



The Abdus Salam
**International Centre
for Theoretical Physics**



Spring College on the Physics of Complex Systems

DESCRIPTION:

ICTP and SISSA, in collaboration with the partner institutions of the International Master Course in Physics of Complex Systems (PCS), and with the financial support of Politecnico di Torino and Capital Fund Management Foundation, are organizing the Spring College on the Physics of Complex Systems from 15 February to 12 March 2027.

MORE DETAILS:

Many complex systems in physics, biology, engineering and economics are characterised by a large number of interacting degrees of freedom, giving rise to a non-trivial collective behaviour. The theoretical and computational tools for a quantitative analysis of complex systems are often rooted in modern theoretical physics. The Spring College on the Physics of Complex Systems aims to expose students to a selection of topics at the forefront of research during an intensive, 4-week programme.

The Spring College is part of the PCS Master programme and it is open to qualified Master and PhD students, and to young researchers.

LECTURERS AND COURSES:

Raffaella Burioni
Universita' di Parma, Italy
Statistical physics of graphs and networks
with application to neuroscience

Nicolas Macris
EPFL, Lausanne, Switzerland
Recent developments on exact solutions
of gradient flows in simple learning theory
models

Kirone Mallick
IHPT, Paris

Izaak Neri
King's College London
Theory of non-equilibrium stochastic
transport with applications

Mohit Jolly Kumar & Paras Jain
Indian Institute of Science, Bangalore
Physics of cancer

RULES FOR PARTICIPATION:

The spring college will be composed of 4 courses each of 9 lectures and a final exam for each course. Candidates are required to solicit recommendation letters to be sent by their supervisors in support of their application. Participants with financial support from the ICTP and Master PCS students are required to attend at least 80% of the courses and to take the final exam for each course. Certificates of attendance will be awarded only to participants who have attended at least 80% of the courses



15 February - 12 March 2027



Trieste, Italy



Deadline:
1 November 2026

DIRECTORS:

Jacopo Grilli, ICTP
Sebastian Goldt, SISSA
Matteo Marsili, ICTP

LOCAL ORGANISER:

Matteo Marsili, ICTP

FURTHER INFORMATION:



E-mail: smr4338@ictp.it

Web: <http://indico.ictp.it/event/11412/>

GRANTS:

A limited number of grants are available to support the attendance of selected participants, with priority given to participants from developing countries. There is no registration fee.

Co-Sponsors:

