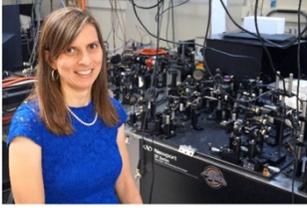


Photonics Seminar



Dr. Juliet Gopinath

Electrical, Computer and Energy Engineering & Physics
University of Colorado Boulder

Nonlinear Integrated Optics and Microscopy

Tuesday, November 30, 2021

EEB 132

1:30 PM – 2:30 PM

Zoom Link:

<https://usc.zoom.us/j/91808071892?pwd=VUwyK3NSNW5rSzVLQzFKSGdPc05yUT09>

Abstract: I will discuss my research interests in nonlinear integrated devices. Recently, ultrafast and nonlinear integrated devices have captured interest for frequency metrology, sensing, and imaging. An excellent platform for nonlinear optical devices is offered by chalcogenide glasses, with high nonlinearities, long wavelength transparencies, flexible substrate choice, and low nonlinear absorption. Progress on integrated optical devices for the near, mid, and long-wavelength infrared is presented, including nonlinear optical characterization. Specifically, I will present a new method for characterizing the linear and nonlinear properties of microresonators, supercontinuum generation and annealing studies in the material as well as an investigation of photosensitivity as a method to control the device properties.

Biography: Juliet Gopinath is the Alfred T. and Betty E. Look Professor of Electrical, Computer and Energy Engineering and Physics at the University of Colorado Boulder. She received her B.S. degree in Electrical Engineering from the University of Minnesota and her M.S. and Ph.D. degrees at MIT. She was a member of technical staff at MIT Lincoln Laboratory from 2005 to 2009. Since then, for the past twelve years, she has led a research group at the University of Colorado Boulder. Her current research interests include ultrafast lasers, nonlinear optics, mid-infrared materials, spectroscopy, orbital angular momentum and adaptive optical devices. She has published 70 peer-reviewed journal articles and over 86 conference presentations. She is the recipient of an R&D 100 Award (2012) and is an OSA Fellow. She served as an Associate Editor for the IEEE Photonics Society Journal (2011-2017), the Associate Director for Cubit (2019), and current is an Associate Editor for Optica.

Hosts: Faculty-Wade Hsu, Mercedeh Khajavikhan, Michelle Povinelli, Constantine Sideris, and Wei Wu
Students-Max Lien and Raymond Yu
MHI: <http://mhi.usc.edu>