

# ATR NSUF Users Organization

DJ Senior, Outgoing Chair and Peng Xu, Incoming Chair  
NSUF User Meeting  
23 June 2015  
Idaho National Laboratory

# UO Purpose

- Defined in UO Charter – updated Oct 2013
  - Provide a formal and clear channel for exchange of information, advice, and best practices between NSUF users and user facility management
  - Educate and inform stakeholders regarding experimental activities of NSUF
  - Facilitate communications among NSUF users

# UO Membership

- Membership open to anyone interested in the NSUF
  - Users
  - Potential users
  - Past users
  - Scientists and engineers engaged in operation and development of NSUF facilities (including partner facilities)

# UO Leadership

- Executive Committee
  - Six members, including one student member, nominated and elected by UO membership plus immediate past chair as member ex-officio
  - Four-year terms (one-year term for student member)
  - Chair and Secretary/Chair-Elect selected by Executive Committee members
- 2014-15 Members
  - Chair – David Senior, PNNL
  - Secretary/Chair-Elect – Peng Xu, Westinghouse
  - Mitra Taheri, Drexel University
  - Ron Ballinger, MIT
  - Yong Yang, University of Florida
  - Student Member – Kathryn Metzger, University of South Carolina
  - Immediate Past Chair – Jeff Terry, Illinois Institute of Technology

# UO Executive Committee Election

- Election held in May 2015
- Three nominees for two open at-large positions
- One nominee for student member position
- Newly elected members
  - Peter Hosemann, UC-Berkeley
  - Jessica Rojas, Virginia Commonwealth University
  - Matthew Swenson, Boise State University (Student Member)
- New Chair for 2015-2017
  - Peng Xu, Westinghouse
  - New Secretary/Chair-Elect to be selected by new EC
- Many thanks for service of outgoing EC members
  - Kathryn Metzger
  - Mitra Taheri
  - David Senior
  - Jeff Terry

# UO Meetings

- Annual general membership meeting at NSUF User Meeting in June
- Executive Committee meetings
  - NSUF User Meeting
  - Teleconference as needed, but at least once per quarter
  - Technical conferences, as appropriate
    - NuMat 2014 in October 2014

# UO Activities

- Provided input/feedback to NSUF management on a variety of topics
  - User engagement
  - Access to NSUF for programs not related to fission reactor fuels and materials
  - Partner facility capabilities and utilization
  - NSUF User Meeting format
  - Duration of irradiation experiments
  - Consistency in proposal reviews
- Participated in DOE-NE research equipment and infrastructure database review committee led by NSUF
- Continued work with three committees created two years ago to address specific topics
  - User Meeting
  - Education and Outreach
  - Capabilities and Infrastructure
  - Membership in committees is open to any UO member and broad participation is encouraged

# User Meeting Committee

- Mitra Taheri, Chair
- Provides input on timing, format, content, location and other aspects of User Meeting
- User Meeting is the annual meeting of the UO – strong participation and input from members during planning is critical
- UO Vision for User Meeting
  - UO should have the dominant voice in planning the User Meeting – this is our meeting
    - Only possible with actively engaged user base
  - User Meeting should be “go-to” meeting for users to share experiences and ideas on NSUF projects
    - Helps build a vibrant and interactive user base
    - Fosters communication between users and NSUF staff
  - Transitioning from mostly educational format to mostly technical exchange (will retain some educational component to benefit new users)
  - In future, should technical exchange be a separate meeting from the educational “how-to” workshop on irradiation testing and partner facility capabilities presentations?
    - For example, keep the how-to workshop at INL for access to experimental facilities and staff for tours/demos, but rotate User Meeting among the partner facilities to increase exposure to research community?

