

# **Dubrovnik Workshop on Disordered Systems 2026**

## **Scientific Program**

11–15 October 2026  
Dubrovnik, Croatia

## Sunday, 11 October

*Arrival day*

| Time      | Participant / Event | Activity                                               |
|-----------|---------------------|--------------------------------------------------------|
| Afternoon | —                   | Arrival, registration and welcome reception (from 19h) |

## Monday, 12 October

*Random fields, dimensional reduction and approaches to disorder*

| Time                                                     | Speaker               | Title / Activity                                                                                                             |
|----------------------------------------------------------|-----------------------|------------------------------------------------------------------------------------------------------------------------------|
| 09:15–09:25                                              | Nada Bruer Ljubišić   | Welcome from the Inter University Centre Dubrovnik                                                                           |
| 09:25–09:35                                              | Ivan Balog            | Introduction to the workshop                                                                                                 |
| Random fields, dimensional reduction and supersymmetry   |                       |                                                                                                                              |
| 09:35–10:00                                              | Gilles Tarjus         | Random-field Ising model: pedagogical introduction and open questions                                                        |
| 10:00–10:45                                              | Emilio Trevisani      | Random Field Models and Parisi–Sourlas SUSY: Recent Developments in the Emergence of SUSY, Dimensional Reduction, and Uplift |
| 10:45–11:15                                              | Coffee break          |                                                                                                                              |
| 11:15–12:00                                              | Marco Picco           | Dimensional Reduction in the Random Field Ising Model: Numerical Evidence                                                    |
| 12:00–12:45                                              | Matthieu Tissier      | Conformal invariance in the RFIM: the role of the dangerously irrelevant temperature                                         |
| 12:45–14:30                                              | Lunch                 |                                                                                                                              |
| General field-theoretic approaches to disordered systems |                       |                                                                                                                              |
| 14:30–15:15                                              | Maria Chiara Angelini | Loop Expansion around the Bethe Solution: A New RG Approach for Disordered Models                                            |
| 15:15–16:00                                              | Alessandro Codello    | Functional Dimensional Regularization (FDR) and Disordered Systems                                                           |
| 16:00–16:30                                              | Coffee break          |                                                                                                                              |
| 16:30 onward                                             | —                     | Free time for discussions                                                                                                    |
| 19:00                                                    | –                     | Departure by bus for the gala dinner                                                                                         |

## Tuesday, 13 October

*Quantum disorder*

| Time                                                                  | Speaker          | Title / Activity                                                                           |
|-----------------------------------------------------------------------|------------------|--------------------------------------------------------------------------------------------|
| Disorder-driven quantum criticality, localization and multifractality |                  |                                                                                            |
| 09:00–09:45                                                           | Bitan Roy        | Novel aspects of semimetal-to-metal quantum phase transitions in disordered Weyl materials |
| 09:45–10:30                                                           | Andrei Fedorenko | Non-Anderson disorder-driven quantum transition in nodal semimetals                        |
| 10:30–11:00                                                           | Coffee break     |                                                                                            |
| 11:00–11:45                                                           | Ilya Gruzberg    | Multifractals and conformal invariance at Anderson transitions                             |
| 11:45–12:30                                                           | Akshat Pandey    | Low-temperature transition of 2d random-bond Ising model and quantum infinite randomness   |
| 12:30–14:30                                                           | Lunch            |                                                                                            |
| Interacting and quasiperiodic disordered quantum systems              |                  |                                                                                            |
| 14:30–15:15                                                           | Nicolas Dupuis   | One-dimensional disordered Bose gas                                                        |
| 15:15–16:00                                                           | Adam Rançon      | Disordered Bose-Hubbard model                                                              |
| 16:00–16:30                                                           | Coffee break     |                                                                                            |
| 16:30–17:00                                                           | Taylan Yildiz    | Reentrant Localization and Multifractality in Quasiperiodic Thue–Morse Chain               |
| 17:00 onward                                                          | —                | Free time for discussions                                                                  |

## Wednesday, 14 October

*Disorder, supersymmetry and emergent structures*

| Time                                                 | Speaker             | Title / Activity                                                                                              |
|------------------------------------------------------|---------------------|---------------------------------------------------------------------------------------------------------------|
| <b>Disorder, emergent symmetry and supersymmetry</b> |                     |                                                                                                               |
| <b>09:00–09:45</b>                                   | Kay Jörg Wiese      | <i>Principles and open questions in disordered elastic systems</i>                                            |
| <b>09:45–10:15</b>                                   | Alapan Das          | <i>Emergence of enlarged symmetry at the Bayesian measurement critical point for the critical Ising model</i> |
| <b>10:15–10:45</b>                                   | <i>Coffee break</i> |                                                                                                               |
| <b>10:45–11:30</b>                                   | Apratim Kaviraj     | <i>Supersymmetry in the Lowest Landau level</i>                                                               |
| <b>11:30–12:30</b>                                   | —                   | Free time for discussions                                                                                     |
| <b>12:30–14:30</b>                                   | <i>Lunch</i>        |                                                                                                               |
| <b>Afternoon</b>                                     | —                   | Informal discussions and farewell reception (from 19h)                                                        |

## Thursday, 15 October

*Departure day*

| Time | Participant / Event | Activity  |
|------|---------------------|-----------|
| —    | —                   | Departure |

Program subject to minor adjustments.