

Quantitative viral dynamics

Master 2 IMAiS, Ecole Normale Supérieure, 2023-2024 ; 18-22 December

Organiser : François Blanquart francois.blanquart@college-de-france.fr

For admin & practical matters please contact secfib-M2@bio.ens.psl.eu

Schedule: 9am to 12 am, 14pm to 17pm

Salle: 321 (46 rue d'Ulm, 3rd floor)

Monday, December 18th

9-12

François Blanquart: Modelling outbreak dynamics.

14-17

François Blanquart, Mattia della Vecchia: digital laboratory on outbreak dynamics.

Tuesday, December 19th

9-12

Jérémy Seurat, phage ecology and phage therapy

11 Baptiste Gaborieau, example of research on phage therapy

14-17

Jérémy Seurat, Mattia della Vecchia: digital laboratory: mixed models to infer phage dynamics

Wednesday, December 20th

9-12

François Blanquart, modelling within-host dynamics of human viruses.

11 Samuel Alizon: Example of research in mathematical modelling of within-host dynamics.

14-17

François Blanquart, Mattia della Vecchia, digital laboratory on modelling within-host dynamics. Inferring the key parameters of HIV infection from within-host longitudinal viral load data.

Thursday, December 21th

9-12

François Blanquart: modelling between-host dynamics (2/2)

Friday, December 22th

9-12

François Blanquart, phylodynamics of infectious diseases: inferring the origin and spread of viruses from sequence data. Inferring phylogenies and dating past events. Inferring past population size and geographical spread at different scales.

11 Sebastian Duchêne: Example of research in phylodynamics

14-17 François Blanquart, phylodynamics practical. Dating, inferring history of population size, and phylogeography of HIV-1 or SARS-CoV-2.