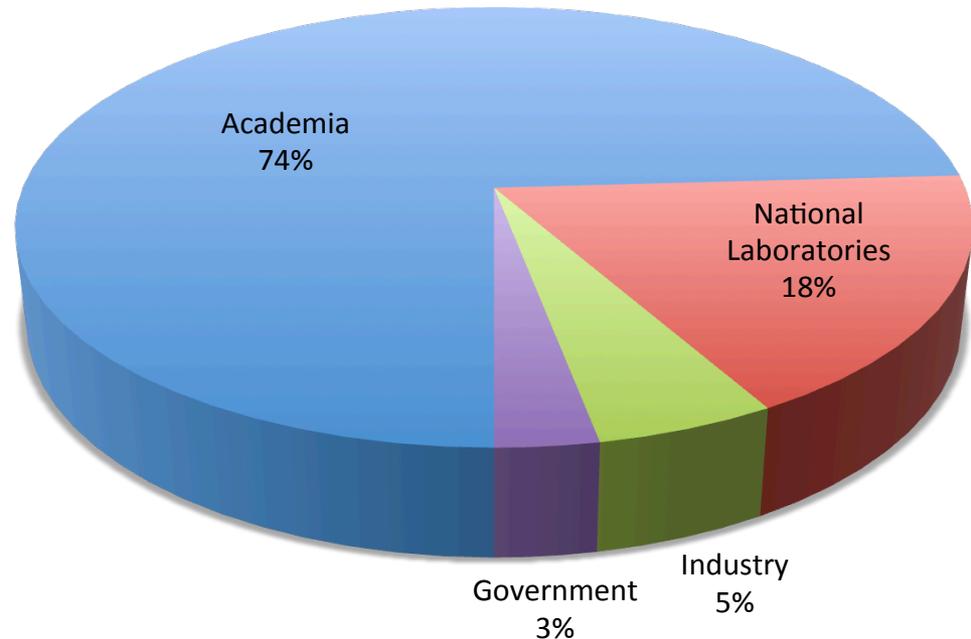
# Education and Outreach Committee

- Jim Tulenko, Chair
- Focuses on growing the UO membership and improving communication with stakeholders
  - Important component to the vision of growing NSUF beyond irradiation testing to embrace the wider nuclear materials and fuels community
  - Strong university representation in UO, reflecting early focus of NSUF on university-led research
  - Opportunities now exist to grow industry and national laboratory participation in the NSUF and UO
- Yong Yang is planning a session at 2016 ANS Annual Meeting to highlight ways the user facility can be used as an educational tool

# UO Member Demographics

## Member Affiliation

- 156 Members Represent
  - 39 Academic Institutions
  - 8 National Laboratories
  - 3 Government Agencies
  - 4 Private Sector Entities
  - 3 International Organizations



- 20% increase in total membership from 2014 to 2015
- Only modest gains in National Laboratory and Industry participation

# Capabilities and Infrastructure Committee

- Peng Xu, Chair
- Conducted a survey of UO members to get feedback on
  - Satisfaction with combined NEUP/NEET/NSUF proposal process
  - Support from NSUF staff during proposal preparation
  - Proposal review process
  - Experimental capabilities within the NSUF
  - Project execution
  - User Organization
  - User Meeting
- Peng will provide more detail during his presentation

