Research Areas:
(i) Biosensors and nanomaterials for disease detection and food safety, (ii) Confocal raman spectroscopy for intracellular quantification of drugs/proteins, (iii) Single molecule studies of protein aggregation in/on living cells, DNA and receptor oligomerization dynamics in living cells.

Classes Taught:
ABE 450 – Finite Element Method in Design and Optimization
ABE 485 – Senior Engineering Design
ABE 540 – Biosensors
ABE 591T – Introduction to Biophysics

Selected Publications:
Ren, W., Mura, S., and Irudayaraj, J. Modified graphene oxide sensors for ultrasensitive detection of nitrate ions in water. Talanta. 10.1016/j.talanta.2015.05.073.