The Italian Society of Neutron Sciences (SISN) organizes a three-year project of Advanced Schools called Training on Neutron Techniques (TNT).

Scope and Topics

The school aims to provide students with a thorough understanding of the fundamental principles of neutron scattering techniques, supported by examples and applications across a broad range of scientific disciplines. The program will also cover recent advancements and ongoing innovations in experimental methods at reactor-based facilities and spallation sources, with particular attention to the upcoming European Spallation Source (ESS). The 2026 edition will be devoted to **Inelastic Neutron Scattering**, including quasi-elastic and magnetic scattering. Additionally, it will explore the integration of Artificial Intelligence (AI) and Machine Learning (ML), highlighting their increasing role in data processing as well as in the management and execution of the measurement. The previous 2025 edition focused on **Neutron Diffraction and Imaging**, while the future edition in 2027 will concentrate on **Small Angle Scattering** and **Reflectometry**.

Project Coordinator

Renato Magli (Univ. Milano)

Directors of the 2026 School

Ubaldo Bafile (CNR-IFAC, Sesto Fiorentino)
Alessio De Francesco (CNR-IOM, Grenoble)
Leonardo del Rosso (CNR-IFAC, Sesto Fiorentino)
Ferdinando Formisano (CNR-IOM, Grenoble)

Scientific Committee 2026

Francesco Cantini (CNR-IFAC, Sesto Fiorentino & INFN-CHNet)
Monica Ceretti (ICGM CNRS-UM, Montpellier)
Daniele Colognesi (CNR-IFAC, Sesto Fiorentino)
Alessandra Luchini (Univ. Perugia)
Ernesto Scoppola (Max Planck Inst. of Colloids and Interfaces, Potsdam)
Francesco Spinozzi (Univ. Politecnica delle Marche)

2nd edition of the 2025-2027 cycle of Advanced Schools on Neutron Scattering Techniques

A comprehensive program, addressed to Graduates, PhD Students, Post-Docs and Researchers, focused on inelastic and quasi-elastic scattering. The school covers incoherent and coherent scattering processes, including magnetic scattering, as well as production and conditioning of neutron beams, with advanced applications of AI and ML in neutron science

SISN Società Italiana di Scienze Neutroniche
Associazione di Promozione Sociale

Inelastic Neutron Scattering

Eleonora Guarini Memorial Edition

San Giovanni in Valle Aurina (BZ)
Italy
14 - 19 June 2026

Contents

- *Fundamentals*
  - Mathematical Methods for Neutron Spectroscopy
  - Neutron Scattering Theory
  - Neutron Sources, Beam Conditioning and Instrumentation
- *Inelastic Scattering*
  - Coherent Scattering
  - Incoherent Scattering
  - Quasi-elastic Scattering
  - Magnetic Scattering
  - Neutron Scattering and Simulations
  - INS Instrumentation
- *Applications*
  - Crystals
  - Nanomaterials
  - Soft Matter
  - Disordered Systems
  - Magnetic Materials
- *Artificial Intelligence & Machine Learning*
  - Basic Principles and Applications
- *Tutorial Activities*
  - Small groups of students with tutors

Registration & Fee

A maximum of 25 students will be accepted. The registration fee of 500 € includes full board accommodation at the Hotel Steinpent and handouts of the lectures. Travels costs to and from S. Giovanni are not included. A limited number of fellowships is available, depending on the available funds.
A pre-registration is required: people interested should complete the Registration Form present at https://www.sisn.it/formazione/tnt/ and upload also a short CV.
The School Board will evaluate the applications and inform candidates of the final acceptance by May 8, 2026.

Further Information

(please refer to one of these e-mail addresses in case of any question)

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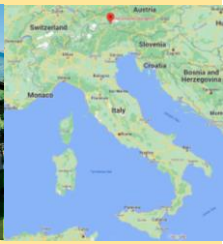
General Information

- The School is open to Graduates, PhD students, Post-Docs and Researchers working in scientific disciplines such as Biology, Chemistry, Earth Sciences, Materials Science, Physics, Sciences for Cultural Heritage Conservation, and similar.
- The language of the School will be English. The program of the School will start on Sunday morning June 14th and finish on Friday afternoon June 19th 2026. General lessons will be held each morning, while the afternoons will be mainly devoted to applied seminars and tutorial activities in small groups.
- The School will be hosted at the Hotel Steinpent, San Giovanni, Valle Aurina (Bz), Italy, and the students will be accommodated in shared rooms. Students are requested to arrive at the Hotel by 7:00 pm on Saturday June 13th.



Important dates

- Pre-registration deadline: April 20, 2026
- Preliminary acceptance: April 27, 2026
- Fee payment deadline: April 30, 2026
- Final acceptance: May 8, 2026

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