



The Galileo Galilei Institute for Theoretical Physics
Arcetri, Florence



Breakdown Of Ergodicity In Isolated Quantum Systems: From Glassiness To Localization

May, 20 2019 - July, 12 2019

Galileo Galilei

This workshop aims to investigate the fundamental role of quantum effects in suppressing or slowing down equilibration in large systems. Tunneling and localization play a central role in shaping the dynamics of systems ranging from spin and structural glasses to quantum simulators and lattice gauge theories. In particular, many-body localization has recently emerged as a fundamentally new mechanism by which isolated quantum systems may evade equilibration even at very high temperature. The workshop will bring together researchers at the intersection of all these fields in order to stimulate the rapid development and cross-fertilization of these ideas.

Topics:

- Many-body quantum systems: thermalization and non-equilibrium.
- Disordered systems: classical and quantum spin glasses.
- Statistical mechanics and quantum computation.

Organizing Committee:

B. Altshuler (Columbia University)
V. Kravtsov (Landau Institute, Moscow and ICTP)
C. Laumann (Boston University)
G. Parisi (La Sapienza Università di Roma and INFN)
A. Scardicchio (ICTP and INFN)

Local organizer: Filippo Colomo (INFN Firenze)

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