

Dear Colleague,

Thank you for agreeing to participate in the NIST Center for Neutron Research workshop. We are seeking your expertise and experience in planning the future directions for instrument development at the NCNR.

To facilitate preparation for the workshop, documents including worksheets, guide hall layouts, and NCNR Annual reports are posted at (<http://ncnr.nist.gov/measurements/index.html>).

During the workshop you will be a member of one of the nine breakout groups, each with a different scientific focus. After the general presentations on Thursday (Aug 21) morning, each group will work together to produce a short report (2-4 pages) that addresses the following questions:

- 1) What new research opportunities can be addressed by new capabilities in the NCNR Expansion?
- 2) What are the neutron measurement capabilities that would open new research opportunities?

In your deliberations, we ask you to consider instrument ideas that exploit the neutron beams available at the NCNR and complementarity to our current suite of instruments and those available elsewhere in the US. Each group is asked to give a brief oral presentation that summarizes their report on Friday afternoon. Final reports are due on August 29.

As background, the NCNR completed a second guide hall in 2012 with five new guides and new instruments bringing our total number to 28. We are in the process of completing two additional instruments: vSANS, a new small-angle neutron scattering instrument that will permit measurements over a very broad range of length scales; and CANDOR, a broad bandwidth reflectometer using energy dispersive detectors enabling high-throughput. After completing these instruments, we will still have two vacant end positions and perhaps two additional side positions available for new neutron instruments.

Within five years the NCNR is planning to install a new, high performance, liquid deuterium cold source with gains expected to approach 2.0 at longer wavelengths.

We sincerely appreciate your willingness to participate in this workshop and look forward to seeing you in August.

Best,

Rob Dimeo  
NCNR Director