6th Youth in High-Dimensions: Recent Progress in Machine Learning, High-Dimensional Statistics and Inference & How Creative is Generative AI? Perspectives from Science and Philosophy

Description:

In the first part of this activity, we will discuss to what extent generative artificial intelligence systems that create text or images like ChatGPT or Dall-E are "creative". To this end, we will bring together a diverse group of experts from the sciences and humanities.

SPEAKERS:

Larissa Berger, Uni Siegen, Germany
Alessandro De Cesaris, Università di Torino, Italy
Alice Barale, Università di Milano, Italy
Alexandra Gilliams, Université Paris 1 Panthéon-Sorbonne, France
Roberto Trotta, SISSA, Italy
Michael Benzaquen, CNRS, Ecole Polytechnique, Switzerland
Ardavan Vossoughi, Italy
Sergio Canazza, Centro di Sonologia Computazionale, Italy

The second part of this activity will see the sixth edition of "Youth in high dimensions", where we give young researchers from academia and industry the opportunity to gather and present recent results on high-dimensional statistical problems, in areas ranging from machine learning and inference to neuroscience or statistical physics. Typical problems in high-dimensions include estimating noisy signals, analysing (deep) neural-networks, detecting communities in large networks, or modelling disordered spin systems.

This conference aims at reinforcing the links among the interdisciplinary community of scientists working on machine learning, and to connect them with philosophers, artists and sociologists to reflect about the impact and role of this technology, and to bring forward the latest development happening in the high-dimensional world.

Youth is a satellite meeting of Statphys2025 https://statphys29.org/

TOPICS:

- High-dimensional statistics
- Statistical physics
- Machine learning
- Computational neuroscience
- Complex systems
- Machine learning for science
- Statistical inference

SPEAKERS:

Lorenzo Bardone, SISSA, Italy
Freya Behrens, EPFL, Switzerland
Simone Bombari, ISTA, Austria
Elizabeth Collins-Woodfin, McGill, Canada
Alex Damian, Princeton, USA
Hadi Daneshmand, MIT, USA
Daniil Dmitriev, ETH Zurich, Switzerland
Margalit Glasgow, Stanford, USA
Erin Grant, Gatsby, UK

Brice Huang, MIT, USA
Bingbin Liu, CMU, USA
Vidya Muthukumar, Georgia Tech, USA
Mauro Pastore, ICTP, Italy
Reese Pathak, MIT, Berkeley, USA
Stefano Sarao Manelli, Chalmers, Sweden
Abishek Shetty, Berkeley, USA
Jingfeng Wu, Berkeley, USA

The ICTP-IBM AI Prize for Young Scientists Ceremony takes place during the "Youth in high dimensions". For more information on the ceremony and winners, please visit: https://www.ictp.it/prize/ictp-ibm-ai-prize-young-scientists

3 - 10 July 2025

Trieste, Italy

Deadline:
30 April 2025

DIRECTORS:
Jean Barbier, ICTP
Sebastian Goldt, SISSA
Marco Mondelli, Institute of Science and Technology
Fanny Yang, ETH Zurich

ICTP LOCAL ORGANISER:
Jean Barbier, ICTP

FURTHER INFORMATION:

E-mail: smr4084@ictp.it

Web: http://indico.ictp.it/event/10849/

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.