

19th International Conference on Systems Biology  
October 28 - November 1, 2018  
Lyon, France

## Instructions – Call for abstracts

# 19<sup>th</sup> International Conference on Systems Biology (ICSB) 2018

We are pleased to invite you to submit your abstract to the 19<sup>th</sup> International Conference on Systems Biology (ICSB2018).

Abstracts must be submitted exclusively via the online platform available from <http://www.icsb2018-france.com/call-for-abstracts> after reading the instructions below.

## Important Dates

<b>Call for abstracts opening date</b>	April 12 <sup>th</sup> , 2018
<b>Abstract submission deadline</b>	June 15 <sup>th</sup> , 2018
<b>Notification of acceptance to authors (oral, poster)</b>	July 17 <sup>th</sup> , 2018
<b>Conference Dates</b>	October 28 <sup>th</sup> - November 1 <sup>st</sup> , 2018

## Conference Themes

Methodological developments for Systems Biology / Education for Systems Biologists / Modelling Networks and Circuits / Multi-omics / Single-cell Systems Biology / Quantitative Systems Physiology / Humanities and Social Sciences for Systems Biology: epistemological, social and ethical dimensions / Developmental Systems Biology / Systems Neurosciences / Systems Medicine / Systems Biology for Synthetic Biology / Multiscale Systems Biology / Evolutionary and Ecological Systems Biology / Systems Biomechanics

## Abstract Themes

Methodological developments for Systems Biology:

- Parameters estimation
- Statistical tools for Systems Biology
- Mixed-effect models
- Identifiability
- Multiscale methodological issues
- Information theory *and more*.

#### Education for Systems Biologists:

- Inter- or trans-disciplinary training
- Novel methods and tools
- Students' mobility
- Role of infrastructures and research centers in systems biology education
- Career paths
- Mathematical and computational training for systems biologists
- Training of professional biologists - Interdisciplinary collaborations *and more*.

#### Modelling Networks and Circuits:

- Deterministic dynamical models (ODEs and PDEs)
- Stochastic models
- Graphical models
- Boolean models
- Network and statistical modelling *and more*.

#### Multi-omics:

- Integration of different -omics data (e.g. transcriptome, metabolome, methylome, ChIP-seq)
- Genome-wide models (e.g. stochastic models based on scRNA-seq)
- Role of genetic variation on systems biology models (of gene regulation, metabolism, development, etc.) *and more*.

#### Single-cell Systems Biology:

- Methodological aspects for single-cell molecular interrogation
- Dedicated statistical tools
- From single cells to tissues, and back
- Single-cell multi-omics *and more*.

#### Quantitative Systems Physiology:

- Quantitative approaches to microbial physiology
- Phenomenological framework of cellular reproduction
- Growth and the cell cycle
- Coordination of biosynthesis
- Quantitative predictive power of single-cell physiology *and more*.

Humanities and Social Sciences for Systems Biology: epistemological, social and ethical dimensions:

- Epistemology of systems biology
- Epistemology of modelling
- Epistemology of interdisciplinarity
- Ethical questions raised by systems biology and systems medicine *and more.*

Developmental Systems Biology:

- Plant and animal cellular and tissue-level development and differentiation
- Morphogenesis
- Patterning and growth in the developing embryo
- Tissue and organ development *and more.*

Systems Neurosciences:

- Network-based approaches to brain function
- Neural networks
- Molecular and cellular approaches for modelling brain structure and functions
- Electrophysiology, *in vivo* imaging *and more.*

Systems Medicine:

- Systems approaches to healthcare and drug discovery
- Systems and personalised medicine
- Big data for systems medicine
- Systems biology for cancer, immunology, stem cells, aging *and more.*

Systems Biology for Synthetic Biology:

- Biotechnology and new energy
- Artificial cells, tissues and organoids
- Cell optimisation *and more.*

Multiscale Systems Biology:

- Coupling large-scale networks (regulatory, metabolic and signalling networks)
- Cellular populations to ecological interactions
- From microbiome to host physiology
- Systems analysis for environment management *and more.*

#### Evolutionary and Ecological Systems Biology:

- Systems approach to evolution and evolution of systems
- Networks evolution
- Study of ecosystems
- Interactions within and between biological and ecological systems
- Comparative genomics
- Microbiomes, microbial communities *and more*.

#### Systems Biomechanics:

- Biofluid mechanics
- Dynamical biophysics
- Biotribology
- Comparative biomechanics *and more*.

## Presenting Author's Responsibilities

The person submitting the abstract needs first to identify the presenting author who has to be registered to the congress in order to present his/her abstract.

As the primary contact for the abstract, the presenting author will be responsible for:

- communicating to all co-authors regarding the acceptance of the abstract
- obtaining conflict of interest disclosures from them.

## Abstract Format and Submission

In order to submit your abstract, please use the platform accessible from the website <http://www.icsb2018-france.com/call-for-abstracts> and follow the steps.

- Following items are required:
  - Authors' Information
  - Preferred Abstract Presentation Format (oral, poster) - Final decision will be made by the Scientific Program Committee
  - Abstract Title in uppercase. The title should not exceed 150 characters
  - Abstract Topic. Please select the theme that best describes your abstract. You can also select a secondary topic
- Abstract should not exceed 2,500 characters including spaces (320 to 430 words) and should not include images or tables

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- The official language of ICSB2018 is English and there will be no translation services provided during the conference
- Abbreviations should be introduced before use. For example, "hepatitis C virus (HCV)."

## Abstract Review and Acceptance

All presentations will be accepted based on quality, relevance and space availability after review by the Scientific Program Committee.