# New UO Chair

- Please welcome Peng Xu as the new Chair of the User Organization for 2015-2017

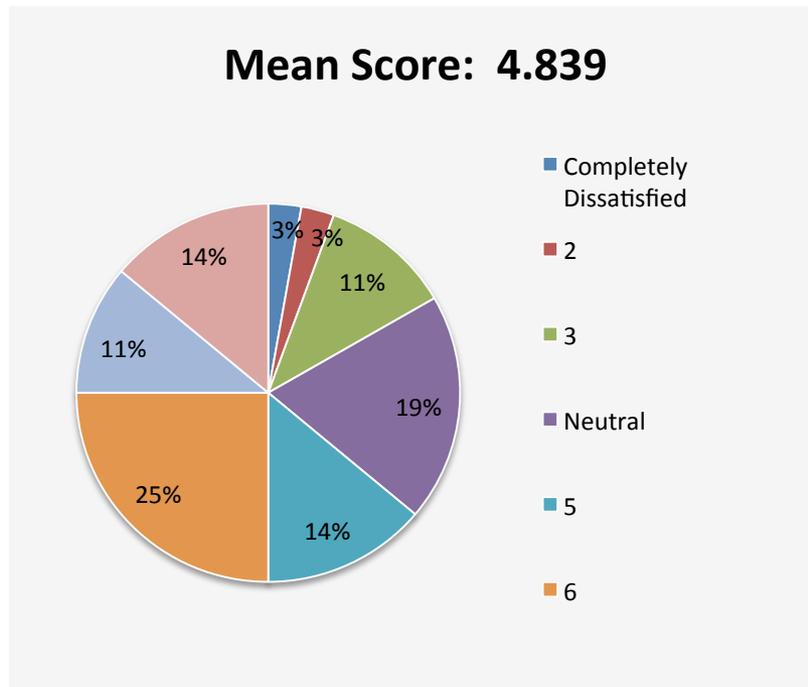
# Nuclear Science User Facilities Survey

- **Purpose of the survey**
  - To collect feedbacks and measure engagement
- **7 Survey questions**
  - combined NSUF and NEUP proposal process
  - support from the ATR-NSUF staff during your proposal preparation
  - the reviewers' comments and the fairness of the decision on your proposal
  - experimental capabilities within the NSUF (including partner facilities),
  - working with NSUF staff (including CAES/MACS and university partner facilities) after the project is select,
  - the user organization
  - The User Meeting
- **Survey Statistics**
  - Invited participants: 155
  - Invited, but did not participate: 108
  - Started survey, but did not complete: 11
  - Completed survey: 36
  - Participants rated questions on a scale of 1 – 7
- **Great support from NSUF staff, especially Sarah Robertson and Jodi Grgich**

# 7 Survey Questions

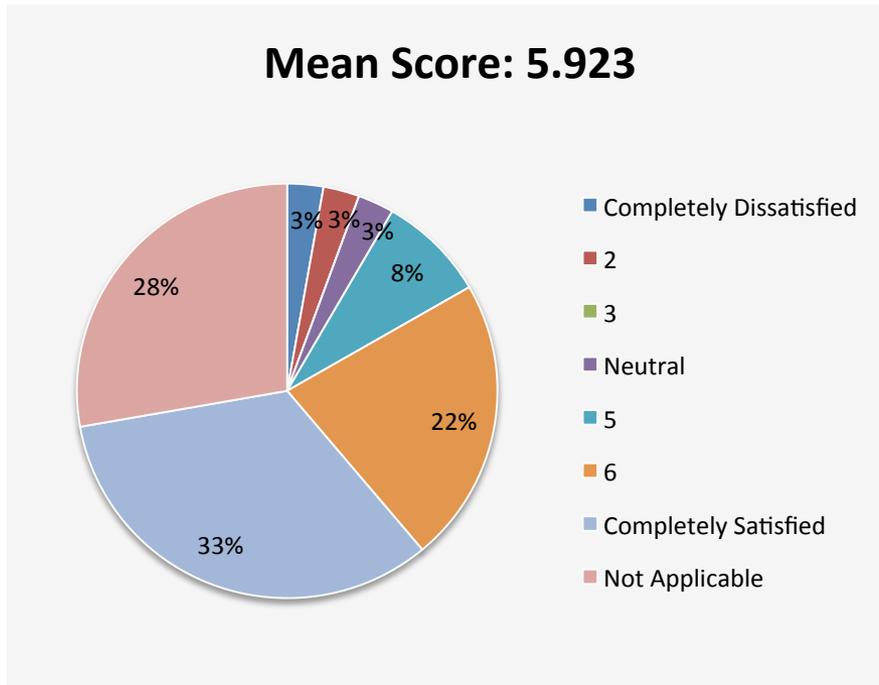
- combined NSUF and NEUP proposal process.
- support from the ATR-NSUF staff during your proposal preparation
- the reviewers' comments and the fairness of the decision on your proposal
- experimental capabilities within the NSUF (including partner facilities)
- working with NSUF staff (including CAES/MACS and university partner facilities) after the project is select
- the user organization
- The User Meeting

