

Table of contents

1. Introduction to molecular epidemiology and infectious disease phylodynamics
2. Phylogenetic Inference: Sequence Alignment
3. Phylogenetic Inference: Building Trees
4. Alignment and tree reconstruction using Seaview: A hands-on practical
5. Bayesian phylogenetics
6. Advanced Bayesian Phylogenetics: Phyloalignment
7. Advanced Bayesian Phylogenetics: Recombination
8. Estimating Evolutionary Rates and Divergence times
9. Bayesian model testing
10. Estimating rates and dates from time-stamped sequences: A hands-on practical
11. Viral epidemiology and the Coalescent
12. Non-Parametric Bayesian Population Dynamics Inference
13. Revealing the evolutionary dynamics of influenza
14. Phylogeography
15. Phylogeographic inference in discrete space: A hands-on practical
16. Phylogeographic inference in continuous space: A hands-on practical
17. Learning to Count: Tests for Evolutionary Innovation and Robust Sequence Distance Estimation
18. Research Acknowledgments