



# Bioengineering Department

## Spring 2021 Semester—Seminar Series

Thursdays, 12:00 pm—1:00 pm  
Virtual Seminar Via Zoom

**February 18, 2021**  
**Claudia Clopath, Ph.D.**

*Professor, Bioengineering Department and Head of Computational Neuroscience Laboratory  
Imperial College London  
London, England*

**Title:** *Theory of Neural Perturbome*

**February 25, 2021**  
**Nathan Crook, Ph.D.**

*Assistant Professor, Chemical and Biomolecular Engineering Department  
North Carolina State University  
Raleigh, NC*

**Title:** *Engineering the In Vivo Residence Times and Biomolecule Production Capacities of Probiotics*

**March 4, 2021**  
**Pieter Cullis, Ph.D.**

*Scientific Director & CEO, NanoMedicines Innovation Network, Canada's;  
Professor, Department of Biochemistry and Molecular Biology, University of British Columbia  
Vancouver, British Columbia*

**Title:** *Lipid Nanoparticle (LNP) Systems for Enabling Gene Therapies: Applications for an Hereditary Disease and a COVID-19 Vaccine*

**March 18, 2021**  
**Eva Dyer, Ph.D.**

*Assistant Professor,  
Coulter Department of Biomedical Engineering  
Georgia Institute of Technology & Emory University  
Atlanta, GA*

**Title:** *Representation Learning and Alignment in Biological and Artificial Neural Networks*

**March 25, 2021**  
**Matthew O'Donnell, Ph.D.**

*Frank and Julie Jungers Dean Emeritus,  
College of Engineering;  
Professor, Bioengineering Department  
University of Washington  
Seattle, WA*

**Title:** *Light and Sound: Integrating Photonics with Ultrasonics*

**April 1, 2021**  
**Rosemary Kozar, Ph.D.**

*Professor of Surgery, Co-Director of the Shock Trauma Anesthesia Research (STAR) Center, Director of Translational Research at Shock Trauma  
University of Maryland  
College Park, MD*

**Title:** *Endotheliopathy, from bench to bedside*

**April 8, 2021**  
**Axel Krieger, Ph.D.**

*Assistant Professor, Department of Mechanical Engineering  
Johns Hopkins University  
Baltimore, MD*

**Title:** *Autonomous Surgical Robots: Will Future Surgeons Need Caffeine or 120v?*

**April 15, 2021**  
**Carmen Canavier, Ph.D.**

*Mullins Professor and Interim Head, Department of Cell Biology and Anatomy  
Louisiana State University Health Sciences Center  
New Orleans, LA*

**Title:** *Hippocampal Dynamics: Simulation of Analogs of Place Field Firing in CA1*

**April 22, 2021**  
**Ilkay Oksuz, Ph.D.**

*Assistant Professor, Computer Engineering Department,  
Istanbul Technical University  
Istanbul, Turkey*

**Title:** *Detection and Correction of Cardiac MRI Quality Issues Using Deep Learning*

**April 29, 2021**  
**Fatah Kashanchi, Ph.D.**

*Professor, Department of Systems Biology, George Mason University, Prince William Campus.*

**Title:** *Exosomes and Viruses: A Tale of Two Overlapping Worlds*