# Q1: Rate your satisfaction with the newly combined NSUF and NEUP proposal process



- Comments
  - Combined call certainly streamlines the process for NE program proposals
  - It just makes hard to get access to NSUF and to have the NEUP proposal selected
  - It is really complicated and requires many forms
  - A few steps were unclear, and NSUF staff had some uncertainties as well
  - Reviewers are apparently not aware or not instructed to rate relevance to mission need for programs

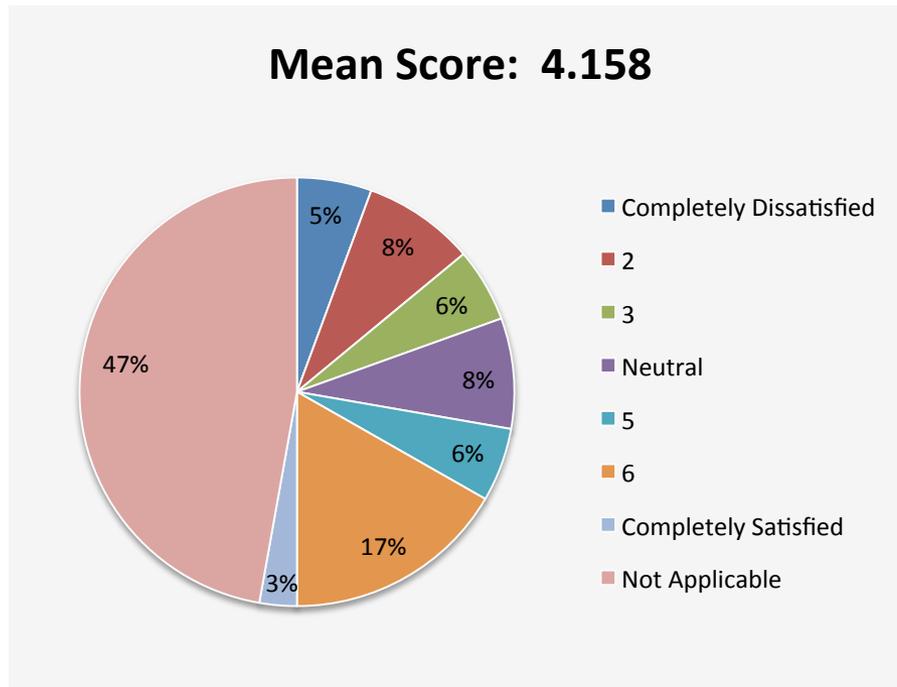
## Q2. Rate your satisfaction with the support from the ATR-NSUF staff during your proposal preparation



