

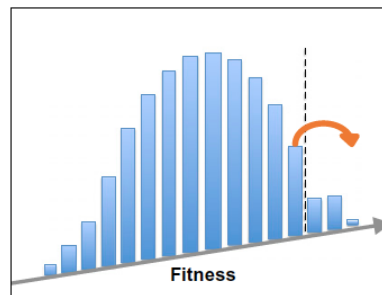
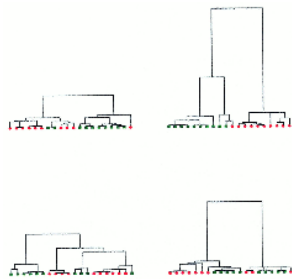
# PHYS 274

## STOCHASTIC PROCESSES IN POPULATION GENETICS

SPRING 2015

**Instructor:** Prof. Massimo Vergassola  
Office: Urey Hall 7262  
email: massimo@physics.ucsd.edu

**Time and Location:** Tue and Thu  
09:30 am – 10:50 am  
Mayer Hall 2623



**Course description:** The course explores genetic diversity within biological populations. Genetics fundamentals, mutation/selection equilibria, speciation, Wright-Fisher model, Kimura's neutral theory, Luria–Delbrück test, the coalescent theory, evolutionary games and statistical methods for quantifying genetic observables such as SNPs, copy number variations, etc., will be discussed.

**Recommended preparation:** familiarity with probabilities and PDEs at the undergraduate level; an introduction to basic evolutionary processes is useful but not necessary as it will be covered.

