

SPECIAL ISSUE CALL FOR PAPERS
VIRTUAL LABORATORIES
Submission deadline: 2 June 2006

High quality laboratory experiences enhance the learning of model-based knowledge domain concepts and theories and provide the bridge from concept to practical understanding. However, access to real-world laboratories is limited because of the number of students who need access and because of the cost of equipment, supplies, and maintenance.

Virtual laboratories, whether accessed locally or remotely, have great potential. Virtual laboratories provide learning experiences similar to their in-class analogues, can facilitate deep learning in model-based knowledge domains, and can accomplish learning without most of the overhead inherent in traditional lab experiments. However, virtual labs are not actually real-world experiments in a physical laboratory but are simulations – mathematical models implemented on a computer. Questions often arise with regard to the overall quality of a virtual laboratory experience because of student and faculty perceptions of a virtual experiment, the reality of a virtual experiment not actually being a real experiment, and the perceived difficulty and pace of the virtual simulation compared to its real-world counterpart. The purpose of the Special Issue will be to address these concerns.

Authors wishing to contribute to this Special Issue should refer to the Transactions' Website at <http://www.ewh.ieee.org/soc/es/ToE-manuscript.html> for information relative to the scope of Transactions and manuscript preparation. Authors should note that submitted manuscripts **must** contain a balance of technical content and pedagogical content to be considered for this Special Issue and **must** contain the following five components:

1. curriculum content within electrical engineering, computer engineering, or allied disciplines,
2. a description of the course or course sequence in which the content is presented,
3. a description of the pedagogical issue(s) being addressed in the virtual laboratory experience,
4. information that will assist educators in the discipline in implementing the concepts presented in the manuscript, and
5. meaningful, statistically-sound assessment data that provides information relative to the strengths and weaknesses of the curriculum content in satisfying the pedagogical issues being addressed.

Manuscripts are to be submitted electronically to the Transactions' Website at <http://te-ieee.manuscriptcentral.com> by 2 June 2006. For further information, contact the Special Issue Editor, Rob Reilly (r.reilly@ieee.org).

The timeline for this special issue is as follows.

- **Manuscript Submission Deadline: 2 June 2006**
- Notification of Review Evaluation: 2 October 2006
- Author Revision Due by: 1 December 2006
- Notification of Acceptance: 2 March 2007
- Accepted Manuscripts Due for Editorial Review: 2 April 2007
- Manuscript Packet Information Sent to Author: 4 May 2007
- Manuscript Packet Due from Author to Editor: 1 June 2007
- Tentative Publication Date: November 2007