- Comments

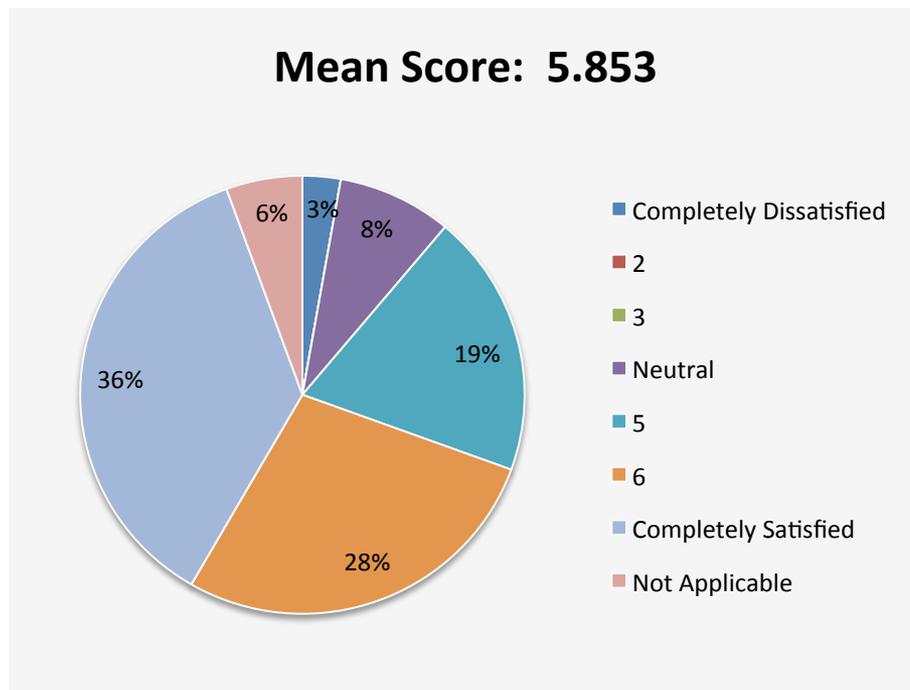
- most of the support came from an experienced ATR-NSUF experimenter who was a PI on the proposal
- From my previous experiences I have received a valuable support for proposals preparation
- Not needed

# Q3. For the proposals that you didn't win, please rate your satisfaction with the reviewers' comments and the fairness of the decision on your proposal



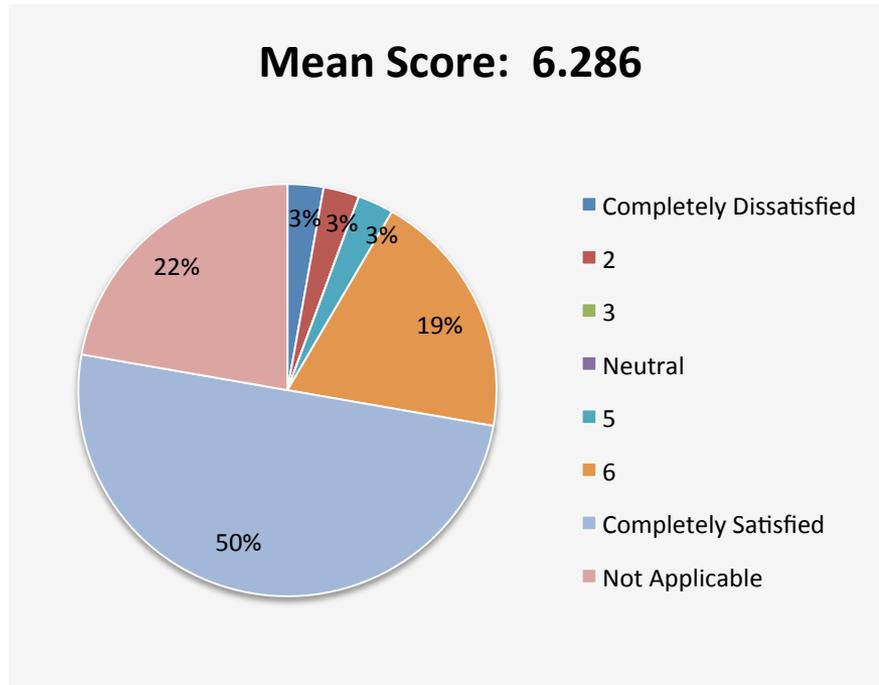
- Comments
  - There should be some allowance for non-NE missions using unique NE-owned facilities (particularly for NSUF access only proposals). If there are such allowances in the funded portfolio, that was not made clear to the reviewers
  - Overall, I am satisfied with the reviewers' comments. However, sometimes **the comments lack coherence** with the aspects to be evaluated. Thus it is difficult to identify the weaknesses
  - The reviewer is not experts in the research field

