

Learning Workshop on BPS States and 3-Manifolds (CTP)

27 February - 3 March 2023
An ICTP Meeting
Trieste, Italy

Further information:
<http://indico.ictp.it/event/10060/>
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The main scientific theme of the workshop is counting BPS states in physical systems associated to 3-manifolds or links, and interpretation of these counts as old or new topological invariants.

Directors:

S. GUKOV, DIAS and Caltech
P. KUCHARSKI, Warsaw University
P. PUTROV, ICTP

Local Organiser:

P. PUTROV, ICTP

Description:

Although the ideas behind such relations appeared already in the late 90s, the recent years have seen some dramatic new developments. The goal of this learning workshop is to bring together physicists and mathematicians who are experts in the subject and also those who would like to enter the field. In particular, the talks will be given both by senior scientists and junior ones, including PhD students who only recently began working on the subject. The talks will be supplemented by dedicated discussion sessions where experts can answer questions that will be submitted by participants to the moderator in advance, or asked directly during the session.

Topics:

- “Z-hat” and F_K invariants counting BPS states in 6d superconformal field theory compactified on 3-manifolds, and their relation to known invariants of 3-manifolds and links
- Knots-quivers correspondence and its generalization to knot complements
- Properties of generating functions counting BPS states, including: modularity, relation to characters of (logarithmic) Vertex Operator Algebras, GW/DT invariants

Speakers:

R. AKHMECHET, Columbia University
M. CHENG, University of Amsterdam
H.-J. CHUNG, Jeju National University
I. COMAN, IPMU
F. COSTANTINO, Toulouse University
T. EKHOLM, Uppsala University
B. HAGHIGHAT, Tsinghua University
S. HARICHURN, Bonn University
J. JANKOWSKI, Wrocław University
P. JOHNSON, Michigan State University
S. KRUSHKAL, University of Virginia
P. LONGHI, Uppsala University
D. NOSHCHENKO, University of Amsterdam
S. PARK, University of Texas at Austin
D. PASSARO, University of Amsterdam
D. PEI, University of Southern Denmark
P. RAMADEVI, Indian Institute of Technology, Mumbai
S.-J. RI, ICTP
M. STOSIC, Instituto Superior Técnico
P. SULKOWSKI, Warsaw University
J. SVOBODA, University of Miami
C. VAFA, Harvard University

How to apply:

Online application:
<http://indico.ictp.it/event/10060/>

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.

Deadlines:

For applicants requesting financial and/or visa support:

4 December 2022

For all other applicants:

5 February 2023



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**International Centre
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