SSM
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SSM-INAF JOINT EVENT

Featuring a contribution from ESO

From Next Generation Facilities to Key Cosmological Challenges

21 May 2026, h 14:30

Scuola Superiore Meridionale

Via Mezzocannone 4 (Aula Magna)

Naples, Italy

Prof. Arturo De Vivo

Responsabile della SSM

Prof. Salvatore Capozziello

Coordinatore dell'area SPACE

Opening Remarks

Prof. Roberto Ragazzoni

INAF President

"New Eyes on the Cosmos: Telescopes Now and Next"

Dr. Martino Romaniello

European Southern Observatory (ESO)

"The Hubble Constant and the Quest to Measure the Universe"

LOCAL ORGANIZING COMMITTEE

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Giulia De Somma (INAF)

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Marcello Miranda (SSM)

Teresa Sicignano (SSM - INAF)

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New Eyes on the Cosmos: Telescopes Now and Next

Prof. R. Ragazzoni
INAF President

When: Thursday 21 May 2026, 14:30 CET

Venue: Scuola Superiore Meridionale – Via Mezzocannone 4

Abstract: Astrophysical observation has moved beyond the boundaries of the electromagnetic spectrum. Today, we probe the Universe not only through light, but also through messengers such as neutrinos and gravitational waves, gathering information both on the physical properties of individual celestial objects and on the geometries in which they evolve. What are the most powerful telescopes of today, and what will define the observatories of tomorrow, from the perspective of a leading national research institution?

The Hubble Constant and the Quest to Measure the Universe

Prof. M. Romaniello
European Southern Observatory (ESO)

When: Thursday 21 May 2026, 14:30 CET

Venue: Scuola Superiore Meridionale – Via Mezzocannone 4

Abstract: The Hubble Constant, H_0, measures the current expansion rate of the Universe. It is one of the most fundamental parameters in cosmology, setting the absolute distance scale and,hence, the age of the Universe and the absolute values of luminosities and sizes. Ever since a non-static Universe emerged as a natural, and yet unexpected, consequence of Einstein's equations of General Relativity, measuring what came to be known as the Hubble Constant has sparked fierce scientific debate. In this talk, I will trace this fascinating history, from the earliest attempts to map the cosmos to the current tension between early- and late-Universe measurements of H_0. This discrepancy, if not attributable to systematic errors, may point to physics beyond the standard cosmological model — posing one of the deepest challenges to our current understanding of the Universe.

Bio: Martino Romaniello is an astronomer at the European Southern Observatory (ESO) Headquarters in Garching bei München, Germany. He is Head of the Back-end Operations Department, responsible for managing the science data stream from the La Silla Paranal Observatory, including the ESO Science Archive and the scientific oversight of data processing tools and operations. He is a keen advocate for Open Science and FAIR (Findable, Accessible, Interoperable, and Reusable) principles.

His research interests focus on the local distance ladder and its connection to the present-day value of the Hubble constant H_0, with a particular emphasis on Cepheid variable stars as standardizable candles for accurate and precise distance measurements. At the intersection of his operational role and his own research lies a broader interest in advanced algorithms for data processing and the application of AI in astronomy.

He holds a PhD in Physics from the Scuola Normale Superiore in Pisa (Italy).

PhD SPACE
Cosmology, Space Science & Space Technology