SSM

Scientific Colloquia

Scuola Superiore Meridionale

Academic Year 2025-2026

Cycle: Sixth cycle of highly interdisciplinary Scientific Colloquia

Seminar program

1

Newton’s problem of the bodies of least resistance: from its origins to the present

Date and time: 06 November 2025 - 2:30 pm CET
Speaker(s): Giuseppe Buttazzo
Affiliation / role: Full Professor at University of Pisa, Italy

2

Microscopic and macroscopic models for vehicular and pedestrian flow

Date and time: 13 November 2025 - 2:30 pm CET
Speaker(s): Emiliano Cristiani
Affiliation / role: Research director at CNR

3

The Kraichnan model of passive scalars: anomalous dissipation and regularization by noise

Date and time: 20 November 2025 - 2:30 pm CET
Speaker(s): Mario Maurelli
Affiliation / role: University of Pisa

4

From interactions rules to critical states in schooling fish

Date and time: 27 November 2025 - 2:30 pm CET
Speaker(s): Guy Theraulaz
Affiliation / role: Research Director at the Centre for Integrative Biology, CNRS, University of Toulouse III

Note: This event is also part of the Workshop "Complex systems and Collective behaviour", organized by the MERC PhD program.

5

The GINGER project: a sophisticated array of large area gyroscopes for interdisciplinary science

Date and time: 04 December 2025 - 2:30 pm CET
Speaker(s): Alberto Porzio
Affiliation / role: University of Cassino

6

A network science approach to physics and rheology of colloidal systems

Date and time: 11 December 2025 - 2:30 pm CET
Speaker(s): Safa Jamali
Affiliation / role: Northeastern University (US)

7

The Antimatter Puzzle

Date and time: 15 January 2026 - 2:30 pm CET
Speaker(s): Barbara Sciascia
Affiliation / role: Senior Researcher at National Laboratory of Frascati (LNF), INFN

8

Analogue Transformations in Physics and their Application to Acoustics

Date and time: 29 January 2026 - 2:30 pm CET
Speaker(s): Sante Carloni
Affiliation / role: University of Genoa

9

Transition from Simple Robots to Field Swarms: Ideas and Challenges in Swarm Robotics

Date and time: 5 February 2026 - 2:30 pm CET
Speaker(s): Heiko Hamann
Affiliation / role: Department of Computer and Information Science, University of Konstanz

10

A Field Medal Problem: What is Optimal Mass Transport

Date and time: 12 February 2026 - 2:30 pm CET
Speaker(s): Luigi Ambrosio
Affiliation / role: Scuola Normale Superiore, Pisa

11

Learning-Driven Optimization and Control of Autonomous and Distributed Systems: Algorithms and Robotic Toolboxes

Date and time: 19 February 2026 - 2:30 pm CET
Speaker(s): Giuseppe Notarstefano
Affiliation / role: Department of Electrical, Electronic and Information Engineering, University of Bologna

12

Advancing seismic risk assessment through physics-based numerical approaches to earthquake ground-motion modeling

Date and time: 26 February 2026 - 2:30 pm CET
Speaker(s): Chiara Smerzini
Affiliation / role: Department of Civil and Environmental Engineering, Politecnico di Milano

Note: This event is also part of the Workshop "Seismic Hazard and Risk Challenges Through Advanced Seismological Models", organized by the MERC Ph.D. program.

13

How much milk in the sky? The mass distribution of the Milky Way

Date and time: 5 March 2026 - 2:30 pm CET
Speaker(s): Fabio Iocco
Affiliation / role: University of Naples “Federico II” - Physics Department

14

Semigroups everywhere: from exponential functions to evolution equations

Date and time: 12 March 2026 - 2:30 pm CET
Speaker(s): Abdelaziz Rhandi
Affiliation / role: University of Salerno

15

A Dynamic, Risk-Based Perspective on Natural and Induced Earthquakes

Date and time: 19 March 2026 - 2:30 pm CET
Speaker(s): Stefan Wiemer
Affiliation / role: ETH Zurich

16

Quantum fields with moving boundaries

Date and time: 26 March 2026 - 2:30 pm CET
Speaker(s): Lucia Rizzuto
Affiliation / role: University of Palermo - Physics Department

17

Measuring and understanding the dark universe following the path of light: the Euclid mission

Date and time: 16 April 2026 - 2:30 pm CET
Speaker(s): Vincenzo Cardone
Affiliation / role: Rome Astronomical Observatory

18

Journey to the Center of the Earth with Deep-Learning Atomistic Simulations

Date and time: 23 April 2026 - 2:30 pm CET
Speaker(s): Sandro Scandolo
Affiliation / role: Abdus Salam International Center for Theoretical Physics (ICTP), Trieste

19

Going To Mars!

Date and time: 7 May 2026 - 2:30 pm CET
Speaker(s): Domenico Giardini
Affiliation / role: ETH Zurich

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When Mathematicians Play Billiards…

Date and time: 14 May 2026 - 2:30 pm CET
Speaker(s): Alfonso Sorrentino
Affiliation / role: University of Rome Tor Vergata

21

From Next Generation Facilities to Key Cosmological Challenges

Date and time: 21 May 2026 - 2:30 pm CET
Speaker(s): Roberto Ragazzoni and Martino Romaniello
Affiliation / role: Roberto Ragazzoni (President of INAF) and Martino Romaniello (European Southern Observatory)

22

Mechanics of the golf lip out, featuring “the golf balls of death”

Date and time: 28 May 2026 - 2:30 pm CET
Speaker(s): John Hogan
Affiliation / role: University of Bristol

23

The dynamics of natural and induced earthquakes

Date and time: 11 June 2026 - 2:30 pm CET
Speaker(s): Massimo Cocco
Affiliation / role: National Institute of Geophysics and Volcanology