

AVVISO DI SEMINARIO



~~M~~artedì 21 Luglio 2016 alle ore 12.00 presso l'Aula B del Dipartimento, in via Archirafi 36, il **Dr. Daniel M. Mittleman** direttore del Mittleman Laboratory della Brown University, Providence, Rhode Island, USA, terrà un seminario dal titolo

Modulators for Terahertz Radiation

Abstract

Terahertz radiation promises many important emerging applications, from imaging to wireless communication. However, many critical components and capabilities remain out of reach. We describe recent advances in the development of one important example - the ability to externally modulate a freely propagating terahertz wave. Modern concepts in optics including metamaterials and plasmonics enable new strategies for modulation, and new materials such as graphene can offer enhanced functionality. We will discuss the state of the art in electrically driven modulators for terahertz radiation, and show how a high-speed multi-pixel spatial light modulator, together with new signal processing techniques, can enable real-time THz imaging.

Biography

Dr. 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 September 1996. In 2015, he moved to the School of Engineering at Brown University. His research interests involve the science and technology of terahertz radiation. He is a Fellow of the OSA, the APS, and the IEEE, and is currently serving a three-year term as Vice-Chair of the International Society for Infrared Millimeter and Terahertz Waves.

Education

- 1994- Ph.D. University of California, Berkley
- 1990- M.S. University of California, Berkley
- 1988- B.S. Massachusetts Institute of Technology

Prof. E. Fiordilino