

# DISTINGUISHED SEMINAR

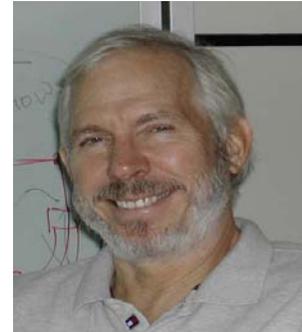
## Illinois Center for Wireless Systems

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### Creating Spectrum

Robert Brodersen  
University of California, Berkeley

Tuesday, March 27, 2007, 3:30 p.m.  
B02 Coordinated Science Laboratory



**Abstract:** As the major wireless bandwidth driver moves from audio to video and the number of users approaches the number of people on the planet, the wireless capacity requirements are increasing by many orders of magnitude. This talk will be about technological solutions to these demands which involve abandoning the property rights model of "owning" spectrum as well as exploiting the scaling of CMOS.

**Biography:** Professor Robert Brodersen received his PhD from MIT in 1972 and then was with the Central Research Laboratory at Texas Instruments for three years. He joined the Electrical Engineering and Computer Science faculty at the University of California, Berkeley in 1976 where he is now the John Whinnery Chair professor and Co-Scientific Director of the Berkeley Wireless Research Center. Professor Brodersen's research is focused in the areas of low power design and wireless communications and the CAD tools necessary to support these activities.

He has won best paper awards for a number of journal and conference papers in the areas of integrated circuit design, CAD and communications, including the W.G. Baker Award in 1979 for Best Paper in all the IEEE Journals and Transactions. In 1982 he became a Fellow of the IEEE and was co-recipient of the IEEE Morris K. Liebmman Award for Outstanding Emerging Technology in 1983. He received Technical Achievement Awards in the IEEE Circuits and Systems Society in 1986, from the Signal Processing Society in 1991 and in 1999 from the ACM Special Interest Group in Mobile Computing. Professor Brodersen was elected a member of the National Academy of Engineering in 1988. In 1996, he received the IEEE Solid State Circuits Award. Professor Brodersen was awarded an honorary doctorate from the University of Lund, Sweden in 1999 and in 2000 he received the Millennium Award from the Circuits and Systems Society and the Golden Jubilee Award from the IEEE. In 2001 he was awarded the Lewis Winner Award for outstanding paper in the IEEE International Solid-State Circuits Conference and in 2003 was given an award for being one of the top ten contributors over the 50 years of that conference.

In 1998 he was instrumental in founding the Berkeley Wireless Research Center which is a research effort involving 10 companies, 60-70 students and 6 faculty involved in all aspects of the design of highly integrated CMOS wireless systems. He now is a co-Scientific Director of this center. The research is performed at an off campus location adjacent to the University.

He was involved in the founding of Atheros Communications in 1998 and is a member of a number of Technical Advisory boards for companies in the area of wireless communications, CAD tools and integrated circuits. In 2004, he founded SiBEAM, the first to build 60 GHz chipsets using CMOS technology.

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ICWS Seminar series is supported by a grant from Rockwell Collins

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