Probability, networks and evolution

Random processes on discrete objects (graphs, trees, partitions etc) are a central theme of many phenomena in evolutionary biology. For example, the evolution of DNA, the ancestry of populations and species, the genetic composition of populations, and the origin of life, have all been modeled using discrete random processes. In this talk I provide an overview of some of the many ways in which these models are being applied in modern evolutionary biology, and outline some of our recent results in this area.