

Qlife

Quantitative Biology Winter School Series

QUANTITATIVE VIRAL DYNAMICS ACROSS SCALES

MARCH 21ST - 25TH, 2022 - PARIS

LECTURERS & SPEAKERS

Anne CHEVALLEREAU, Paris
Vittoria COLIZZA, Paris
Laurent DEBARBIEUX, Paris
David DEMORY, Atlanta
Laura DI DOMENICO, Paris
Sylvain GANDON, Montpellier
Michael HOCHBERG, Montpellier/Santa Fe
Debbie LINDELL, Haifa
Jacopo MARCHI, Paris
Namiko MITARAI, Copenhagen
Thierry MORA, Paris
Richard NEHER, Basel
Chiara POLETTI, Paris
Igor ROUZINE, St Petersburg
Eugenio VALDANO, Paris
Aleksandra WALCZAK, Paris
Jake WEISSMAN, Los Angeles
Joshua WEITZ, Atlanta/Paris
Edze WESTRA, Exeter
Sophia ZBOROWSKY, Paris

SCIENTIFIC COMMITTEE CHAIR

Joshua WEITZ, Atlanta/Paris

COORDINATOR

Patrick CHARNAY, Paris

Viral infections transform the fate of cells, organisms, populations, and ecosystems. The global SARS-CoV-2 pandemic has revealed how rapidly an emerging viral disease can spread within hosts and between individuals in a connected population, with devastating consequences. In response, quantitative modelling has become a key component of response efforts: shaping the rationale for non-pharmaceutical interventions, helping to structure and implement novel mitigation strategies, and providing a glimpse of how immunity, transmission, and evolution converge in shaping a potential transition to post-pandemic dynamics.

This course will bring thought leaders in dialogue with the next generation of early career scientists to advance the integrative study of quantitative viral dynamics across scales. It will intentionally focus on organizing principles of multi-scale dynamics spanning both epidemiology (primarily the dynamics of viral infections in humans) and ecology (primarily the dynamics of viral infections in bacteria). The workshop will provide the conceptual basis for understanding viral impacts across scales, quantitative methods for analysing within and between host spread, and computational toolkits to integrate robust quantitative methods into research practice. For the digital practical (every afternoon), the students will have to choose in either the ecology or epidemic series.

Common lunches and dinners with the speakers and instructors will foster informal discussions. The winter school is limited to 24 participants. It is open to Master 2 and PhD students, as well as postdocs, engineers and junior scientists with backgrounds in life science, geoscience, chemistry, physics, computer science or mathematics.

Basic experience in file manipulation under Unix/Linux and in Python or R programming is required.

Additional information is available on:

<https://www.enseignement.biologie.ens.fr/spip.php?article246>

APPLICATION DEADLINE JANUARY 7TH, 2022

REGISTRATION FEES: 150 €*

- Registration link: <https://bit.ly/3DDgfu5>
- In addition, provide a CV, a 1 page motivation letter (including justification for travel grant if requested) and a supporting letter from a supervisor with "Qlife VirDyn winter school 2022-LASTNAME" as subject header to qlife.events@psl.eu

* Fees cover food and lodging from Monday morning to Friday afternoon.
Some travel grants will be available.

