

SISMID Module Schedule: Stochastic Epidemic Models with Inference

Instructors: Prof's Ira Longini (IL), Tom Britton (TB) and TA Fanny Bergström (FB)

Each topic will have a full set of pdf's.

Monday, July 29:

1. Introduction to stochastic epidemic models; notation, properties, examples, IL, TB
2. Important properties of epidemics and endemic situations, TB + FB
3. Inference on stochastic epidemic models, TB
4. Different models for vaccine mechanisms, IL

Tuesday, July 30:

5. Continuation, Heterogeneities, inference from big outbreaks, TB + FB
6. Modeling using networks and other heterogeneities, Computer simulations, TB
7. Stochastic models for small groups such as households, IL
8. Study designs for evaluating vaccine efficacy, IL

Wednesday, July 31

9. COVID-19 analysis, TB
10. Design and analysis of randomized vaccine trials for emerging infectious disease epidemics: From Cholera to Ebola to COVID 19, IL

Schedule for lectures (times are in the Eastern Daylight Time (EDT) Zone):

Date	Time (EDT)	Topic	Instructor
Monday, July 29	8:30 – 8:35	Introduction	IL,TB,FB
	8:35 – 10:00	Lecture 1 + exercises	TB
	10:30– 12:00	Lecture 2 + exercises + computer simulations	TB+FB
	1:30 – 3:00	Lecture 3 + exercises	TB
	3:30 – 5:00	Lecture 4	IL
Tuesday, July 30	8:30 – 10:00	Lecture 5 + exercises + computer inference	TB+FB
	10:30– 12:00	Lecture 6 + exercises	TB
	1:30 – 3:00	Lecture 7	IL
	3:30 – 5:00	Lecture 8	IL
Wednesday, July 31	8:30 – 10:00	Lecture 9 + exercises	TB
	10:30– 12:00	Lecture 10	IL