

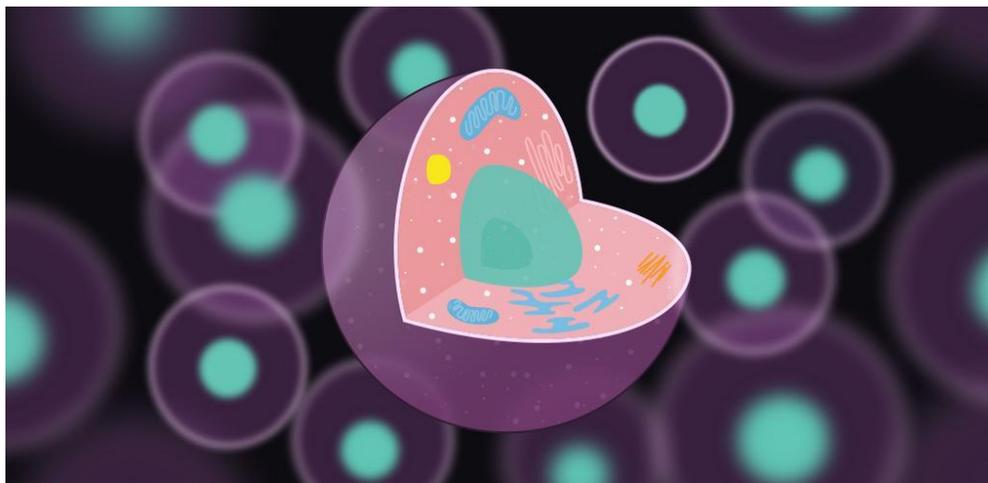
Physical Biology Meets Cancer Workshop

A Laufer Center Mini-Workshop

Stony Brook University, LC Lecture Hall 101

Friday, November 30, 2018, 1:30 PM - 5:30 PM

Sponsored by [Laufer Center for Physical and Quantitative Biology](#)



Synopsis

Despite decades of ongoing research, cancer remains a serious health burden and a major scientific puzzle. The search for new approaches to cancer research has generated interest among engineers, programmers and computer scientists. Among the growing influx of computational and engineering methods, it may be unclear what physicists have to offer. And methods are not what they offer. Rather, they offer entirely new perspectives and questions arising from a quest for principles.

This workshop's aim is to explore how physicists would think about cancer, and whether there are principles at the level of molecules, single cells or cell populations that may form a core of understanding.

Workshop Organizers:

- Gábor Balázsi, *Henry Laufer Associate Professor, Laufer Center for Physical & Quantitative Biology and Department of Biomedical Engineering*
- Ken A. Dill, *SUNY Distinguished Professor of Chemistry & Physics, and Laufer Center Director*

Contact: Nancy Rohring, *Laufer Center Admin. Director*; Tel: 631-632-5400; nancy.rohring@stonybrook.edu





Physics X Cancer

Workshop Agenda

- 1:30 PM** **Robert H. Austin, Ph.D.**, Princeton University
CANCER TUMORS: THE ULTIMATE COMPLEX ADAPTIVE MATTER
- 2:30 PM** **Sui Huang, Ph.D.**, Institute for Systems Biology, Seattle
FROM NON-LINEAR DYNAMICS TO SINGLE-CELL TRANSCRIPTOMICS OF CELL STATE
TRANSITIONS – WHY CANCER TREATMENT BACKFIRES
- 3:30 PM** Coffee & Refreshments (Laufer Center Hub, LC 110)
- 4:00 PM** **Marsha R. Rosner, Ph.D.**, University of Chicago
REWIRING SIGNALING PATHWAYS IN CANCER CELLS
- 5:00 PM** **Gábor Balázsi, Ph.D.**, Stony Brook University
CONTROL KNOBS, THRESHOLDS AND CANCER CELL REPROGRAMMING
- 5:30 PM** Reception (Laufer Center Hub, LC 110)

