

SATURDAY WORKSHOPS

Saturday, Noon–10:00 p.m. (Pre-Registration is required.)

On Saturday afternoon and evening, FIE features three-hour workshops—highly interactive sessions selected for their timeliness and value. Workshops offer a concentrated professional development experience. The wide range of workshop topics offers opportunities for everyone from new faculty members to the most experienced educators to expand their skills and knowledge.

Conference attendees must register separately for workshops. There is a \$50 Registration fee for each workshop, with discounts for registering for two or three workshops.

Session A: Saturday, Noon-3:00 p.m.
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Workshop A-1 • Spinnaker

Program Educational Objectives and Outcomes: How to Design a Sustainable, Systematic Process for Continuous Improvement

Nikos J. Mourtos, San Jose State University

The workshop addresses the design and implementation of a sustainable, systematic process for defining and assessing program educational objectives and program outcomes. Results from the successful implementation of such a process will be presented. Participants of the workshop will have an opportunity to (1) define educational objectives and outcomes that address specific strengths of their programs, (2) analyze outcomes into elements and define a set of skills for each element, (3) select outcome indicators and performance targets to quantify the achievement of each outcome, (4) develop / adapt special rubrics to accurately assess student performance in each outcome, (5) design / adapt a systematic process for assessing educational objectives and outcomes on a regular basis with minimum faculty workload, (6) discuss course and curriculum improvements that address specific program outcomes and / or increase student achievement in critical areas, (7) brainstorm ways to overcome challenges inherent in the implementation of a continuous improvement process. The workshop format will combine direct instruction, individual practice, interaction among the participants, and discussion. For each of the seven workshop objectives described above participants will be presented with specific examples and given an opportunity to discuss ideas and challenges with other workshop participants.

Workshop A-2 • Marina 3 & 4

Teaching Digital Signal Processing Concepts via LabVIEW

Mark A. Yoder, Rose-Hulman Institute of Technology

Participants in this workshop will learn how to use LabVIEW to teach digital signal processing concepts. LabVIEW (www.ni.com) is a graphical-based programming language which is strongly associated with data acquisition and test. Significant signal processing capabilities have been added to LabVIEW in recent years making it a good DSP teaching tool. In this workshop, up to 30 participants will be shown how to program in LabVIEW and how to use it to teach DSP concepts. This is a hands on, BYOC (bring your own computer) workshop. Participants will be directed to load an evaluation copy of LabVIEW on their laptops before arriving. Once at the workshop they will be lead through several LabVIEW-based classroom-tested exercises designed to teach DSP. These exercises are based on those in the text *Signal Processing First* (<http://vig.prenhall.com/catalog/academic/product/0,1144,0130909998,00.html>).

All participants will be given a full copy of LabVIEW Student Edition (<http://www.ni.com/labviewse/lfb.htm>).