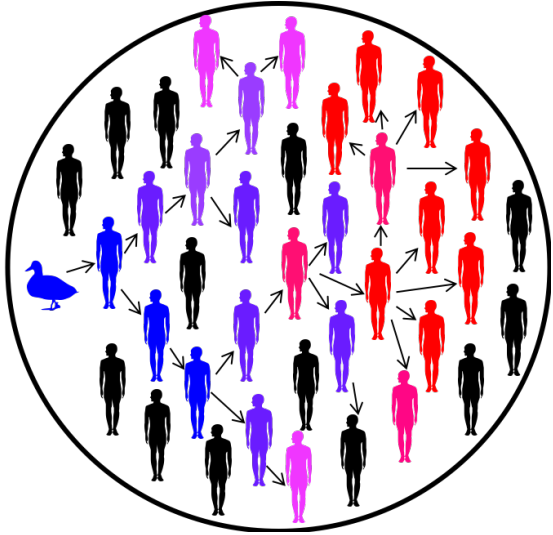


Probability and Stochastic Processes with Applications to Biology

MAT/BIS 107 (CRN 56364/70660)



Disease outbreak

When are disease outbreaks likely? If your medical test was positive, what is the chance you are sick? How can one simulate genomic big data experiments? How can we use simulations of cancer to quantify risk of metastasis? Stochastic models can provide insights to these and many more questions in biology.

Description: Introduction to probability theory and stochastic processes with biological, medical, and bioengineering applications. Combinatorics, discrete & continuous random variables, Bayes' formula, conditional probability, Markov chains, Poisson processes, and random walks. Computer labs cover computational techniques. Pre-requisites: MAT/BIS 27A or MAT 22A or permission of instructor

Instructor: Sharon Aviran, BME & Genome Center

Time: MWF 11-11:50am and (lab) F 9-10:50am

