

Predavanje 'Applications and Recent Developments in Terahertz (THz) Research' koje (na engleskom jeziku) će održati prof. dr. sc. Branimir Pejčinović, Portland State University, Electrical and Computer Engineering department.

Sadržaj predavanja:

Terahertz radiation and its interaction with gases, molecules and solids is still a relatively unexplored research area. Unique characteristics, such as penetration of various materials, spectral sensitivity to material properties and surface features, ability to detect various biological and other molecules, and many others, enable a variety of applications in biology, medicine, security, and non-destructive testing. Arguably, we are seeing the first phase of commercialization of various applications in this region of the spectrum. In this talk we will explain some fundamentals of THz interaction with solids and present some of the recent developments in explosives detection, materials characterization, and waveguide and sensor applications.

O predavaču:

Branimir Pejcinovic received Dipl.-Ing. degree from University of Zagreb, and M.S. and Ph.D. degrees from University of Massachusetts, Amherst. He is currently an Associate Professor and Associate Chair for Undergraduate Education at Portland State University, Electrical and Computer Engineering department. He is also a co-director of IC Design and Test Lab, a unique facility for digital, mixed-mode and high-frequency test and characterization of ICs. His research interests are in the areas of semiconductor device characterization, design and simulation (including SiGe BJTs, GaAs FETs, strained-SOI CMOS, low-bandgap FETs and avalanche photodetectors) as well as signal integrity and electromagnetic compatibility. Most recently he is working on establishing a THz measurement facility at PSU and utilizing THz waves in various applications. He was a Technical Program Committee co-chair for two conferences: International Conference on Electronics, Circuits and Systems (ICECS) 2002 and MELECON 2004, as well as a guest editor for special issue of Analog Integrated Circuits And Signal Processing journal (Nov/Dec 2004 issue) and Telecommunication Systems Journal (July 2006) which contained best papers from these conferences. He also served on the Technical Program Committee for International Microwave Symposium.