

Terahertz Measurements and their Applications

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Daniel Mittleman received his B.S. in physics from the Massachusetts Institute of Technology in 1988, and his M.S. in 1990 and Ph.D. in 1994, both in physics from the University of California, Berkeley, under the direction of Dr. Charles Shank. He then joined AT&T Bell Laboratories as a post-doctoral member of the technical staff, working first for Dr. Richard Freeman on a terawatt laser system, and then for Dr. Martin Nuss on terahertz spectroscopy and imaging. Dr. Mittleman joined the ECE Department at Rice University in 1996. At Rice, his research interests involve various aspects of spectroscopy, sensing, and imaging using terahertz radiation. His group reported the first THz measurements on nanometer-sized water pools, and developed new types of plasmonic waveguides for broadband THz pulses. He pioneered the use of coherent THz radiation in the study of multiply scattered photons, and the use of apertureless scattering-type imaging for near-field THz spectroscopy. In 2015, his research group has moved from Rice University to Brown University, where they continue to work in the field of THz science and technology. Dr. Mittleman edited one of the first books on THz techniques, and is the author of over 150 papers on the topic. He founded the conference series on Optical Terahertz Science and Technology (OTST), and is currently serving as the Chair of the International Society for Infrared Millimeter and Terahertz Waves. He is a Fellow of the Optical Society of America, the American Physical Society, and the IEEE.