

UNIVERSITÀ
DEL SALENTO

Dipartimento di Matematica e Fisica
"Ennio De Giorgi"





[Home](#)

[News](#)

[ISAPP Aims](#)

[Steering Committee](#)

[ISAPP Schools](#)

[Partner Institutes](#)

[Internal](#)

ISAPP – International School on AstroParticle Physics

European Doctorate School

<https://www.isapp-schools.org/>

A network of European Institutions has been created, with the purpose of organizing a common curriculum in Astroparticle Physics at the level of a Doctorate School.

The Institutions of the ISAPP network have subscribed an [agreement](#). On the basis of the agreements subscribed by these Institutions, specialized courses concerning Astroparticle Physics are organized in a common International School on AstroParticle Physics (ISAPP). Bilateral and multilateral student exchanges concerning the research activities in this field are also foreseen, in view of their thesis preparation.

The network presently includes 41 institutions. The agreement subscribed by the ISAPP Institutions is open to new member institutions. Institutions interested in joining are welcome. Decisions are taken on a mutual consensus within the Steering Committee.

Contact:

- Francesco D'Eramo francesco.deramo@pd.infn.it and
- Tiina Suomijärvi tiina.suomijarvi@ijclab.in2p3.fr

ISAPP 2025 Lecce Main Topics

Phenomenology of astrophysical sources:

Acceleration mechanisms

Particle production (charged, photons and neutrinos)

Propagation, interaction channels

Search for Dark Matter, exotics, BSM

Detection techniques and status of the art:

Direct observation from space: satellites, balloons

EAS detectors (ground, fluorescence/Cherenkov/radio)

Multi-messengers (photons, astrophysical neutrinos, GW)

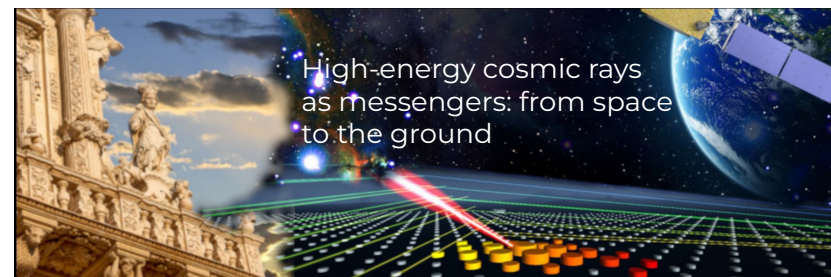
Seminars:

Highlights from the selected experiments in the field

Phenomenological or theoretical status of the art in specific topics, open points and new frontiers

Specific analysis techniques such as AI and machine learning

Roadmap for astroparticle physics in the near future



ISAPP INTERNATIONAL DOCTORATE SCHOOL

June 9-20 2025

Rettorato dell'Università del Salento

Piazza Tancredi, Lecce, Italy

<https://agenda.infn.it/e/ISAPP2025Lecce>



TOPICS: theory, experimental seminars and hands-on sessions

Phenomenology of astrophysical sources:

- Acceleration mechanisms
- Particle production (charged, photons and neutrinos)
- Propagation, interaction channels
- Search for Dark Matter, exotics, BSM

Detection techniques and status of the art:

- Direct observation from space: satellites, balloons
- EAS detectors (ground, fluorescence/Cherenkov/radio)
- Multi-messengers (photons, astrophysical neutrinos, GW)

Local Organizing Committee

University of Salento and INFN Lecce:

Lorenzo Perrone (chair), Paolo Bernardini, Gabriella Cataldi, Maria Rita Coluccia, Matteo Conte, Francesco de Palma, Emanuele De Vito, Ugo Giaccari, Daniele Martello, Daniele Montanino, Viviana Scherini, Antonio Surdo.

Gran Sasso Science Institute:

Ivan De Mitri, Adriano Di Giovanni, Carmelo Evoli, Pierpaolo Savina

Secretariat and IT managers:

University of Salento: Daniela Dell'Anna, Antonio Falconieri, Matteo Morelli.

