

**STEVENS INSTITUTE OF TECHNOLOGY  
DEPARTMENT OF MECHANICAL ENGINEERING**

**Wednesday, November 12, 2008  
Carnegie 315, Time 3 pm**

***VIRTUAL AND DISTANCE EXPERIMENTS:  
PEDAGOGICAL ALTERNATIVES, NOT LOGISTICAL  
ALTERNATIVES***

**Dr. Euan Lindsay**

Discipline Leader for Mechatronic Engineering  
Curtin University of Technology, Perth, Australia

Today, there is a trend towards providing undergraduate engineering laboratory classes through remote or simulated access, where the students are separated from the hardware and interact through a technology-mediated interface. This trend is driven by a demand for increased flexibility and opportunities in the delivery of laboratory classes to students, but it also has the consequence of affecting the learning outcomes of the laboratory class. Dr. Lindsay's work in remote and virtual laboratory classes has shown that there are significant differences not only in the students' learning outcomes but also in their perceptions of these outcomes when being exposed to the different access modes. These differences have powerful implications for the design of remote and virtual laboratory classes in the future and provide an opportunity to match alternative access modes to the intended learning outcomes they enhance. This presentation will address not only the nature of these changes and the factors that cause them, but also the place that remote and virtual laboratories have within undergraduate engineering curricula

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**Dr. Lindsay** is the Discipline Leader for Mechatronic Engineering at Curtin University of Technology, in Perth, Western Australia. His research interests include engineering education, internet-based telecontrol, artificial neural networks, and rehabilitative technologies for people with sensing impairments. He is a member of the Executive of the Australasian Association for Engineering Education and co-edits the Australasian Journal of Engineering Education. Dr. Lindsay was the recipient of the 2007 Carrick Award for Australian University Teaching, and in 2005, he was named as one of the 30 Most Inspirational Young Engineers in Australia.

*For more information, please contact Prof. Sven Esche at [Sven.Esche@stevens.edu](mailto:Sven.Esche@stevens.edu) or 201-216-5559*