# Q4. Rate your satisfaction with the experimental capabilities within the NSUF and partner facilities



- Comments
  - The IVEM at Argonne should be supported permanently
  - I was able to work with my irradiated samples at CAES. The facility is fantastic. I wished for more ion Mills, and the tem and fib were overbooked usually. But great work was accomplished
  - Needs more FIB capability. Could definitely use another instrument to take duty off the one FIB in CAES
  - NSUF needs to process experiments outside HFEF. Mechanical testing is very weak
  - The research funding on X-ray beam should be reduced since the cost should be relatively for the University PI. While this can promote more experiments

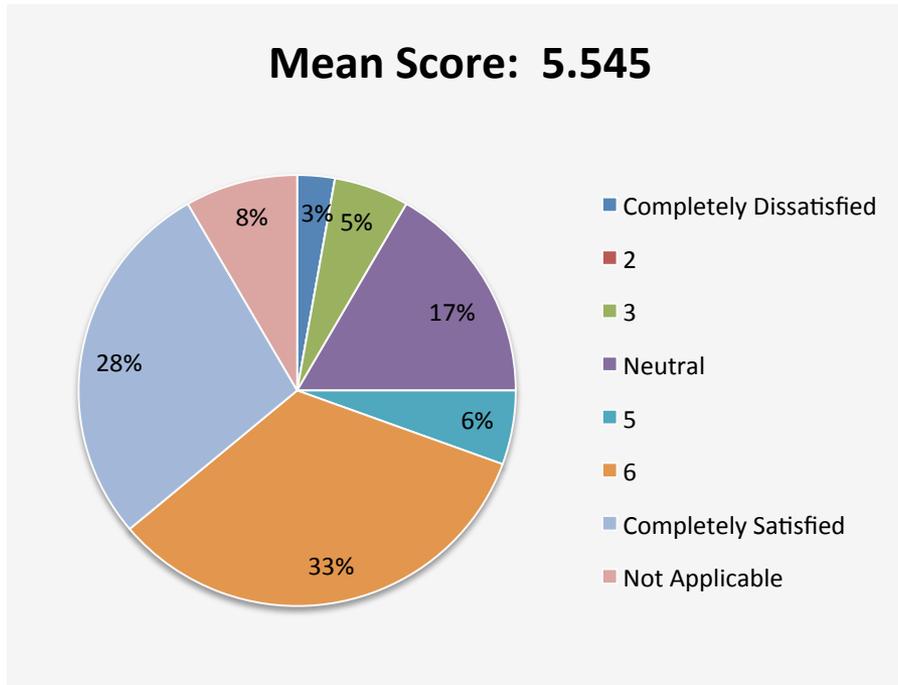
# Q5. Rate your satisfaction working with NSUF staff (including CAES/MACS and university partner facilities) after the project is selected



- Comments

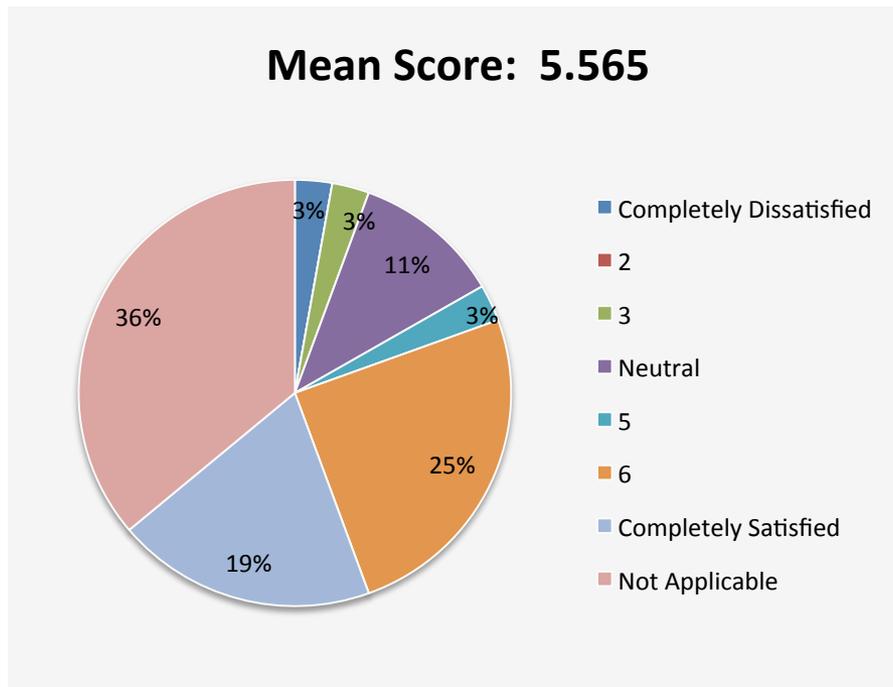
- The folks at CAES and MACS have worked miracles. Very helpful and friendly team. I am glad to have experience working with these colleagues
- The cost and process shipping irradiated specimens do not seem reasonable. Otherwise VERY good
- CAES staff is very professional with excellent experimental expertise

