

The Department of Mechanical
Engineering
PRESENTS

John C. Bischof

*Distinguished Professor
Mechanical and Biomedical Engineering
Chair, Mechanical Engineering
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**Friday, May 1, 2015
WCH Room 205/206
11:10-12:00PM**



Nanoparticle Heat Transfer for Biomedical Applications

Abstract:

Unique physical characteristics and properties of metallic nanoparticles (1 – 100 nm) are supporting new opportunities in the field of nanomedicine. For example, gold and iron oxide nanoparticles have unique and tunable properties that allow transduction of optical (light), or radiofrequency (RF) electromagnetic fields to affect heating of biomaterials at multiple scales. This talk will explore the underlying physics and relative advantages of each form of nanoparticle heating and then introduce several applications from disease treatments, diagnosis to regenerative medicine.

About the Speaker:

John Bischof is a Distinguished McKnight University Professor in the Departments of Mechanical and Biomedical Engineering and the inaugural Carl and Janet Kuhrmeyer Chair in Mechanical Engineering at the University of Minnesota. His research interests are broadly in the areas of thermal and cryotherapy, biopreservation and nanomedicine.

