SACRAMENTO STATE

Department of Physics and Astronomy

SPRING 2023 Colloquium Series

“The Making of Flatland: From Bacteria to Batteries”

Dr. Salem Mosleh

Harvard University

Living systems grow robustly into a remarkable array of forms, often in the face of many environmental perturbations. Elucidating how this happens is a key challenge in biology, with massive potential applications in living and bio-inspired systems, and will require weaving together tools from mathematics, physics, and biology. Here using bacterial cell envelopes and plant tree leaves as examples of growing structures that can be abstracted as thin two-dimensional sheets embedded in three dimensions, I will describe how mathematical models — when informed by experiments — can be essential in discovering the regulatory mechanisms involved in controlling shape. Lastly, I discuss how understanding shape control in living organisms may help us design better solid-state batteries.

***Tuesday, February 7, 2023**

4:00 - 5:20PM

MND1015

Open & Free to all students, faculty and public