



## Photonics Distinguished Seminar

*March 29, 2019*

*11:45 a.m. -  
1:15 p.m.*

*9th Floor*

*Room 901*

*Photonics Center*

*8 Saint Mary's Street*

*Lunch will be served!*



### **Professor Irene Gerogeakoudi, Tufts University**

#### **Assessing Tissue Metabolic and Biomechanical Function Through Label-free, High Resolution Imaging**

#### **Host: BU OSA/SPIE Student Chapter**

Histopathological tissue evaluation procedures for disease diagnosis have remained essentially unchanged for the past century. Yet, they demand highly trained personnel, significant resources and infrastructure, and provide assessments of tissue that has been highly processed. Diagnostic features rely primarily on morphological characteristics and have not evolved to incorporate a wealth of functional information that we have acquired during the last decades regarding disease development. Professor Gerogeakoudi will present an overview of studies that her team has been pursuing in her group that aim to exploit endogenous sources of optical contrast to yield quantitative metrics of not only morphological, but also functional cell and tissue properties, without the need to excise tissue.

Dr. Irene Georgakoudi is a Professor in the Biomedical Engineering Department at Tufts University. She received her B.A. in Physics from Dartmouth College, her Ph.D. in Biophysics from the University of Rochester and performed postdoctoral work at the MIT GR Harrison Spectroscopy Lab and the Wellman Center for Photomedicine at Massachusetts General Hospital. She is a fellow of the American Institute of Medical and Biological Engineering and of the Optical Society of America and a Senior Member of SPIE. She is the recipient of a Claflin Distinguished Scholar Award, an NSF Career Award, and an American Cancer Society Research Scholar Award. She was elected as a member of the Board of Directors at the Optical Society of America in 2008-2009. She served as the program chair, co-chair or session chair of over 25 international conferences in Biomedical Optics. She is currently an Associate Editor for the journal *Optica*. Her lab is interested in the development of new or improved methods to assess different aspects of the normal or diseased development of human tissues that rely on light interactions with endogenous chromophores and are thus non-invasive.



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