



BiophysTO Lunchtime Seminar Series

Date

Thursday, Nov 16, 2023
12:00 – 1:00 pm

Location

McLennan Physical
Laboratories, 60 St
George street.
Room: MP606

Dr. Mei Zhen

Molecular Genetics
and Lunenfeld-Tannenbaum Institute
University of Toronto

The neural Compression, computation, and sensory-driven rewiring at a small nervous system: insights from the *C. elegans* neural circuit

The ability of animals to generate goal-oriented motor behaviors ensures their survival. Combining connectomics, genetics, optogenetics, electrophysiology, and modeling, we have begun to reveal cellular mechanisms that drive the motor behaviors of *C. elegans*, an animal with a small nervous system. I will also present published and unpublished progress that describes how sensory inputs drive genetically controlled structural rewiring across the brain to underlie behavioral adaptation of the stressful environment. These results imply fascinating functional compression, computation and genomic organizations that enable a small nervous system to serve as a compact model to dissect the organizational logic of circuits.

Host: Anton Zilman



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