



The Abdus Salam
International Centre
for Theoretical Physics



Summer School on Modern Tools in Low-Dimensional Topology; Conference on Modern Developments in Low-Dimensional Topology

DESCRIPTION:

The summer school is aimed at graduate students in low-dimensional topology. The goal is to make students familiar with the novel techniques in the field that have led to recent advances in our understanding of four-dimensional manifolds.

MINI-COURSES:

1. Skein lasagna modules, by Mike Willis (Texas A&M) and Melissa Zhang (UC Davis)
2. Real Seiberg-Witten theory, by Hokuto Konno (Tokyo U) and Ian Montague (UT Austin)
3. Kontsevich invariants from configuration spaces, by Jianfeng Lin (Tsinghua U) and Danica Kosanović (U Bern)
4. Lefschetz fibrations and closed exotic 4-manifolds, by András Stipsicz (Rényi Institute) and Zoltán Szabó (Princeton)

DIRECTORS:

Anna Beliakova, U Zurich
Sergei Gukov, Caltech and DIAS
Peter Kronheimer, Harvard
Aaron Lauda, USC
Ciprian Manolescu, Stanford
Lisa Piccirillo, UT Austin

CONFIRMED CONFERENCE SPEAKERS:

Mina Aganagić, UC Berkeley	Marc Lackenby, Oxford
Akram Alishahi, U Georgia	Jiakai Li, Harvard
Aleksei Andreev, U Zurich	Louisa Liles, U Virginia
Valentina Bais, SISSA Trieste	Cristina Palmer-Anghel, U Leeds
William Ballinger, Harvard	Qianhe Qin, Stanford
Inanc Baykur, U Mass Amherst	Qiuyu Ren, UC Berkeley
Joe Boninger, Boston College	Alexander Schimhuber, MIT
Eugene Gorsky, UC Davis	Dean Spyropoulos, Michigan State
Kyle Hayden, Rutgers Newark	Masaki Taniguchi, Kyoto U
Matthew Hogancamp, Northeastern	Laura Wakelin, King's College
Allison Miller, Swarthmore	Paul Wedrich, U Hamburg
Sungkyung Kang, Oxford	Stephan Wehrli, Syracuse U

The conference will consist of several research talks on topics of current interest in low dimensional topology, including four-manifolds, knot invariants, categorification, gauge theory, and connections to physics.



2 - 13 June 2025



An ICTP Meeting
Trieste, Italy

Deadlines:



Requesting financial and/or visa support:
1 March 2025

For other participation:
1 May 2025

LOCAL ORGANISER:

P. PUTROV, ICTP

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.

FURTHER INFORMATION:



E-mail: smr4074@ictp.it

Web: <https://indico.ictp.it/event/10839/>

Female scientists are encouraged to apply.

