

# Neutron Scattering Society of America (NSSA)



Purpose and New Initiatives

[www.neutronsattering.org](http://www.neutronsattering.org)

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SNS/ANL School on Neutron and X-Ray Scattering  
June 2011

# What is the NSSA?

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- ◆ NSSA is an organization of scientists and engineers with a common interest in using neutron scattering for research.
- ◆ Formed in 1992, NSSA now has almost 1500 members from 26 countries
- ◆ Became a non-profit corporation in 2002
- ◆ Sister organizations in Europe, Japan and Canada
- ◆ NSSA is an advocacy group for **YOUR CONCERNS** about neutron sources, instruments, and user policies

# NSSA GOALS AND PURPOSE

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- ◆ To identify and provide a focal point for the neutron scattering community in the USA
- ◆ To identify the needs of the neutron community (present and future source and instrumentation requirements) and to bring these needs to the neutron facility management and funding sources.
- ◆ To foster educational activities associated with neutron scattering including conferences, workshops, and neutron scattering schools.

# From the Members

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- ◆ We ask our members to freely communicate to NSSA their successes, problems, and concerns about present-day issues and longer-term concerns about new sources and instruments.
- ◆ We call on our members (hopefully not too frequently!) to write to the Federal Funding Agencies and to the Congress on issues affecting the future of our careers.
- ◆ In short, **WE WANT AND NEED TO HEAR FROM YOU:**
  - [www.neutrons scattering.org](http://www.neutrons scattering.org)
  - [fernandezbja@ornl.gov](mailto:fernandezbja@ornl.gov)

# NSSA Executive Committee

## Elected 2009

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- ◆ **President:** *Bruce Gaulin*, Dept. of Physics, McMaster Univ.
- ◆ **Vice-President:** *Julie Borchers*, National Institute of Standards and Technology (elected 2010)
- ◆ **Secretary:** *Chris Leighton*, Univ. Of Minnesota (elected 2010).
- ◆ **Treasurer:** *John Tranquada*, Physics Dept., Brookhaven National Lab
- ◆ **Past Treasurer:** *Angus P. Wilkinson*, School of Chem. and Biochem., Georgia Institute of Technology
- ◆ **Membership Secretary:** *Jaime Fernandez-Baca*, Neutron Sciences Division, Oak Ridge National Laboratory
- ◆ **Communications Secretary:** *Thomas Proffen*, Lujan Center, Los Alamos National Laboratory
- ◆ **3 Members at Large (appointed by Executive Committee)**
  - **Shenda Baker**, Harvey Mudd College
  - **Norman J. Wagner**, Univ. of Delaware
  - **Flora Meilleur**, North Carolina State University

# Current NSSA Concerns

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- ◆ Building an enthusiastic young group of neutron scattering investigators who will be the core users and support of the SNS and upgraded facilities at other sources.
- ◆ Reassuring graduate students\* that neutrons have a bright future in the US
  - (\* i.e., can I get a job and do research if I get a Ph.D. in neutron scattering?)

# Current NSSA Initiatives

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- ◆ Organizes the *American Conference on Neutron Scattering*. This meeting, held every two years, has a rotating venue among the national neutron centers. It is intended to serve as a national user meeting as well as showcase recent research results.
- ◆ Awards the Clifford G. Shull Prize in Neutron Science, the NSSA Sustained Research Prize, the NSSA Science Prize, and the Outstanding Student Research Prize
- ◆ Hosts information booths and displays at major national meetings (e.g., March 2000 – 2006, 2010-11 APS)



- ◆ 2010 Meeting held in Ottawa, ON, Canada, June 26-30
- ◆ 350 in attendance
- ◆ > 300 papers including large number of invited/tutorial papers
- ◆ Several tutorial workshops were held on Sunday before conference
- ◆ Next conference -- Georgetown, Washington, DC, June 2012, organized by NIST



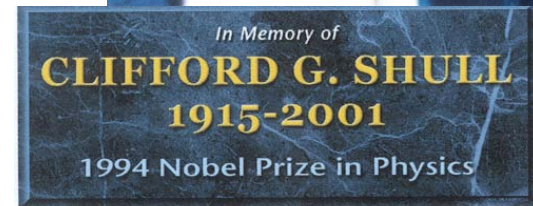
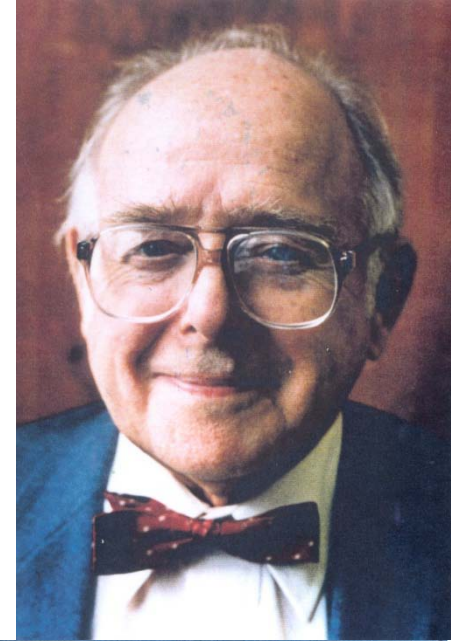
# Clifford G. Shull Prize in Neutron Science

