

School and Workshop on Supersymmetric Localization and Holography: Black Hole Entropy and Wilson Loops



School 2 - 7 July 2018
Workshop 9 - 13 July 2018
Trieste, Italy

Further information:
SCHOOL: <http://indico.ictp.it/event/8560/>
WORKSHOP: <http://indico.ictp.it/event/8326/smr3227@ictp.it>

This activity aims to bring together experts in the areas of holography and supersymmetric localization to take stock of important developments in the field and to outline key directions for the future.

The AdS/CFT correspondence conjectures an exact equivalence between string theories in anti-de-Sitter space and gauge theories, and allows us to address difficult problems of strongly coupled field theory dynamics on one side – such as the computation of Wilson loops – and of quantum gravity on the other side – such as the quantum entropy of black holes. On the other hand, supersymmetric localization allows us to perform exact non-perturbative computations in strongly coupled gauge theories. The interplay of localization and holography provides powerful new tools to explore the strongly coupled regime of quantum gravity.

The first week will be a School, with the goal of providing the necessary basic knowledge through a series of pedagogical lectures. This activity is intended for students in theoretical physics or mathematics and postdocs with a knowledge of quantum field theory, general relativity and string theory.

The second week will be a focused Workshop with experts in the topics of holography, Wilson loops, supersymmetric localization, quantum entropy of black holes in supergravity and string theory.

School Topics:

- Supersymmetric localization
- 4D N=2 supergravity
- AdS black hole entropy
- Localization in supergravity
- Wilson loops
- Quantum entropy of black holes

How to apply:

Online application:

School: <http://indico.ictp.it/event/8560/>

Workshop: <http://indico.ictp.it/event/8326/>

Women are particularly 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.

Organizers:

F. BENINI, SISSA
A. DABHOLKAR, ICTP & ICTP & Sorbonne Université, CNRS
S. MURTHY, King's College London
L. PANDO ZAYAS, University of Michigan
A. ZAFFARONI, Milano-Bicocca

School Lecturers include:

S. CREMONESI, Durham University
S. MURTHY, King's College London
I. N. PAPADIMITRIOU, KIAS
D. TRANCANELLI, University of São Paulo
S. VANDOREN, Utrecht University
J.M. VIEIRA GOMES, University of Amsterdam
A. ZAFFARONI, Milano-Bicocca

Workshop Speakers include:

N. BOBEV, KU Leuven
C.N. CLOSSET, CERN
J.R. DAVID, IISc Bangalore
B. DE WIT, Utrecht University
N. DRUKKER, King's College London
R. GUPTA, King's College London
K. HRISTOV, Bulgarian Academy of Sciences
C. IMBIMBO, INFN Genova
I. JEON, Harish-Chandra Research Institute
D. KLEMM, INFN Milano
J. LIU, University of Michigan
D. MARTELLI, King's College London
K.S. NARAIN, ICTP
N. NEKRASOV, SCGP Stony Brook
I.N. PAPADIMITRIOU, KIAS
S.J. REY, Seoul National University
V. REYS, Milano-Bicocca
G.A. SILVA, National University of La Plata
K. SKENDERIS, University of Southampton
J. SPARKS, University of Oxford
C. TOLDO, UC Santa Barbara
C. VAFA, Harvard University
B. WILLETT, UC Santa Barbara
I. YAAKOV, Kavli IPMU
M. ZABZINE, Uppsala University

Deadline:

30 April 2018



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

