



BiophysTO Lunchtime Seminar Series

Date

Thursday, March 12, 2020
[12:00(noon)]

Location

McLennan, MP606
60 St George st

**Pizza & refreshments
provided**

Prof. Hanna Salman

Department of Physics
University of Pittsburgh

Cell-size control and inheritance dynamics in bacteria

Genetically identical cells exhibit large heterogeneity in their characteristics (such as size and protein content) even when experiencing homogenous environmental conditions. The evolution of this heterogeneity is limited in part by the inheritance of cellular traits from one generation to the next. In addition, this heterogeneity is controlled by molecular mechanisms to prevent the divergence of cellular properties over time. In this talk, I will introduce a new experimental technique for measuring how the heterogeneity in bacterial cell size develops over time, and discuss a possible mechanism that allows bacteria to control it. Our results show that the inheritance dynamics exhibit long-term memory up to ~ 10 generations that restricts the variation of cell size, and reveal a feedback mechanism that acts to limit the heterogeneity acquired during cell division as a result of cellular noise

Host: Prof. Anton Zilman



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