

BIOENG-800

Summer School on Quantitative biology: bridging the gap between computational and experimental approaches

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Cursus	Sem.	Type
Computational and Quantitative Biology		Obl.

Language of teaching	English
Credits	2
Session	
Exam	Oral presentation
Workload	60h
Hours	47
Courses	22
Exercises	20
TP	5
Number of positions	30

Frequency

Only this year

Remark

Next time: 16.09.19 - 20.09.19 Registration via : <http://quantbio2019.epfl.ch>

Summary

Through a series of seminar style lecture, workshops and student presentations, students will be exposed to novel experimental and computational approaches within the scope of quantitative biology and will have the chance to explore current problems in the field.

Content

The emergence of the fields of systems and synthetic biology has brought about the need for efficient coordination of experimental and computational efforts. This summer school aims to foster such dialog by bringing together scientists from both computational and experimental backgrounds and allowing them to exchange ideas around specific state-of-the-art open problems. In particular, it aims at improving the awareness of experimentalists about computational and statistical possibilities, while giving computational scientists a better understanding of the current needs of experimentalists.

The program consists of talks spanning topics from stochastic and deterministic modeling, inference, control theory and dynamical systems applied to synthetic and systems biology. Furthermore, in hands-on workshops, the students will get a chance to explore current problems in these areas and become familiar with approaches to solve them. There will be over 20 speakers coming to share their research from 16 different scientific institutions in 9 different countries, giving students the opportunity to hear lectures and discuss with scientists from both inside and outside the EPFL/ETH domains. Student oral and poster presentations are also incorporated into the summer school schedule, enabling students to talk about their own research and exchange ideas with others.

Keywords

quantitative biology, systems biology, synthetic biology, computational modeling