Active processes in living systems create a novel class of nonequilibrium matter composed of many interacting components that individually consume energy and collectively generate motion or mechanical stress. In this talk, I will discuss experimental tools and conceptual frameworks we develop to uncover laws governing fluctuations, order, and self-organization in systems in which individual components break time reversal symmetry. I will describe how these frameworks provide powerful insight into dynamics of nonequilibrium living systems across scales, from the emergence of thermodynamic arrow of time to spatiotemporal organization of signaling protein patterns and discovery of odd elasticity.

Wednesday, November 10th, 2021 at 2:15 pm
MPIDS, video conference at www.zoom.us
Meeting ID: 959 2774 3389
Passcode: 651129, direct link