INFN Lecce: Carla Gentile, Elenia De Rinaldis, Enrico Fasanelli, Antonio Forte, Fulvio Ricciardi

ISAPP Steering Committee

<https://www.isapp-schools.org/steering-committee>



Specific initiatives

Hands-on sessions:

First round → Thu 12/6

AI and machine learning (see Software instructions, indico site)

Second round → Tue 17/6

Propagation, EAS Shower generators (simulations)

Writing a successful proposal

round table → **Fri 13/6**

Open data and dissemination

example applications → **Wed 18/6**

Road map and future perspective

an overview from the chair of the APPEC SAC → **Fri 20/6**

LOC members and secretariat

Universtity of Salento and INFN Lecce (Staff, Phd Student, postdoc)

P. Bernardini, G. Cataldi, M.R. Coluccia, M. Conte, F. de Palma, E. De Vito, U. Giaccari, D. Martello, D. Montanino, L. Perrone, V. Scherini, A. Surdo

GSSI (Staff, post-doc)

I. De Mitri, A. Di Giovanni, C. Evoli, P. Savina

Secretariat:

D. Dell'Anna (UniSalento), E. De Rinaldis (INFN), C. Gentile (INFN)

IT Support

E. Fasanelli (INFN), F. Ricciardi (INFN), A. Forte (INFN), R. Ferrari (INFN)
A. Falconieri (UniSalento), M. Morelli (UniSalento), S. Molendini (UniSalento)

Where we are: Rectorate of the Università del Salento



Walk distance to all B&Bs and restaurants of the historical center

Ancient monastery with a large cloister
17th century baroque building

Excursion to OTRANTO (Sun 15/6)

Social event:

- seminar open to the public in the castle in the morning
- afternoon free for visiting and swimming!



Bus transportation and lunch voucher provided
(more details later on)



High-energy cosmic rays
as messengers: from space
to the ground

ISAPP INTERNATIONAL DOCTORATE SCHOOL
15 Giugno 2025
Castello di OTRANTO

<https://agenda.infn.it/e/ISAPP2025Lecce>

**Catching the highest energy
cosmic messengers**
I SEGRETI DEI RAGGI COSMICI

 **Prof. Miguel Mostafà,**
Dean of the College of Science and Technology
Temple University, USA

Local Organizing Committee
University of Salento and INFN Lecce:
Lorenzo Perrone (chair), Paolo Bernardini, Gabriella
Cataldi, Maria Rita Coluccia, Matteo Conte,
Francesco de Palma, Emanuele De Vito, Ugo
Giaccari, Daniele Mariello, Daniele Montanino,
Viviana Scherini, Antonio Surdo.

Gran Sasso Science Institute:
Ivan De Mitri, Adriano Di Giovanni, Carmelo Evoli,
Pierpaolo Savina

**Evento patrocinato dal
Comune di Otranto**
Lorenzo Perrone (chair),
Paolo Bernardini, Gabriella
Cataldi, Maria Rita Coluccia, Matteo Conte,

ISAPP Steering Committee
<https://www.isapp-schools.org/steering-committee>



Lecce highlights

Historical centre

Piazza Duomo e Seminario, Basilica di Santa Croce, Anfiteatro romano, teatro romano, Castello di Carlo V

Museums

Sigismondo Castromediano, MUST, Museo della cartapesta, Museo Ebraico, Museo Ferroviario

Surroundings

Cerrate, Galatina Nardò Otranto

Beaches and natural beauties

Gallipoli, Porto Cesareo, Porto Selvaggio, Torre dell'orso
Sant'Andrea, Otranto, Santa Cesarea, Porto Badisco, Santa Maria di Leuca..

Culinary experience

Pasticciotto e caffè leccese, rustico, pucce, polpette, ciceri e tria



An example of a typical Menu

Appetizers

→ Eggplant, meatballs, mussels au gratin, various vegetables, potato pitta)

First course

→ Ciceri e tria, broad bean puree with chicory, orecchiette or sagne with sauce or turnips

Second course

→ horse meat (“pezzetti”) in sauce or octopus pignatta, eggplant parmigiana

Desserts: spumone (typical icecream, many flavors), pasticciotto (pastry with cream).

Coffee on ice with almond milk (“caffè leccese”).

Quick lunch several options in the city center.

→ Rustico (puff pastry with mozzarella, besciamella and tomatos), Puccia (Sandwich) or the evergreen pizza



learning and enjoying!