Biological Complexity (Spring 2023)

BSC 4930 / 6936

Tuesday and Thursday, 2:00 - 3:20 PM

Prof. Ashkaan K. Fahimipour

Nature is complex. From cells to ecosystems to societies, our ability to comprehend and predict natural phenomena is made difficult by emergence, self-organization, randomness, nonlinearities, hierarchies, and collective dynamics. Our intuition often breaks down in these situations. In this course, we will learn how to make sense of complex biological systems. We will cover what you need to know to start wielding the tools of networks, math models, algorithms, and big data analysis to make headway on biological problems; and deploy these tools on real datasets and with modern computational perspectives.