



UNIVERSITÀ
DI TRENTO

Dipartimento di
Fisica



PhD Program in Space Science and Technology - SST

From Quiescence to Activity: Galactic Nuclei as a Unified Cosmic Particle Laboratory

Specific Seminar – Curriculum 1

April 8, 2026, 2.30 p.m.

Speaker:

Prof. Dr. Elisa Resconi - Technische Universität München

Abstract:

This talk opens with a summary of recent IceCube results establishing Seyfert galaxies as potential high-energy neutrino emitters, highlighting the role of neutrinos as unique messengers from the high-energy universe. The same dense coronal environments that make these sources efficient neutrino factories render them opaque to cosmic-ray escape, raising the question of where ultra-high-energy cosmic rays (UHECRs) are instead accelerated. The talk will also touch on the exciting prospects ahead, with next-generation observatories such as IceCube-Gen2 and P-ONE set to dramatically sharpen our view of the high-energy neutrino sky.

Short Bio:

Prof. Resconi's research lies at the crossroads of particle physics and astrophysics. Neutrinos, the most abundant matter particles of our universe, form the central focus of her work. Cosmic neutrinos, as new astrophysical messengers, open a new window onto the universe and the observation of its most energetic, hence violent, regions. They allow us to explore phenomena in cosmic accelerators and collapsing stars that would be otherwise inaccessible.

Prof. Resconi studied at the Università degli Studi di Milano and Genova. After completing her dissertation on solar neutrinos at Laboratori Nazionali del Gran Sasso, she relocated to Germany on a Marie Curie Fellowship (DESY-Zeuthen). From 2005 to 2010, she headed an Emmy Noether junior research group based at the Max Planck Institute for Nuclear Physics in Heidelberg. In 2012, she was appointed to the Professorship for Experimental Physics with Cosmic Particles at TUM. In 2018, she was awarded a Liesel Beckmann Distinguished Professorship.

Online attendance:

Information on remote participation can be requested by sending an e-mail to dn_sst@unitn.it