

Winter School on Quantitative Systems Biology: Learning and Artificial Intelligence



12 - 23 November 2018
Trieste, Italy

Further information:
<http://indico.ictp.it/event/8339/>
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Artificial intelligence (AI) is undergoing an explosive phase - machines can now accomplish complex specific tasks at a level that exceeds human skills. At the basis of this performance is the ability to understand sensory input from the external world and to associate it with effective strategies to achieve a desired goal.

This advanced school aims to combine different yet strongly coupled perspectives: first, theoretical approaches, which focus on principles, algorithms, and their applications to computer science; second, the relationship with experimental neuroscience, which has inspired the latest generation developments in AI and has, in turn, benefited from the ability of AI to investigate the computations underlying complex cognitive processes; third, applications such as robotics, gaming, etc.

The topics covered include:

- Deep learning and its relation to vision and language
- Reinforcement learning and decision making
- Sensorimotor learning
- The ethics of artificial intelligence and its impact on society

This Winter School is part of the joint ICTP-ICTS Programme in Biology.

This is the seventh school in the series on Quantitative Systems Biology, held alternately in Trieste and Bengaluru.

How to apply:

Online application:
<http://indico.ictp.it/event/8339/>

Female scientists are encouraged to apply.

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.

Financial support for students from India is available under the Pratiksha Trust Scholarships, ICTS Bangalore

Directors:

A. CELANI (ICTP - Local Organizer)
C. MATHYS (SISSA)
D. ZOCCOLAN (SISSA)

Confirmed Lecturers:

B. BIGGIO (Cagliari U.)
D. BRAUN (Ulm U.)
P. DAYAN (Gatsby Computational Neuroscience Unit)
J. DI CARLO (MIT)
B. KAPPEN (Radboud U., Nijmegen)
T. LATTIMORE (DeepMind, London)
M. PELILLO (Ca' Foscari U.)
J. PETERS (Technische Universitaet Darmstadt)
L. ROSASCO (U. Genova, MIT & IIT)
N. TISHBY (The Hebrew University of Jerusalem)
R. ZECCHINA (U. Bocconi)

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M. THATTAI (NCBS Bangalore)
A. TREVES (SISSA)

Deadline:

For applicants requesting financial support:

1 September 2018

For applicants not requesting financial support:

15 October 2018



The Abdus Salam
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for Theoretical Physics
www.ictp.it
Trieste, Italy