## Q6. Rate your satisfaction with the user organization



- Comments
  - Too much turnover. The new director should reach out to the universities more
  - It made my PhD possible. Very thankful for all of their hard work
  - Extremely important
  - I am highly satisfied with the organization. I believe it is a great space that allows for professional networking and discussion of potential research opportunities
  - The effort is sincere user organization is weak and coopted to some extent. NSUF need informed honest critical input but does not seem to want it. This is totally shortsighted or worse
  - **This organization is not really attached to the community**

# Q7. Rate your satisfaction with the User Meeting and provide any feedback on what you would like to see at the meeting



- Comments
  - better guidance through RTE and Irradiation Proposals
  - Prefer the old, single site method completed in the past under ATR-NSUF
  - The User Meeting should be driven more by the User Organization and less by DOE-NE. I would prefer to see more technical exchange from current/past NSUF users rather than how-to seminars or capability advertisements. In my opinion, the how-to (or user development) portion of the meeting should be separated into its own stand-alone meeting, maybe held concurrently with ANS or TMS meetings to attract potential new users
  - the details on the website are helpful
  - The user's meeting is a great space to identify potential research opportunities as well as the facilities available
  - User meeting should have more presentations on on-going research projects

# Revisit UO Charter

- Defined in UO Charter – updated Oct 2013
  - Provide a formal and clear channel for exchange of information, advice, and best practices between NSUF users and user facility management
  - Educate and inform stakeholders regarding experimental activities of NSUF
  - Facilitate communications among NSUF users

## Communication

- Channels: user week meeting, quarterly executive committee conference calls, conference booth, technical sessions sponsored at conferences, committee meetings at conferences

## User Development

- Key to user growth and engagement
- Development opportunities
- Customized training

# What We Want to Change

- We need to hear from you
  - Peng Xu ([xup@westinghouse.com](mailto:xup@westinghouse.com))
  - Dave Senior ([David.Senior@pnnl.gov](mailto:David.Senior@pnnl.gov))
  - Other committee members
- Some ideas
  - Extend student membership to 2 years, and allow to have 2 student memberships
  - All user week attendees will be offered UO membership unless they elect not to
  - Make the sign-up and opt-out process simple

# User Growth and Engagement

- Two key improvements needed
- User growth
  - Maintain 20% growth rate
  - Academic is doing good, industry and labs need to catch up
- Engagement – what the committee can do
  - Make sure that we listen to the users and the users' voice is heard
  - More technical exchange meetings at national conferences
  - Support NSUF booth at national conferences
  - Surveys
- Learn from other user organizations

# User Input

- This is your meeting!
- What topics should the UO be addressing that have not been discussed?
- Ideas for the committees?
  - User Meeting
  - Education and Outreach
  - Capabilities and Infrastructure
  - New committees needed?
- Get involved – help shape the user facility to meet your research needs