

Seminar jointly organized by ICEE & HKU-EEE Dept

Title: Selling Random Wind

Speaker:

Professor Pravin Varaiya
Institute of Advanced Study, HKUST
University of California, Berkeley

Date: Thursday, 11 November 2010

Time: 2:00 pm

Venue: Room 603, Chow Yei Ching Building

Abstract:

Countries all over the world are attempting to reduce greenhouse gases by large investments in wind power. Wind power is inherently random, but we are used to 100 percent reliable electricity service. Converting random wind into reliable electricity is very expensive, so wind power producers require large subsidies to stay in business. We propose an alternative. Let us package random wind power into electricity with different levels of reliability and sell them at different prices. Such an electricity market will reduce or eliminate subsidies, and it is more efficient than the current market. However, we have to think of electricity differently.

Biography of the speaker:

Pravin Varaiya is Nortel Networks Distinguished Professor in the Department of Electrical Engineering and Computer Sciences at the University of California, Berkeley. From 1975 to 1992 he was also Professor of Economics at Berkeley. His research is concerned with communication networks, transportation, and hybrid systems.

Varaiya has held a Guggenheim Fellowship and a Miller Research Professorship. He has received two Honorary Doctorates, the Field Medal and Bode Prize of the IEEE Control Systems Society, and the Richard E. Bellman Control Heritage Award. He is a Fellow of IEEE, a member of the National Academy of Engineering, and a Fellow of

the American Academy of Arts and Science. He is on the editorial board of Transportation Research--C. He has co-authored three books. The second edition of High-Performance Communication Networks (with Jean Walrand) was published by Morgan-Kaufmann in 2000. "Structure and Interpretation of Signals and Systems" (with Edward Lee) was published in 2003 by Addison-Wesley.

Organizer: Prof. F.F. Wu