

Maximum Likelihood Estimation for Allele Frequencies

Biostatistics 666
Lecture 7

Last Three Lectures: Introduction to Coalescent Models

- Computationally efficient framework
 - Alternative to forward simulations
- Predictions about sequence variation
 - Number of polymorphisms
 - Frequency of polymorphisms

Coalescent Models: Key Ideas

- Proceed backwards in time
- Genealogies shaped by
 - Population size
 - Population structure
 - Recombination rates
- Given a particular genealogy ...
 - Mutation rate predicts variation