KENNESAW STATE UNIVERSITY
SOUTHERN POLYTECHNIC COLLEGE OF ENGINEERING AND ENGINEERING TECHNOLOGY

SPCEET RESEARCH SEMINAR SERIES

DR. BILLYDE BROWN

Senior Research Engineer,
Georgia Tech

NANOFABRICATION FOR ENHANCED ENERGY STORAGE, HEAT TRANSFER, AND BIOSENSOR PERFORMANCE

DATE: WEDNESDAY, JANUARY 28TH
TIME: 11:15 AM - 12:15 PM
LOCATION: Q 107

BIO

Dr. Billyde Brown is a Senior ResearchEngineer and External User Outreach Manager at the Georgia Tech Institute for Matter and Systems (IMS), the largest interdisciplinary research institute with the most extensive shared user facilities at the Georgia Institute of Technology. Dr. Brown's primaryrole is to provide awareness of world-class nano-/microfabrication class 100 cleanroom, class 1000 biocleanroom, and materials characterization tools and facilities through outreach activities. Dr.Brown is a co-investigator on the NIH-funded Atlanta Center for Microsystems-Engineered Point-of-Care Technologies (ACME-POCT) led by Georgia Tech and Emory. Dr. Brown has strong expertise in several technical areas including electrochemical biosensors, nanomaterial synthesis and characterization, thin-film additive manufacturing, and electrochemical energy storage.

ABSTRACT

Dr. Brown will give an overview of the Institute for Matter and Systems (IMS) core facilities and how to access them, as well as present some recent case study examples of biosensor and heat transfer research and development projects from Georgia based university spinoff companies who have leveraged IMS tools. Further Dr. Brown will discuss his own recent research in energy storage and biosensors that extensively used IMS tools and facilities. These include the following projects: (1) Titanium oxide and nitride atomic layer deposition (ALD) coatings on carbon nanomaterials and nanoscale 3D printed polymer templates for microscale energy storage. (2) Prototype development of a wireless biosensor system for real-time monitoring of critical quality attributes in cell expansion bioreactors.