

BI-CO MATHEMATICS COLLOQUIUM

Dr. Erica Graham

Bryn Mawr College

“Mathematizing Health Disparities”

Monday, September 30, 2024

Talk at 4:15 PM – Park 245

Reception at 4:00 PM – Park 361, Math Lounge

Abstract:

Mathematical modeling is a powerful tool for studying mechanisms of physiological health and disease within and among individuals. Importantly, societal constructs often affect disease outcomes, establishing disparities across various identities, such as race, ethnicity, or socioeconomic status. McEwen and Stellar coined the term *allostatic load* to describe how repeated adaptation to internal and external stressors can lead to an accumulation of physiological defects. In this talk, I will discuss some existing mathematical models that allow us to examine the physiological nature of health disparities through an allostatic load-mediated process.

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