

**Seminar Announcement**  
**Electrical and Computer Engineering Department Seminar**  
**Monday, February 12, 12:00 noon-1pm**  
**306 Lutz Hall**

**Nanophotonics Introduction – Exploring Light-Matter  
Interactions at the Nanoscale**  
**Speaker: Dr. Sung Jin Kim**

**Summary:**

Nanophotonics is characterized as the "science and engineering of interactions between light and matter occurring at wavelength and subwavelength scales, wherein the physical, chemical, or structural properties of natural or artificial nanostructured materials govern these interactions." Significant progress has been made in nanoscale science and engineering over the past decades, and the research findings from these advancements have been integrated into diverse applications. This presentation will provide an overview of various Nanophotonics domains, including Photonic Bandgap, 0-D Confined Structures, Metamaterials, and Plasmonics.



**Biography:**

Dr. Sung Jin Kim is a professor of Electrical and Computer Engineering at the University of Louisville. He is also serving as the director of the Micro Nano Technology Center (MNTC) at UofL. Dr. Kim's research focuses on nanophotonics and nanophotonic devices and materials for energy and sensing applications. He is exploring fundamental physics of light-nanostructure interactions as well as developing various optoelectronic devices and biomedical applications using engineered nanostructures and novel nanomaterials. He is a member of IEEE, Eta Kappa Nu and a senior member of (International Society for Optics and Photonics.