

Dr. Richard D. Gitlin is a State of Florida 21st Century World Class Scholar, Distinguished University Professor and the Agere Systems Chair of Electrical Engineering at the University of South Florida. He has more than 40 years of leadership in the communications and networking industry. He was at Bell Labs/Lucent Technologies for 32-years performing and leading pioneering research and development in digital communications, broadband networking, and wireless systems. Dr. Gitlin was Senior VP for Communications and Networking Research at Bell Labs and later CTO of Lucent's Data Networking Business Unit. After retiring from Lucent, he was visiting professor of Electrical Engineering at Columbia University, where he supervised several doctoral students and research projects and Chief Technology Officer of Hammerhead Systems, a venture funded networking company in Silicon Valley. Since joining USF in 2008, he has focused on advanced wireless systems and the intersection of communications with medicine to create novel cyber-physical systems.

Dr. Gitlin is a member of the National Academy of Engineering (NAE), a Fellow of the IEEE, a Bell Laboratories Fellow, and a Charter Fellow of the National Academy of Inventors (NAI). He is also a co-recipient of the 2005 Thomas Alva Edison Patent Award and the S.O. Rice prize, has co-authored a text, published ~100 papers and holds 60 United States patents.

Previously, at Bell Labs he conducted and led research and development that has resulted in many innovative products, including: the industry-leading ATLANTA ATM Chipset, the world's first 20 gigabit/sec ATM switch, wire-speed and quality of service-aware IP switches, multicode CDMA (used in 3G HSDPA wireless data), and the BLAST broadband wireless system based on advanced smart antennas (MIMO). Earlier in his career, he led the team that pioneered V.32/V.34 voice-band modems, and in 1986 he was co-inventor of DSL. He was instrumental in launching Globespan, an early DSL chip vendor. Dr. Gitlin received a Bachelor's degree with honors in Electrical Engineering from The City College of New York, and Masters and Doctor of Engineering Science degrees in Electrical Engineering from Columbia University.

From 2002-2006 Dr. Gitlin served on the Board of Directors of PCTEL, Inc. (NASDAQ: PCTI), where he chaired the Intellectual Property committee.

For current research projects see <http://iwinlab.eng.usf.edu/>

Dr. Gitlin teaches the following courses:

[Digital Communications Systems-EEL 6534](#) [Fall semester]

[Wireless Networking-EEL 6597](#) [Spring semester]

[Random Processes-EEL 6545](#) [Occasionally]

### **Selected Accomplishments**

- Co-inventor of DSL
- Co-inventor of multicode CDMA (used in 3G HSDPA wireless)
- Pioneered MIMO smart antenna spatial processing (used in 4G/5G and WiFi wireless systems)
- Co-inventor of adaptive equalizer to compensate for polarization dispersion in fiber optic systems

## **Research Interests**

- Wireless signal processing, communications, and networking (5G, Internet of Things, cognitive systems, heterogeneous systems, *ad-hoc* systems, and cross-layer design).
- Communications and networking for biomedical applications.
- Broadband networking (quality of service, restoration and reliability, Terabit networks).

**Recent Publications:** See <http://iwinlab.eng.usf.edu/Papers.htm>

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