ICTP SAIFR | International Centre for Theoretical Physics South American Institute for Fundamental Research

HOLOGRAPHY@25

School June 5-13 | Workshop June 14-17, 2023

at Instituto de Física Teórica - UNESP, São Paulo, Brazil

SCHOOL LECTURERS AND TOPICS

Jan de Boer (Amsterdam University, Netherlands)
Black holes and AdS/CFT

Aristomenis Donos (Durham University, UK)
Applications to condensed matter theory

Carlos Hoyos (Oviedo University, Spain)
Applications of holography to QCD and nuclear physics

Juan Maldacena (IAS-Princeton, USA)
Closing lecture

Herman Verlinde (Princeton University, USA)
Formal aspects and tests

Konstantin Zarembo (Nordita, Sweden)
Integrability and AdS/CFT

WORKSHOP SPEAKERS

Matteo Baggioli (Shanghai Jiaotong U., China)
Agnese Bissi* (Uppsala U., Sweden)
Nikolay Bobev (Leuven U., Belgium)
Aristomenis Donos* (Durham U., UK)
Nadav Drukker (King's College, London, UK)
Johanna Erdmenger (Wuerzburg U., Germany)
Carlos Hoyos (Oviedo U., Spain)
Charlotte Kristjansen (Niels Bohr I., Denmark)
Juan Maldacena (IAS, Princeton, USA)
Dario Martelli (Turin U. and INFN, Turin, Italy)
Niels Obers (Niels Bohr I., Denmark)
Leopoldo Pando-Zayas (Michigan U., USA and ICTP, Trieste, Italy)
Kostas Skenderis (Southampton U., UK)
Dam Thanh Son (Chicago U., USA)
Matthias Staudacher* (Humboldt U., Berlin, Germany)
Alessandro Tomassielo (Milan U. and INFN Milan, Italy)
Herman Verlinde* (Princeton U., USA)
Konstantin Zarembo (Nordita, Sweden)

*to be confirmed

The AdS/CFT correspondence, first proposed by Juan Maldacena in 1997, relates non-gravitational theories with a gravitational theory in a higher dimension, the correspondence being holographic in nature. Since it is a non-perturbative duality, such that a weakly coupled model on one side corresponds to a strongly coupled (hard to solve) one on the other, it has been applied to understand a multitude of interesting strongly coupled problems in various areas of theoretical physics. The various areas represented at the Holography@25 event will include: formal aspects, definition and tests; applications to QCD and nuclear physics; applications to condensed matter theory; applications to black holes, information, chaos and complexity; and applications to integrability.

The Holography@25 event will take place at the ICTP-SAIFR in São Paulo, Brazil, and will include a **School (June 5-13, 2023)** for graduate students and a **Workshop (June 14-17, 2023)** for researchers. The AdS/CFT correspondence, generalized to gauge/gravity duality, or in one word, holography, has become an important tool of theoretical physics, and it is the purpose of the School to familiarize the participants with its methods and applications. The School will be followed by a 4-day workshop celebrating the 25th anniversary of the birth of the AdS/CFT correspondence and will bring together researchers who will describe new advances from all the areas of the correspondence discussed at the School.

There is no registration fee and limited funds are available for travel and local expenses.

Application deadline:
March 26, 2023

Online application form and more information:
https://www.ictp-saifr.org/holography25/

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