

Compact mm-Wave Imaging and Sensing

Dr. Brian Ginsburg

RF Design Manager, Texas Instruments

Date: Friday, October 21, 2016

Time: 2:00pm

Location: EEB 132

Abstract: The wide bandwidths, short wavelength, and diverse material interactions of mm-wave signals offer rich potential for sensing and imaging applications. These applications benefit from arrays of transceivers with high levels of synchronization, small form factor, low power dissipation, and efficient low frequency and RF interfaces. The challenges extend from the gain-limited front-end all the way through the signal processing backend. This talk will explore the applications, design challenges, and some solutions addressing the RF signal path, design methodology, antenna, baseband, timing control, and power management, specifically focusing on a 160GHz pulsed radar transceiver array demonstrator integrated in 65 nm CMOS.

Biography: Brian Ginsburg received his S.B., M.Eng., and Ph.D. degrees from the Massachusetts Institute of Technology. He joined Texas Instruments, Dallas, Texas in 2007 working in its wireless terminals business unit and Kilby research labs. He is now a Senior Member of Technical Staff developing highly-integrated mm-wave transceivers. Brian is a member of the technical program committees for the Symposium on VLSI Circuits and ISSCC.

Hosted by Prof. Hossein Hashemi, Prof. Mike Chen, and Prof. Mahta Moghaddam. Organized and hosted by Tzu-Fan Wu.