

2011 IEEE Syracuse Section - MTT/AP/EMC Chapter

**Thursday September 15th, 2011, 6:30pm – 8:30pm*,
Syracuse University – Center for Science and Technology
Room: CST 4-201**

Tutorial on Modern Ultra Low Noise Microwave Transistor Oscillator Design

By

Prof. Dr.-Ing. Dr. h.c. mult. Ulrich L. Rohde

Abstract:

Communication systems rely on low-phase-noise signal sources such as tunable oscillators or phase-lock-loop (PLL) synthesizers for reliable voice communications and to ensure transmitted data integrity. This presentation will briefly review the design philosophy of oscillator operation and present some practical examples. The presentation will then highlight some of the fundamental constraints on size, cost, and phase noise performances. Topics will include design approach based on the patented techniques to develop a line of high-performance; compact VCOs that offer performance levels well suited to the demanding requirements of existing and emerging wireless communications systems.



Biography:

Ulrich L. Rohde holds a Ph.D. in electrical engineering (1978) and a Sc.D. (hon., 1979) in radio communications, a Dr.-Ing (2004), a Dr.-Ing Habil (2011), and several honorary doctorates. He is President of Communications Consulting Corporation; Chairman of Synergy Microwave Corp., Paterson, New Jersey; and a partner of Rohde & Schwarz, Munich, Germany. Previously, he was the President of Compact Software, Inc., and Business Area Director for Radio Systems of RCA, Government Systems Division, NJ. Dr. Rohde holds several dozen patents and has published more than 200 scientific papers in professional journals, author and co-authors of 10 technical books. Dr. Rohde is a Fellow Member of the IEEE, Invited Panel Member for the FCC's Spectrum Policy Task Force on Issues Related to the Commission's Spectrum Policies, ETA KAPPA NU Honor Society, Executive Association of the Graduate School of Business-Columbia University, New York, the Armed Forces Communications & Electronics Association, fellow of the Radio Club of America, and former Chairman of the Electrical and Computer Engineering Advisory Board at New Jersey Institute of Technology. He is elected to the "*First Microwave & RF Legends*" (Global Voting from professionals and academician from universities and industries: Year 2006). Recently Prof. Rohde received the prestigious "Golden Badge of Honor" and university's highest Honorary Senator Award in Munich, Germany

Contact information: mdenders@syr.edu

*Refreshments will be served.