

Gran Sasso Group

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Gran Sasso Science Institute



- International Ph.D. school established in 2013 in L'Aquila
- Physics Area focused on Astroparticle Physics
 - Rare Events => Neutrinoless Double Beta Decay + Dark Matter + SNv
 - Cosmic Rays
 - Gravitational Waves
- 10 students/year (4 years program) + 22 PostDocs + 27 Faculty Members
- New Facilities will be ready in 2026 at Space and Earth Innovation Campus
 - Clean Room
 - Mechanical and Electronics workshop
 - Cultural Heritage Laboratory
 - Quantum Lab (Thales Alenia Space)
- Knowledge transfer via [Gran Sasso Tech](#)

Laboratori Nazionali del Gran Sasso



- World-leading laboratory in Astroparticle Physics of INFN
 - Neutrino Physics (CUPID + LEGEND + RESNOVA)
 - Dark Matter search (XENON + Dark Side + COSINUS)
 - Nuclear Astrophysics (Bellotti Ion Beam facility + LUNA)
- Long-standing experience
 - Cryogenic detectors and systems
 - Low-background environments and materials
- Facilities and Services
 - Underground installation of HPGe Detectors for gamma spectrometry (STELLA) + ICP-MS
 - Chemistry Laboratory => material cleaning
 - Mechanical Workshop => detector holder production
 - 3D printing lab for plastic and metallic materials

Team

- Giovanni Benato (RTD-b)
- Francesco De Dominicis (Ph. D.)
- Lorenzo Pagnanini (RTD-b)
- Anastasiia Shaikina (Ph. D.)*
- Post doc ([open position](#))

- Dounia Helis (Researcher)
- Andrea Melchiorre (Ph.D.)*
- Stefano Pirro (Senior Researcher)
- Andrei Puiu (Researcher)

*currently not involved



Skills and tasks

- IETI cryostat
 - operation, refurbishment and maintenance
- Detector development
 - mainly NTD-based
 - recently also TES-based
- Software development
 - see Giovanni's talk on Octopus
- Data processing and analysis
 - with DIANA and Octopus
- Monte Carlo Simulations
 - with the AGATA code (CUPID collaboration)
- Background modeling
 - CUPID and ACCESS tools
- Material screening and selection
 - STELLA + ICP-MS