DREXEL UNIVERSITY
Materials Science and Engineering
College of Engineering

Department of Materials Science and Engineering
Spring Seminar Series

3:00 PM, Wednesday, June 1
PISB 108

"Challenges and Prospects of Label-free Measurements of Mitochondrial Dynamics "

Dr. Nada Boustany
Biomedical Engineering
Rutgers University

Abstract:

When analyzing mitochondrial responses to various treatments, there are situations where labeling with fluorescent dyes is not desirable due to several potential issues such as photobleaching in time-dependent measurements, the effect that dyes and transfection may have on mitochondrial function, or conditions under which sample preparation and staining is not possible. In this context, we are developing optical scatter imaging to track the dynamics and function of mitochondria without fluorescent dyes. I will discuss our findings and the challenges and prospects of such an approach.

Bio:

Nada Boustany received her PhD in Medical Physics from the Harvard-MIT Division of Health Science and Technology in 1997. She joined Johns Hopkins University as a distinguished postdoctoral fellow in 1998 and as a research associate in 2001. In 2003 she moved to Rutgers University in New Brunswick, where she is currently an associate professor of biomedical engineering. Her research is focused on utilizing light to study cellular function. Her research interests lie in in non-invasive, optically-based quantitative cell analysis for cell biology and biotechnology.

Contact:
Dr. Caroline Schauer
cschauer@coe.drexel.edu | 215-895-6797

Keiko Nakazawa
knakazawa@coe.drexel.edu | 215-895-2323