Aiiso Yufeng Li Family Department of Chemical and Nano Engineering

DEPARTMENT SEMINAR

Wednesday, March 12th, 2025
11:00 AM - 12:00 PM
SME 248

Dr. Konstantin Sokolov, PhD

"Molecular photoacoustic imaging: finding a clinically translatable path"

Professor
Department of Imaging Physics
The University of Texas MD Anderson Cancer Center, Houston, TX

Abstract: Photoacoustic imaging (PAI) is an emerging clinical modality that offers a unique combination of anatomical (when combined with ultrasound), functional, and molecular imaging with high-contrast and high-spatiotemporal-resolution at clinically relevant depths; these capabilities are unmatched by other imaging technologies. In this talk I will focus on enabling molecular photoacoustic imaging using targeted contrast agents starting form discovery of design principles for generation of a strong photoacoustic signal to formulation of clinically translatable molecular photoacoustic imaging contrast agents.

Bio: Dr. Sokolov received his Diploma Degree in Physics in 1987 from the Moscow Engineering-Physics Institute and his Ph.D. in Biophysics in 1992 from the Moscow State University. His Ph.D. thesis focused on biomedical applications of surface-enhanced Raman spectroscopy (SERS). Subsequently, he carried out research in the field of optical spectroscopy of biomolecules and bioanalytical chemistry as a postdoctoral fellow at the University of Reims, Reims, France, and the Department of Chemistry, Iowa State University, Ames, Iowa, U.S.A. Currently, Dr. Sokolov is a Professor at the Department of Imaging Physics, The UT M.D. Anderson Cancer Center. He has been elected Fellow of the Optical Society of America (OSA, currently OPTICA) in 2015, Fellow of the International Society for Optics and Biophotonics (SPIE) in 2018 and Fellow of the American Institute for Medical and Biological Engineering (AIMBE) in 2023. His lab has made seminal contributions to biophotonics and applications of plasmonic and multimodal nanoparticles for early detection, diagnosis/prognosis, and treatment of cancer and cardiovascular diseases.

Seminar Host: Jesse Jokerst