Imaging and Instrumentation Seminar Series

2:00 – 3:00 pm, Thursday, Dec. 12th 2019
MoSE 1201A

Multiscale Molecular Electromagnetic Acoustic Imaging

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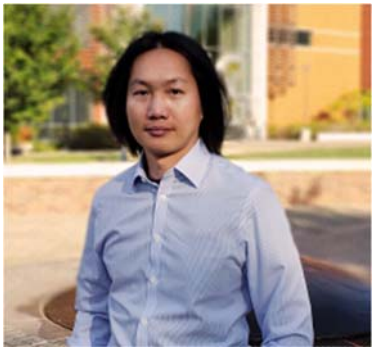

Host: Dr. Stanislav Emelianov (stas@gatech.edu)

Abstract:
The advancement of molecular and genomic biology has opened up a new route towards personized medicine from diagnoses to treatment. Electromagnetic (EM) acoustic imaging, using EM waves to induce ultrasound signals that form images, provides versatile possibilities to fulfill the needs of personized diagnostics. In this seminar, the speaker will review recent progress and challenges in the field. He will present their recent innovation in developing molecular imaging techniques using EM-acoustic effects to image across various imaging scales from single cells to small animals. In particular, he will talk about their recent results on first-of-its-kind *in-vivo* radio-frequency molecular cancer imaging, photoacoustic dynamic imaging, and signal cell photoacoustic molecular imaging.

Bio:
Yun-Sheng Chen is a Research Assistant Professor at the University of Illinois, Urbana-Champaign. He is affiliated with the Department of Electrical and Computer Engineering, Bioengineering, and Carle Illinois College of Medicine. Prior to this appointment, he was a postdoctoral fellow in the Molecular Imaging Program at Stanford School of Medicine, Radiology Department working with Prof. Sanjiv Sam Gambhir. Dr. Chen received his Ph.D. in Electrical and Computer Engineering at the University of Texas, Austin, advised by Professor Stanislav Emelianov. Dr. Chen leads a diverse research group at UIUC. His team focus on developing new multimodal imaging agents, techniques, and devices that reveal aggressive diseases with molecular precision. His work has been recognized with the Stanford Cancer Imaging Training Fellowship from NCI, the Madrid-MIT M+ Vision Fellowship, the Best Poster Award at Gordon Research Conference on Lasers in Medicine, and the Best Poster Award at World Molecular Imaging Congress. Dr. Chen is a coauthor of 30 peer-reviewed journal publications, 1 book chapter, and 3 issued patents, with a total citation of more than 1700 and an h-index of 21.

Website: http://photoacoustics.ece.illinois.edu/
Publications: https://scholar.google.com/citations?user=2GwevxIAAAAJ&hl=en