CMPD5 Mini-symposium Proposal
Title: *Advancing Methods in Epidemiology*

Organizers:

Lauren Childs
Department of Mathematics, Virginia Tech
E-mail: lchilds@vt.edu

Olivia Prosper
Department of Mathematics, University of Kentucky
E-mail: olivia.prosper@uky.edu

Synopsis

The field of epidemiology has greatly benefited from mechanistic modeling of disease transmission dynamics, with relatively simple compartmental differential equation models serving as a starting point for better understanding these dynamics at different scales. With advancing techniques and computational tools, these mathematical models are including greater complexity such as linking different scales of disease dynamics (from within-host population dynamics of the pathogen to landscape-level transmission), integrating empirical data for calibration and validation, and incorporating stochasticity. The aim of this mini-symposium is to bring together researchers who tackle these types of questions as they relate to the population dynamics of infectious disease and to generate further discussion about some of the state-of-the-art approaches for addressing problems of importance to public health.

Confirmed Speakers

- Folashade Agusto, Department of Ecology & Evoluntionary Biology, University of Kansas

- Hayriye Gulbudak, Department of Mathematics, University of Louisiana at Lafayette

- Carrie Manore, Theoretical Biology & Biophysics, Los Alamos National Laboratory

- Miranda Teboh-Ewungkem, Department of Mathematics, Lehigh University

- Omar Saucedo, Mathematical Biology Institute, Ohio State University

- Olivia Prosper, Department of Mathematics, University of Kentucky

- Lauren Childs, Department of Mathematics, Virginia Tech

- Michael Robert, Department of Mathematics, University of the Sciences