WINTER SCHOOL ON QUANTITATIVE SYSTEMS BIOLOGY

MORPHOGENESIS

Pre-School
Dec 3 - 6, 2019

Main school
Dec 9 - 20, 2019

Ramanujan Hall,
ICTS, Bengaluru

Application deadline
1 September 2019

Limited travel grants are available for participants from developing countries via Pratiksha Trust scholarships, ICTS, Bengaluru.

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www.icts.res.in/program/qsb2019

The development of an organism from a single-celled zygote to an embryo involves a tight integration between gene expression, signaling and mechanochemical processes. In recent years, there has been an explosion in studies that attempt to unravel the physical principles behind how organisms self-organize to generate their three-dimensional shape and functional form. Novel microscopy techniques are giving unprecedented views into the processes of development at very high spatiotemporal resolution. This deluge of data necessitates a larger scale systems-level understanding how organisms build themselves.

The eighth edition of the ICTP - ICTS winter school on quantitative systems biology is focussed on ***Morphogenesis*** and will allow students from different backgrounds to become familiar with exciting developments at the interface of Physics and Developmental Biology. The participants of the school will be exposed to contemporary research areas, covering a large variety of topics, including mechanochemical pattern formation, regeneration and growth regulation, evolutionary-developmental biology. The school will emphasize how major questions in developmental biology such as stem cell differentiation, morphogenesis, tissue patterning, and tissue mechanics, can be asked with the help of quantification and physical theory.

SPEAKERS INCLUDE

Karen Alim
Bill Bialek
Fernando Cesares
Suzanne Eaton
Frank Jülicher
Mounia Lagha
Yasmine Meroz
Matteo Rauzi
Jochen Rink
Tim Saunders

ORGANIZING COMMITTEE

Buzz Baum
Stefano Di Talia
Vijay Krishnamurthy *(local organizer)*
Guillaume Salbreux

SCIENTIFIC ADVISORY COMMITTEE

Vijay Balasubramanian
Antonio Celani
Sanjay Jain
Matteo Marsili
Mukund Thattai