



The **Società Italiana di Scienze Neutroniche** organizes a three-year program of Advanced Schools called Training on Neutron Techniques.

Scopes and Topics

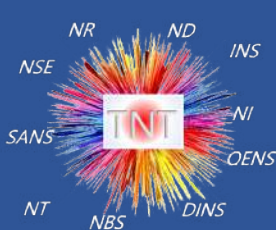
The physical bases of neutron sources and of neutron scattering techniques for the study of condensed matter will be presented and discussed, with examples and applications in various scientific fields. Specific attention will be paid to recent developments and to those in progress and expected for the current decade. The scientific potentialities of the experimental methods will be discussed for instruments accessible both at reactor-based facilities and at spallation sources, also in view of the European ESS project (the future flagship European Neutron Scattering facility). The **2022** edition focused on **Diffraction and Structural Imaging**, while the 2023 one was dedicated to **Inelastic Scattering**. Finally, the **2024** edition will cover **Small Angle Scattering and Reflectometry**.

TNT Project Coordinator

R. Magli (Università degli Studi, Milano)

Directors of the 2024 School

M. Maccarini (CNRS – Université Grenoble Alpes)
 F. Spinozzi (Università Politecnica delle Marche)
 G. Vitiello (Università di Napoli Federico II)
 A. Pietropaolo (Enea, Frascati)



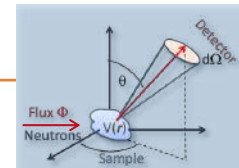
Training on Neutron Techniques

Third edition

SMALL ANGLE SCATTERING AND REFLECTOMETRY

San Giovanni in Valle Aurina (BZ, Italy)

16-21 June 2024



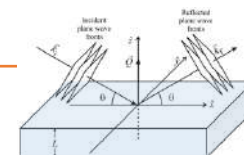
Fundamentals

- Mathematical methods for scattering
- Theory of neutron scattering
- Neutron sources and instrumentation
- Bayesian methods



Small-Angle Neutron Scattering

- Fundamentals of SANS
- Strategies of SANS data analysis
- SANS and molecular dynamics simulations
- Applications of SANS to Biology, Biophysics, Chemistry, Heritage Sciences, Material Sciences and Physics



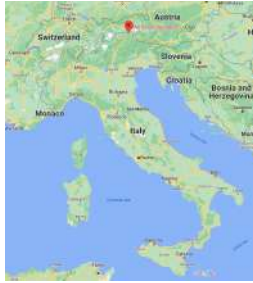
Neutron Reflectometry

- Fundamentals of NR
- Strategies of NR data analysis
- NR and magnetisms with polarized neutrons
- Applications of NR to Biology, Biophysics, Chemistry, Magnetism and Polymer Science



Tutorials

- Small groups of students with tutors



Registration & Fees

A maximum of 25 students will be accepted. The registration fees of 400 € include 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 <http://www.sisn.it/formazione/tnt-summer-school> and upload also a short CV.

The SISN will evaluate the applications and will communicate on the scheduled time the final acceptance.

<https://www.steinpent.com>

San Giovanni in Valle Aurina, I-39030 (BZ)

GPS East: 11°56'7" - North: 46°58'22"

General Information

The School is open to **Graduate** and **PhD students** and to **Post-Docs** working in scientific disciplines as Biology, Biophysics, Chemistry, Earth Sciences, Heritage Sciences, Materials Sciences, Physics, and similar.

The language of the School will be English. The School program will start on Sunday morning.

General lessons will be held each morning, while the afternoons will be mainly devoted to tutorial activities with small groups of students, with some time, each day, available for free activities.

The School will be hosted at [Hotel Steinpent](#), S. 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 15th.



Important dates

- Pre-registration deadline : April 18,2024
- Preliminary acceptance : April 29, 2024
- Fee payment deadline : May 13, 2024
- Final acceptance : May 20, 2024

Further information



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

Scientific committee

U. Bafile (CNR-IFAC, Sesto Fiorentino)
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L. del Rosso (CNR-IFAC, Sesto Fiorentino)
F. Grazzi (CNR-IFAC, Sesto Fiorentino & INFN-CHNet)
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