



The Abdus Salam
**International Centre
for Theoretical Physics**



Fermi-Pasta-Ulam-Tsingou 70 Years Later: Slow Dynamics in Classical and Quantum Physics

Description:

Seventy years after the Fermi-Pasta-Ulam-Tsingou investigations, we revisit its legacy in classical and quantum systems, exploring slow relaxation, ergodicity breaking, and emergent phenomena shaping modern nonlinear and many-body physics.

MORE INFORMATION:

Seventy years after the pioneering numerical experiment of Fermi, Pasta, Ulam, and Tsingou, the study of slow dynamics in many-body systems continues to inspire fundamental research across physics. The unexpected persistence of non-ergodic behavior in nonlinear oscillator chains opened a path to modern investigations of thermalization, integrability, and chaos. Today, these themes extend well beyond the classical realm, shaping our understanding of quantum quenches, many-body localization, prethermalization, and emergent hydrodynamics. This conference brings together mathematicians and physicists to assess the legacy of the FPUT problem, highlight recent advances, and explore future directions in both classical and quantum dynamics.

TOPICS:

- Slow dynamics in many body systems
- Thermalization, ergodicity, and its breaking in many-body systems

SPEAKERS:

B. Altshuler
Columbia University, USA
C. Arezzo
ICTP, Italy
M. Baldovin
CNR-ISC, Italy
F. Balducci
MPIPKS, Germany
G. Benettin
Università di Padova, Italy
E. Bogomolny
Université Paris-Saclay, France
P. Calabrese
SISSA, Italy
S. Flach
Institute for Basic Science, South Korea
L. Foini
Institut de Physique Théorique, France
M. Gallone
SISSA, Italy

M. Giachello
Gran Sasso Science Institute, Italy
S. Lepri
CNR-ISC, Italy
R. Livi
Università di Firenze & INFN, Italy
D. Lucente
Università della Campania, Italy
M. Onorato
Università di Torino, Italy
F. R. Teresenghi
Università La Sapienza, Italy
S. Ruffo
SISSA, Italy
L. Salasnich
Università di Padova, Italy
D. Shepelyansky
Laboratoire de Physique Théorique CNRS, France



10 - 12 November 2025



Trieste, Italy



**Deadline:
12 October 2025**

DIRECTORS:

Silvio Franz, University of Lecce, Italy
Giacomo Gradenigo, Gran Sasso Science Institute, Italy
Antonio Ponno, University of Padua, Italy
Angelo Vulpiani, Università La Sapienza, Rome, Italy

LOCAL ORGANISER:

Antonello Scardicchio, ICTP, Italy

FURTHER INFORMATION:

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Female scientists are encouraged to apply.



GRANTS:

Please note that, unfortunately, no grants or financial support are available to assist with the attendance of selected participants.

