



HAWAII CENTER FOR ADVANCED
COMMUNICATIONS

Presents:

RET HAWAII SEMINAR SERIES

Research Experiences for Teachers Middle School Outreach Program

By: Dr. Scott Douglas

Wednesday, June 25, 2008 10:00 a.m. – 11:30 a.m.

Thursday, June 26, 2008 1:00 p.m. – 2:00 p.m.

University of Hawaii at Manoa . Campus Center Room 308

**Designing Pre-College Engineering Curricula and Technology:
Lessons Learned from The Infinity Project**

Abstract: The importance of mathematics and science education in today's modern, technology-driven society cannot be understated. The Infinity Project is a joint effort between educators, administrators, and industry leaders that has created a during-the-school-day engineering course at the high school level to help address this need. Since its inception in 2000-2001, the curriculum is in place at over 350 high schools in the U.S. and is receiving interest internationally as well. In this talk, we discuss several issues that have been critical to the Infinity Project's success, including the choice and design of curriculum technology, the development timeline, and the design examples chosen to illuminate important engineering concepts. Extensions to both college-level and middle school engineering programs are also described.

Biography: Scott C. Douglas received the B.S. (with distinction), M.S., and Ph.D. degrees in electrical engineering from Stanford University, Stanford, CA, in 1988, 1989, and 1992, respectively. He is currently an Associate Professor in the Department of Electrical Engineering, Southern Methodist University, Dallas, TX. His research activities include source separation, speech enhancement, adaptive computational imaging devices, and hardware implementation of DSP systems. He is the author or coauthor of two books, six book chapters, and more than 150 articles in journals and conference proceedings. He frequently consults with industry and offers short courses and tutorials in the areas of signal processing and source separation. He has served as an editor or coeditor of several books and conference proceedings, including the Digital Signal Processing Handbook, the International Symposium on Active Control of Sound and Vibration, and the IEEE Workshops on Machine Learning for Signal Processing conference records.

Dr. Douglas is the recipient of the 2002 IEEE Signal Processing Society Best Paper Award in Audio and Electroacoustics and the 2003 Gerald J. Ford Research Fellowship. He has served on several technical committees of the IEEE Signal Processing Society and is a Past Chair of the Neural Networks for Signal Processing Technical Committee. He has helped organize several meetings of the IEEE, including the ICASSP and ISCAS conference series, the Digital Signal Processing and Signal Processing Education Workshop series, and the Machine Learning for Signal Processing Workshop series. He is the General Chair of the International Conference on Acoustics, Speech, and Signal Processing 2010 in Dallas. He is also one of the key authors and developers of curriculum and technology for The Infinity Project, a joint effort between educational, civic, and government organizations to implement engineering curricula at the precollege level. He is a member of Phi Beta Kappa and Tau Beta Pi.

For more information, please call (808) 956-9687