C C S C H O

WINTER PHD SCHOOL ON STATISTICAL FIELD THEORIES

The Galileo Galilei Institute for Theoretical Physics Arcetri, Firenze

February 3-14, 2025

This school is meant for PhD students with interest in low-dimensional quantum field theory, conformal field theory and integrable models, and their applications to statistical mechanics and condensed matter systems. Postgraduate courses covering introductory topics as well as recent developments are provided.

Lectures are scheduled each morning, for a total amount of about forty hours, over two weeks. Presentations are given on the blackboard. The afternoon is devoted to study and discussion. A desk and standard research facilities are made available to all participants.

The school can admit up to forty participants. Help for finding accommodation in agreed hotels can be provided upon request, as well as financial support for this cost.

The courses can be included in the PhD curricula of Italian Universities and abroad. If necessary, exams for each course can be taken. Lectures will be recorded and posted on the GGI YouTube channel. Note that the school will be held in presence only.

Lecturers

John Chalker (University of Oxford): Random quantum circuits

Fabian Essler (University of Oxford): Field theory approaches to low-dimensional manyparticle quantum systems

Werner Krauth (ENS, Paris): The second Markov-chain revolution

Silvia Pappalardi *(University of Cologne):* Chaotic dynamics via the full Eigenstate Thermalization Hypothesis

Hubert Saleur (CEA, Saclay and USC, Los Angeles): Physics and conformal properties of loop ensembles in two dimensions

Organizers: V. Alba, M. Burrello, P.Calabrese, J. Dubail,, C.Morais-Smith, A. Trombettoni Advisory Board: D.Bernard, A. Cappelli, F.Colomo, F.Essler, G. Mussardo

Deadline for application: November 15, 2024

Webpage: https://www.ggi.infn.it/showevent.pl?id=493