



**UNIVERSITÀ
DI TRENTO**

Department of Physics
Doctoral Programme in Physics

Seminars for the admission to the third year (39th cycle)

Friday 26 September, 2025 at 9:00 a.m.
at the seminar room of the Department of Physics

Committee 1

PhD student	Seminar title
Andreoni Diego	Ferromagnetic Superfluid Mixtures in 1D Flat Potential
Chehaimi Ahmad	Towards dense cryogenic positronium gas for fundamental physics experiments
Di Donna Andrea	NQS for Hypernuclei and Equivariant Architectures for Excited-State Targeting
Ferguson Riley	The Moire Deflectometer for Universality and Symmetry of Antimatter (MEDUSA) Gravity Module at AEgIS: Design, Installation, Status
Grillo Guglielmo	Organisation and dynamics of individual DNA segments in topologically complex genomes
Miani Roberto	From PET Waste to New Materials: Chemical Recycling and Innovation
Nabari Denis	Internal Friction in thin films of vitreous oxides
Oreglia Pietro	Magneto-levitating Systems: Theory of Feedback Cooling and Intrinsic Dissipation
Pedrotti Davide	Exploring open questions in cosmology and gravitation: tensions and new physics beyond the standard model
Pascual Solis David	Sachdev-Ye-Kitaev models in cavity-QED platforms
Spagnoli Luca	Fault-tolerant quantum simulation of Lattice Gauge Theories
Venturelli Francesco	LISA GRS and femto-ampere current measurements

September 23, 2025

Prof. Raffaello Potestio



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Tuesday September 23, 202 at 15:00
at the seminar room of the Department of Physics

Committee 2

PhD student	Seminar title
Bragi Nicolò Petro	Interplay of Superconductivity, Ferromagnetism and Half-Metallicity in Gated Single Layer g-C ₃ N ₄
Carlioni Anna Giulia	Thermal Neutron Energy Determination with Multilayer Detector
Chesini Alessandro	Simultaneous wastewater remediation and photoelectrochemical hydrogen production: from proof-of-concept to preliminary developments
Spreti Camilla	Boosted Continuous Wang-Landau: A Novel Approach for Soft Matter Sampling

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Seminars for the admission to the third year (39th cycle)

Wednesday September 24, 2025 at 14:20
at the seminar room of the Department of Physics

Committee 2

PhD student	Seminar title
Favaretto Rachele	Silicon Nitride photonic integrated circuit for high sensitivity biosensing
Foradori Alessandro	Neuromorphic Photonic Circuits with Nonlinear Dynamics and Memory
Martini Francesca	Ultraflat excitonic dispersion in single layer g-C ₃ N ₄
Salmoiraghi Alessandro	Core of Sustainability Education: Bridging Theory and Practice in Teaching Climate Science
Volpato Giulio	Density functional theory for superconductors in a Wannier functions framework

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Seminars for the admission to the third year (39th cycle)

Wednesday October 1, 2025 at 15:00
at the seminar room of the Department of Physics

Committee 2

PhD student	Seminar title
Bordieri Giulio	Assessing predictivity and interpretability in radiobiological modeling
Castelli Lorenzo	Modeling of Ultra-High-Dose-Rate radiation response from track structure to DNA molecular damage

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