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## **S E M I N A R**

**Room 223B ZEC**

Monday, March 15, 2004, 3:00 p.m. 3:50 p.m.

### **Analog Front End Design for ADSL**

by

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**Abstract:** The analog front end (AFE) in an ADSL modem is the key to the modem performance. It is defined around constraints imposed by the ITU/ANSI standards bodies, the modem DSP algorithms and the 2-wire to 4-wire hybrid performance. This talk will begin with a review of the signal and system characteristics that constrain the AFE design. Then an architecture is proposed and subsystem specifications derived. Finally, subcircuits from an echo-canceling modem will be presented.

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**Richard K. Hester** received a PhD in physics from William and Mary in 1974. He was a post-doc in the Chemistry Department of MIT until 1976 when he joined Texas Instruments to work on design and fabrication of charge coupled devices. He became interested in analog signal processing, and with the exception of a two-year leave of absence to teach at Iowa State University from 1992 to 1994, he has worked thereafter on circuits and sub-systems for analog interfaces to DSP-based systems. He has served the IEEE, the Solid-State Circuits Society and the Circuits and Systems Society in various capacities including the Program Committees of ISSCC and the Symposium on VLSI Circuits, Associate Editor of TCAS and JSSC and Program Chair of the 1997 ISSCC. He was elected TI Fellow in 1992, TI Sr. Fellow in 2001 and IEEE fellow in 1994.

