



BiophysTO Lunchtime Seminar Series

Date

Thursday, Oct 19 2017
12:00 pm (noon)

Location

McLennan, MP606
60 St George street

Streaming

Seminar livestreamed to
DV3129 @ UTM

**Pizza & refreshments
provided**

Prof. Greg Huber

Kavli Institute for Theoretical Physics,
University of California, Santa Barbara

Terasaki Ramps: A Glimpse into the Geometrical Architecture of the Cell

Biologists have long considered the endoplasmic re5culum (ER) to be an exceedingly important and complex intracellular organelle in eukaryotes. It is a membrane structure, part folded sheet, part branching network, that both envelops the nucleus and threads its way outward, all the way to the cell's periphery. Microscopic images attest to its convoluted geometry, but can the complexity of its architecture be understood in a precise, mathematical way? Recently, refined imaging of the ER has revealed beautiful and subtle geometrical forms - "Terasaki ramps" - suggestive of Riemann sheets and helical minimal surfaces. What is the physics of these structures, can it speak to their formation, and how do the structural motifs connect to biological function?



Host:
Dr. Anton Zilman



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