The University of Hawai‘i Smart Sustainable Microgrid Project

Prof. Anthony Kuh
Department of Electrical Engineering
The University of Hawaii, Manoa
USA

Date : October 29, 2013 (Tuesday)
Time : 3:30 p.m. – 4:30 p.m.
Venue : Room 215, William M. W. Mong Engineering Building, CUHK

Abstract
This talk discusses starts by discussing Hawai‘i’s energy landscape and the Renewable Energy and Island Sustainability (REIS) program. The state of Hawai‘i and the US Department of Energy (DOE) signed a memorandum of understanding in 2008 known as the Hawai‘i Clean Energy Initiative (HCEI) requiring 70% of Hawai‘i’s energy comes from clean sources by 2030. At the beginning of 2009 we formed a multidisciplinary research and education program at the University of Hawai‘i at Manoa, (REIS) to focus on renewable energy, sustainability, and smart grids. The REIS group won an internal UHM sustainability competition in 2009 and in 2010 won a DOE work force training grant in the Strategic Training and Education in Power Systems. We discuss goals of our group including building the REIS program, research and education activities, and interfacing with other UHM sustainability efforts, outside academic institutions, industry, and government. We then discuss the University of Hawai‘i Manoa (UHM) Smart Sustainable Microgrid Project. This project is in coordination with the UHM Department of Electrical Engineering, UHM facilities, and Hawaiian Electric Company. We discuss some of the goals and research of this project which include; sensing and monitoring, modeling and analysis, optimization and control, and social and economic and policy considerations. This talk gives examples of applying signal processing methods to the sensing and monitoring project and also the modeling and analysis project. We also discuss a new Smart Campus Energy Lab and the UHM microgrid which will serve as a laboratory test bed.

Biography
Dr. Anthony Kuh received his B.S. in Electrical Engineering and Computer Science at the University of California, Berkeley in 1979, an M.S. in Electrical Engineering from Stanford University in 1980, and a Ph.D. in Electrical Engineering from Princeton University in 1987. Dr. Kuh previously worked at AT&T Bell Laboratories and has been on the faculty in Electrical Engineering at the University of Hawai‘i since 1986. He is currently a Professor in Department of Electrical Engineering and is also currently serving as director of the interdisciplinary renewable energy and island sustainability (REIS) group. Previously, he served as Department Chair of Electrical Engineering Dr. Kuhl's research is in the area of neural networks and machine learning, adaptive signal processing, sensor networks, communication networks, and renewable energy and smart grid applications.

Dr. Kuh won a National Science Foundation Presidential Young Investigator Award and is an IEEE Fellow. He was also a recipient of the Boeing A. D. Welliver Fellowship and received a Distinguished Fulbright Scholar’s Award working at Imperial College in London. Dr. Kuh was an Associate Editor for the IEEE Transactions on Circuits and Systems served on the IEEE Neural Networks Administrative Committee, served on the IEEE Neural Networks for Signal Processing Committee, and was a Distinguished Lecturer for the IEEE Circuits and Systems Society. Dr. Kuh co-chaired the 1993 International Symposium on Nonlinear Theory and Its Applications (NOLTA) and served as the technical co-chair for the 2007 IEEE ICASSP both held in Honolulu. He is currently serving as the IEEE Signal Processing Society Regions 1-6 Director at Large, on the Board of Governors of the Asia Pacific Signal and Information Processing Association, and as a senior editor of the IEEE Journal of Selected Topics in Signal Processing Journal.

Enquiries: Ms. Winnie Wong / Flora Au-Yeung, Department of Mechanical and Automation Engineering, CUHK at 3943 8337 / 3943 7026.

***** ALL ARE WELCOME *****