

INHOMOGENEOUS RANDOM SYSTEMS

Systèmes Aléatoires Inhomogènes

January 28-29, 2025

Institut Henri Poincaré (also online)

11-13 rue Pierre et Marie Curie, Paris

<https://www.ihp.fr/>

Tuesday 28 January: Bâtiment Perrin, salle Yvonne Choquet-Bruhat

Spin glasses and related topics

Moderator: **Jean-Christophe Mourrat (Lyon)**

- 9h00 – 9h10 : Opening
- 9h10 – 9h40 : **Jean-Christophe Mourrat (Lyon)**: *Celebrating the Abel Prize of Michel Talagrand.*
- 9h40 – 10h30 : **Antoine Maillard (Paris)**: *Average-case matrix discrepancy.*
- 10h30 – 10h50 : Coffee Break
- 10h50 – 11h40 : **Eliran Subag (Rehovot)**: *Disordered Gibbs measures and Gaussian conditioning.*
- 11h40 – 12h30 : **Pierfrancesco Urbani (Saclay)**: *The KHGPS model and the spin glass transition in a field.*
- 12h30 – 14h00 : Lunch Break
- 14h00 – 14h30 : *A tribute to Errico Presutti.*
- 14h30 – 15h20 : **Rémi Monasson (Paris)**: *Accelerated Sampling with Stacked Restricted Boltzmann Machines.*
- 15h20 – 15h50 : Coffee Break
- 15h50 – 16h40 : **Guilhem Semerjian (Paris)**: *Matrix denoising via low-degree polynomials.*
- 16h40 – 17h30 : **Leticia Cugliandolo (Paris)**: *TBA*

Wednesday 29 January: Institut Henri Poincaré, Amphithéâtre Hermite

Ergodicity-breaking phenomena in quantum mechanics

Moderator: **Wojciech De Roeck (Leuven)**

- 9h00 – 9h10 : Opening
- 9h10 – 9h30 : **Wojciech De Roeck (Leuven)**: *Introduction.*
- 9h30 – 10h20 : **François Huveneers (London)**: *Absence of Normal Transport in an Interacting Disordered Spin Chain.*
- 10h20 – 10h40 : Coffee Break
- 10h40 – 11h30 : **Silvia Pappalardi (Koeln)**: *Theory of robust quantum many-body scars in long-range interacting systems.*
- 11h30 – 12h20 : **Marin Bukov (Dresden)**: *Geometric Floquet Theory.*
- 12h20 – 13h50 : Lunch Break
- 13h50 – 14h40 : **David Luitz (Bonn)**: *Eigenstate Correlations, the Eigenstate Thermalization Hypothesis, and Quantum Information Dynamics in Chaotic Many-Body Quantum Systems.*
- 14h40 – 15h30 : **Simone Warzel (Muenchen)**: *Rigorous results on quantum p -spin glasses.*
- 15h30 – 15h50 : Coffee Break
- 15h50 – 16h40 : **Markus Mueller (Villigen)**: *Exact solution of the classical and quantum Heisenberg mean field spin glasses.*
- 16h40 – 17h30 : **Andrea De Luca (Cergy)**: *New universal behaviors of unitary and nonunitary chaotic quantum dynamics.*

Informations and abstracts at: <https://irs.math.cnrs.fr>

Registration:

The conference is free and open to all.

To facilitate local organization please register in advance by sending an e-mail **before January 21** with your name, affiliation, mail address and your choice to be on site or online, to:

inter@math.cnrs.fr with subject: **IRS 2025**

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Partially supported by CNRS, Université Paris Cité, CEA and KU Leuven.