ECE Faculty Candidate Seminar

Dr. Asimina Kiourti
Senior Research Associate
ElectroScience Laboratory, Dept. of Electrical and Computer Engineering
The Ohio State University
https://electroscience.osu.edu/people/kiourti.1

Title: "On-/In-Body Antennas, Sensors and a Novel Class of Textiles"

Location: SEO 1000

Abstract
Rapid advances in wireless communications, sensing technologies, and materials are opening new and hitherto unexplored opportunities in medicine, promising to address the unsustainability of existing healthcare provision models. Specifically, next-generation wireless on-/in-body devices can empower patients and medical providers by providing round-the-clock health status information. This promises significant healthcare cost savings and, more importantly, a much better quality of life for individuals. In this talk, we will discuss transformational wireless technologies for healthcare, addressing their potential and challenges raised. Particular focus will be on game-changing neural devices for deep brain signal monitoring, as well as portable sensors for deep-tissue imaging on the go. Further, emphasis will be given on a novel class of flexible electronics based on conductive textile threads. The latter are promising to revolutionize current practices in a wide range of applications, such as medical, military, sports, space, etc. Other technologies required to make these on-/in-body devices a reality will also be discussed, including antennas, power harvesting, and Body Area Networks.

Host: Dr. Danilo Erricolo, derric1@uic.edu

Bio

Asimina Kiourti has been with The Ohio State University ElectroScience Laboratory since 2013, where she is currently a Senior Research Associate. Prior to that, she received the Ph.D. degree in Electrical and Computer Engineering from the National Technical University of Athens, Greece (2013) and the M.Sc. degree from University College London, UK (2009). Her research interests include medical sensing and imaging, RF/microwave circuits and systems, flexible and stretchable electronics, and on-/in-body antennas.

Dr. Kiourti has published more than 25 journal papers, more than 50 conference papers, 6 book chapters, and 2 patents. She has been the recipient of more than 40 awards and scholarships, including the IEEE Engineering in Medicine and Biology Society (EMB-S) Young Investigator Award for 2014, the IEEE Microwave Theory and Techniques Society (MTT-S) Graduate Fellowship for Medical Applications for 2012, and the IEEE Antennas and Propagation Society (AP-S) Doctoral Research Award for 2011.