

# Qlife

# Quantitative Biology Winter School Series

## CELL DYNAMICS IN DEVELOPMENTAL SYSTEMS

FEBRUARY 8<sup>TH</sup> - 12<sup>TH</sup>, 2021 - PARIS

### LECTURERS & INSTRUCTORS

Stein AERTS, Leuven  
Sara AIBAR, Leuven  
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Emmanuel FAURE, Montpellier  
Swann FLOC'HLAY, Paris  
Guillaume GAY, Marseille  
Stefania GIACOMELLO, Stockholm  
Christophe GODIN, Lyon  
François GRANER, Paris  
Veronica GRIENEISEN, Cardiff  
Carl-Philipp HEISENBERG, Vienna  
Henrik JÖNSSON, Cambridge  
Nathalie LEHMAN, Paris  
Patrick LEMAIRE, Montpellier  
Olivier LEROY, Paris  
Prisca LIBERALI, Basel  
Grégoire MALANDAIN, Sophia Antipolis  
Matthias MERCKEL, Marseille  
Lorette NOIRET, Paris  
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Sophie THEIS, Marseille  
Jan TRAAAS, Lyon  
Danijela VIGNJEVIC, Paris  
Robert ZINZEN, Berlin

### COORDINATOR

Patrick CHARNAY, Paris

*Recent technological developments in sequencing, imaging and image analysis have granted access to unprecedented temporal and spatial resolution of gene expression, cell dynamics and morphological features.*

The Qlife program in Quantitative Biology of the PSL University, in partnership with the Labex DEEP, organizes a winter school that will cover these emerging approaches through a series of lectures and digital workshops, using datasets from *Drosophila*, ascidians, mammals and plants. Dynamic, quantitative analysis of embryonic development will be performed through the combination of image analysis (segmentation, cell tracking, registration) with multiscale analysis of forces and modelling. These data will be integrated with the output of single cell, spatial and barcoding transcriptomic analyses to provide an unprecedented combined view of cell location, morphology, interactions, migration, expression pattern and fate.

Lunches and dinners with the speakers and instructors will foster informal discussions.

The winter school is limited to 20 participants. It is open to M2 students and PhD students, as well as postdocs, engineers and junior scientists, with backgrounds in life science, geoscience, 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?article234>

**APPLICATION DEADLINE DECEMBER 6<sup>TH</sup>, 2020**

REGISTRATION FEES: 150 €\*

- Register through the following link: <https://bit.ly/33zn290>
- In addition, provide a CV, a motivation letter (including justification for travel grant if requested) and a supporting letter from a supervisor with "Qlife CellDyn winter school 2021" as object to [qlife.events@psl.eu](mailto:qlife.events@psl.eu)

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

