

CALL FOR CHAPTER PROPOSALS

Proposal Submission Deadline: March 15, 2010

Internet Accessible Remote Laboratories: *Scalable E-learning Tools for Engineering and Science Disciplines*

A book edited by Dr. Abul K. M. Azad, Northern Illinois University, USA;
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Also visit the Wiki site: <https://wikis.mit.edu/confluence/display/ILB/Home> or
<http://www.online-engineering.org/book> for details.

Introduction

Limited resources and other factors pose major challenges for engineering, technology, and science educators' ability to provide adequate laboratory experience for students at a time and place of their convenience. Ironically, too much laboratory equipment lies idle during most of its usable lifetime. This applies to both traditional laboratory courses as well as laboratory courses as part of distance learning programs. An Internet accessible remote laboratory addresses these difficulties and allows more efficient laboratory management. An Internet accessible remote laboratory is an arrangement in which physical (real) laboratory equipment is controlled remotely from a distant location over the Internet. The user manipulates an experiment and views the experimental results from a remote location.

Objective of the Book

Considering the involvement of multiple disciplines (software, hardware, computer interfacing, Web development, Web security, user interface, and learning management), the development process for an Internet accessible remote laboratory is complex. In the absence of any common framework, each development initiative starts from scratch, and there is difficulty in transferring and integrating technologies from one laboratory implementation to another. The proposed book is a timely effort to collect current developments in this area, as well as offer some suggestions for future direction, while providing a benchmark for the community. The editors will take every effort to gather contributions from all the major players in this field to foster wider collaboration within the community.

Target Audience

The book will provide value to both academics and researchers. In the academic area, it will be a useful resource for graduate and undergraduate level courses in electrical and computer engineering and computer science programs. The book will benefit researchers by providing an understanding of the current status of the field as well as a description of various approaches to remote laboratory design.

Recommended topics include, but are not limited to, the following:

- Teaching with online laboratories and pedagogical design
- Research using online laboratories along with collaborative research and industrial applications
- Educational tools for remote laboratories such as learning management, repositories and portals, and collaborative learning
- System architectures for remote laboratories - system design, hardware and interfacing, software issues, networking and network security, scalability and maintainability
- Policy issues including ethical concerns, inter-institutional use of remote laboratory, and sustainability
- Future trends - use of mobile technologies and mash up for remote laboratory
- Other

Submission Procedure

Researchers, educators, and practitioners are invited to submit chapter proposals *on or before March 15, 2010*. The proposal should be 2 to 4 pages in length and clearly explain the mission and concerns of the proposed chapter. All submitted manuscripts will be reviewed on a double-blind basis. The manuscript submission and review process will be managed electronically. Please visit http://www.conftool.net/Remote_Labs/ for submission details.

Publisher

This book is scheduled to be published by IGI Global (formerly Idea Group Inc.), publisher of the “Information Science Reference” (formerly Idea Group Reference), “Medical Information Science Reference,” “Business Science Reference,” and “Engineering Science Reference” imprints. For additional information regarding the publisher, please visit www.igi-global.com. This publication is anticipated to be released in 2011.

Important Dates

March 15, 2010:	Proposal Submission Deadline
May 15, 2010:	Notification of Acceptance
July 15, 2010:	Full Chapter Submission
September 15, 2010:	Review Results Returned
October 15, 2010:	Final Chapter Submission

Editorial Advisory Board

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If there are any questions or if you need clarification, please contact:

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