In memory of Clifford G. Shull (1915-2001) Nobel Prize in Physics

**Dr. Herbert A. Mook, Jr. from ORNL**  
**received the 2010 Clifford G. Shull Prize**



*“For outstanding contributions to the study of magnetism, superconductivity, and quantum phenomena in matter with neutrons”*



# NSSA Research Prizes

- ◆ ***Prof. Collin Broholm***

**Johns Hopkins University, received the 2010 Sustained Research Prize**

*“For outstanding neutron scattering studies of correlated electron physics in magnets, metals and superconductors, and for science-driven development of neutron scattering techniques”*

- ◆ ***Dr. Craig Brown, NCNR***

**NIST Center for Neutron Research received the 2010 Science Prize**

*“For outstanding neutron scattering studies of hydrogen-framework interactions in metal-organic frameworks”*

- ◆ **NSSA also awards an Outstanding Student Research Prize at each ACNS**



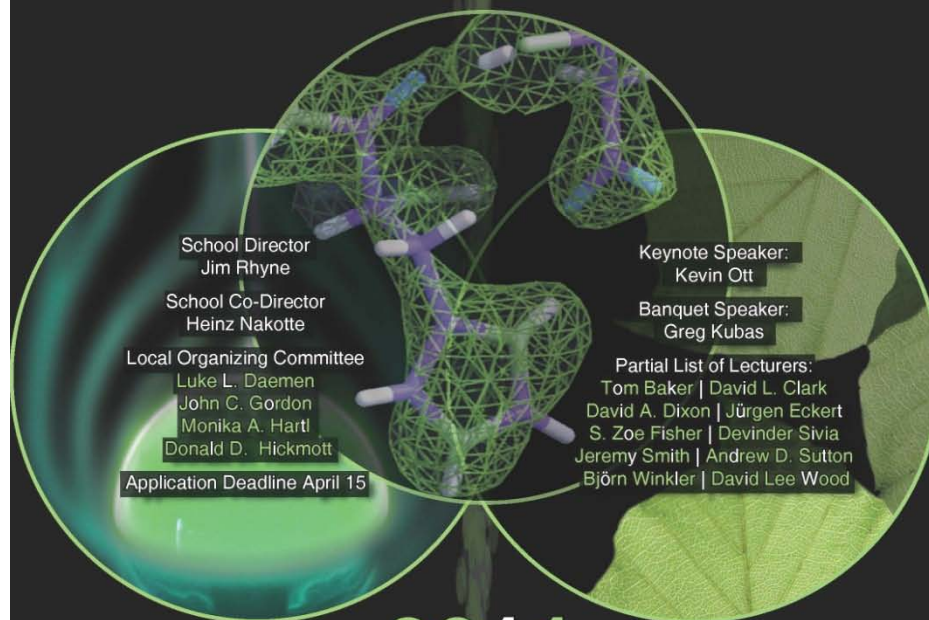
# U.S. Neutron Scattering Schools

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- ◆ National Neutron and x-ray Scattering Summer School
  - Introduction to neutron and x-ray scattering
  - Now 2 ½ weeks – generally in June
  - <http://www.dep.anl.gov/nx/>; Application deadline -- varies
- ◆ NCNR-NIST Summer School
  - Emphasizes alternately NCNR neutron spectroscopy and small angle scattering and reflectometry instruments
  - One week in June
  - <http://www.ncnr.nist.gov/summerschool/index.html> ; Application deadline -- April
- ◆ LANSCE School in Neutron Scattering
  - Topical focus (changes each year)
  - 9 days – Month varies depending on beam cycle
  - <http://www.lansce.lanl.gov/neutronschool/> ; Application deadline -- varies
- ◆ All have a mixture of classroom lectures and hands-on experiments
- ◆ All have funds for travel and subsistence support for students accepted
- ◆ Students need not be US citizens, but must be affiliated with a US university, industry, or national laboratory

Neutron Scattering in all its Diversity

# Neutron Scattering Energy & Environment



School Director  
Jim Rhyne

School Co-Director  
Heinz Nakotte

Local Organizing Committee  
Luke L. Daemen  
John C. Gordon  
Monika A. Hartl  
Donald D. Hickmott

Application Deadline April 15

Keynote Speaker:  
Kevin Ott

Banquet Speaker:  
Greg Kubas

Partial List of Lecturers:  
Tom Baker | David L. Clark  
David A. Dixon | Jürgen Eckert  
S. Zoe Fisher | Devinder Sivia  
Jeremy Smith | Andrew D. Sutton  
Björn Winkler | David Lee Wood

## 2011

# LANSCE

## Neutron Scattering School July 12-22

[lansce.lanl.gov/neutronschool](http://lansce.lanl.gov/neutronschool)

Contact us: [neutronschool@lanl.gov](mailto:neutronschool@lanl.gov)

Space is limited to 30 students. | Minorities are encouraged to apply. | Apply online.  
The School is primarily intended for graduate students & post-docs in the natural sciences.

Co-Sponsored by: Department of Energy (DOE) Office of Science | National Science Foundation (NSF)  
Los Alamos Neutron Science Center (LANSCE) | New Mexico State University

 **Los Alamos**  
NATIONAL LABORATORY  
EST. 1943

# Anyone Here Not a Member of NSSA?

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We would like to have you join (it's free)!!

And we have a membership sign-up form on the web – [www.neutrons scattering.org](http://www.neutrons scattering.org)