

*Stephenson School of Biomedical Engineering*  
*Seminar Series Presents*

**STRUCTURAL AND FUNCTIONAL IMAGING OF TISSUES WITH  
OPTICAL COHERENCE TOMOGRAPHY/ELASTOGRAPHY**



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**zoom**

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**ABSTRACT**

The development of novel methods and techniques for structural and functional imaging, monitoring, and quantification of different biological processes in tissues and small organs has gained tremendous interest in view of the varied applications of Biomedical Optics. In this talk, I will overview several research projects in my lab on the development and applications of Optical Coherence Tomography, Optical Coherence Elastography, Optical Projection Tomography, Light-Sheet Microscopy, and Brillouin Spectroscopy techniques for structural and functional imaging of different tissues, focusing primarily on Ophthalmological and Developmental Biology applications.

**BIO**

Kirill Larin is Cullen College of Engineering Distinguished Professor of Biomedical Engineering at the University of Houston. He also holds joint appointments at the College of Optometry and the Department of Physiology and Biophysics at Baylor College of Medicine. Larin received his first M.S. in Laser Physics and Mathematics from the Saratov State University, Russia, in 1995, his second M.S. in Cellular Physiology and Molecular Biophysics in 2001 and Ph.D. in Biomedical Engineering in 2002 from the University of Texas Medical Branch. His research contributions are in Biomedical Optics and Biophotonics and the development and application of various optical methods for noninvasive and nondestructive imaging and diagnostics of tissues and cells. Larin has authored more than 170 peer-reviewed publications and chapters in ten textbooks on Biomedical Optics. He is the recipient of the prestigious Presidential Award from Russian President Boris Yeltsin. He has also received Wallace Coulter Young Investigator Translation Award, Office of Naval Research Young Investigator Award, Outstanding Young Investigator Award from the Houston Society for Engineers in Medicine and Biology, and Herbert Allen Award from American Society for Mechanical Engineers. Larin currently serves as an Instructor for short courses on Tissue Optics at SPIE, OSA, and IEEE conferences. He was inducted as Fellow of SPIE in 2015, Fellow of OSA in 2016, and Fellow of AIMBE in 2020.