THE UNIVERSITY OF CHICAGO | THE COMMITTEE ON COMPUTATIONAL AND APPLIED MATHEMATICS

COLLOQUIUM

JUNSHAN LIN

Department of Mathematics and Statistics
Auburn University

Resonances through Subwavelength Holes: Theory, Computation and Applications

THURSDAY, March 26th at 4:00 PM
Jones 303, 5747 S. Ellis Ave. Chicago, IL 60637

ABSTRACT

The so-called extraordinary optical transmission (EOT) through metallic nanoholes has triggered extensive research in modern plasmonics and their applications in bio-sensing, imaging, etc. In this talk, I will give an overview of quantitative mathematical theory to understand a variety of resonances that induce the EOT phenomenon in 2D and 3D subwavelength structures, the computational methods for solving the multiscale problems, and the mathematical studies for their applications in imaging and sensing.

Organizers:
Guillaume Bal, Department of Statistics (CCAM), guillaumebal@uchicago.edu & Nisha Chandramoorthy, Department of Statistics (CCAM), nishac@uchicago.edu, Daniel Sanz-Alonso, Department of Statistics (CCAM), sanzalonso@uchicago.edu

CAM Colloquium URL: https://cam.uchicago.edu/events/cam-colloquium/