchers and helping them.
- In the early years, I did "rounds," where I'd go to someone's office for an hour a week to help with the computing- and/or data-intensive aspects of their research.
- Once we got to 20 different groups getting rounds, we started to run out of Henry-hours, so we switched to a help session approach, where I'd do 3 hours a week in a PC lab, so I could help multiple people at a time.
- Then, Josh Alexander started showing up and listening in.
- Then, Josh started doing some of the consulting.



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### History at OU (cont'd)

- Then, other OSCER operations team members started doing it.
- Then, I stopped doing it and they were doing all of it.
- Then, they switched to an ad hoc approach, where people can make an appointment with an OSCER team member to meet either in the researcher's office or in one of our offices.







• Get them as productive as possible as quickly as possible.





#### What Are We Asked to Do?

- Easy: Teach them basic Unix commands; show them how to use the batch system.
- Intermediate: Help them deploy community software, either in their home directory or in a central software repository.
- Advanced: Help them parallelize their code or otherwise optimize it for the platform they want to run it on.
- Guru: Help them design the project; co-author the grant proposal; co-author the publication.





#### What Don't We Do?

- We don't have to become experts on their research domain
  -- but we do have to become sufficiently knowledgeable that we can have an intelligent conversation about it.
- We don't have to be experts on STEM -- but we do have to become experts on STEM research.







Let's go around the room, and each of us will (a) say whether we've done research consulting before and (b) if so, tell a story about a research consulting experience you had and what you learned from it.



#### **OK Supercomputing Symposium 2015**





2004 Keynote: 2003 Keynote: Peter Freeman Sangtae Kim NSF NSF Shared Computer & Information Cyberinfrastructure Science & Engineering **Division** Director Assistant Director



2005 Keynote: 2006 Keynote: Walt Brooks Dan Atkins NASA Advanced Head of NSF's Supercomputing Office of Division Director Cyberinfrastructure







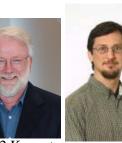
2007 Keynote: José Munoz Jay Boisseau **Deputy Office** Director Director/Senior **Texas Advanced Computing Center** NSF Office of U. Texas Austin Cyberinfrastructure

Assistant Director

2009 Keynote: **Douglass Post Chief Scientist** Scientific Advisor US Dept of Defense HPC Modernization



2011 Keynote: 2010 Keynote: **Barry Schneider** Horst Simon Deputy Director Program Manager Lawrence Berkeley National Science National Center for Dept Head CS Foundation National Laboratory



2012 Keynote: 2013 Keynote: Thom Dunning John Shalf Director Supercomputing Lawrence Berkeley Lab CyberinfarstructureScience & Engineering Applications CTO. NERSC

2014 Keynote:

Irene Qualters

**Division Director** 

Advanced

Division, NSF



Program **FREE!** Wed Sep 23 2015 OU **(***a***)** 

**Reception/Poster Session** 2015 Keynote: Tue Sep 22 2015 @ OU

**Symposium** Jim Kurose NSF Wed Sep 23 2015 @ OU Computer & Information



Write a CI Proposal ACI-REF Virt Res 2015. Thu June 4 2015

# Thanks for your attention!



## Questions? hneeman@ou.edu