



PHYSICS COLLOQUIUM:

Physics of Morphogenetic Matter

Margaret Gardel

Professor, Physics and Molecular Engineering
University of Chicago

Date:

11/12/2021

Time:

10:30 AM-11:50 AM

Link:

Please contact
snsgradstaff@ucmerced.edu
for the zoom
information.



Abstract:

My lab studies how the movement and shape of living cells is controlled by living materials constructed by protein assemblies within the cell interior. In this talk, I will describe my lab's recent efforts to understand the design principles of the active, soft materials that drive morphogenesis of epithelial tissue. In particular, we are interested in the design principles by which protein-based materials generate, relax, sense and adapt to mechanical force.

Here I will describe our current efforts to understand these questions using approaches from biochemistry, cell biology, theory and machine learning.

About the Speaker:

Margaret Gardel is the Horton B. Horton Professor of Physics and Molecular Engineering at the University of Chicago. Her lab's focus is to understand the physical properties of eukaryotic cells and how these control morphogenesis. In addition, her lab uses biological building blocks to construct novel types of soft materials. She joined the University of Chicago in 2007 after earning her Ph.D. from Harvard University and completing postdoctoral research as a Pappalardo Fellow at MIT and at Scripps Research Institute. She is a Fellow of the American Physical Society. Her awards include a Packard Fellowship, Sloan Fellowship, NIH Pioneer Award and Raymond and Beverly Sackler International Prize in Biophysics.

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