As in previous years, this workshop will provide attendees an opportunity to refresh their skills in ultrasound quality assurance (QA) procedures. The emphasis will be on supervised hands-on learning, rather than a didactic lecture. Participants can attend anytime during the scheduled workshop. Several portable ultrasound units and various ultrasound QA phantoms will be provided on-site. Experienced instructors will be available to guide the exercises.

A simple set of QA test procedures described in AAPM Ultrasound Task Group 1 Report (Medical Physics 1998; Vol 25: 1385-1406) will be presented. It includes: display monitor fidelity, image uniformity, depth of visualization, horizontal and vertical distance accuracy, axial and lateral resolution, slice thickness, dead zone measurement. A prostate ultrasound imager and prostate ultrasound QA phantom will be available for those who are interested in learning the QA test procedures for prostate imaging.

In addition, there will be demonstrations of ultrasound physics in clinical settings this year. Several exercises will be provided which emphasize the clinical implications of various scan parameter settings, including: power, gain, dynamic range, TGC, post-processing, Doppler gate angle, Doppler gate size and Doppler gate position. Attendees will observe the effect of these system parameters on spatial resolution, frame rate, depth of penetration, blood flow velocity and overall image appearance.

Educational Objectives:
1. To learn the effect of scanner parameter settings on various aspects of image and its clinical implications.
2. To perform ultrasound quality control test procedures for real-time B-mode units.
3. To learn quality assurance tests for prostate ultrasound imagers.
4. To be acquainted with various ultrasound QA phantoms.