



COLLEGE OF ENGINEERING



The Graduate Studies and Research Committee (GSRC) at the college of Engineering gladly invite you to attend the seminar entitled:

Optical scattering properties for disease detection

Presenter: Dr. Michael Ryan Gardner

**Day and time: Tuesday 13/10/2020 at 10:30 am
26/2/1442**

Abstract

Light scatters from biological materials in unique patterns that can be indicative of the health of a sample. Conditions like glaucoma, traumatic brain injury, and Alzheimer's disease have all been detected using scattering-sensitive approaches to optical coherence tomography, which suggests a common underlying mechanism of increased cellular entropy in the diseased state. Examining and quantifying entropic scattering patterns using other light-based approaches could be a low-cost tool for assessing various biological and non-biological samples.

Biography

Dr. Michael Gardner received his bachelor's degree in biomedical engineering from Purdue University (2012) and his master's (2016) and PhD (2018) from the University of Texas, also in biomedical engineering. He was selected as a US Fulbright Scholar to teach at the University of Bahrain (2018-2019) before beginning as an assistant professor of biomedical engineering at King Faisal University in 2019. His research is in computational optics, using optical imaging (especially optical coherence tomography) and image processing techniques for quantitative analysis of samples, particularly in the biomedical space.

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