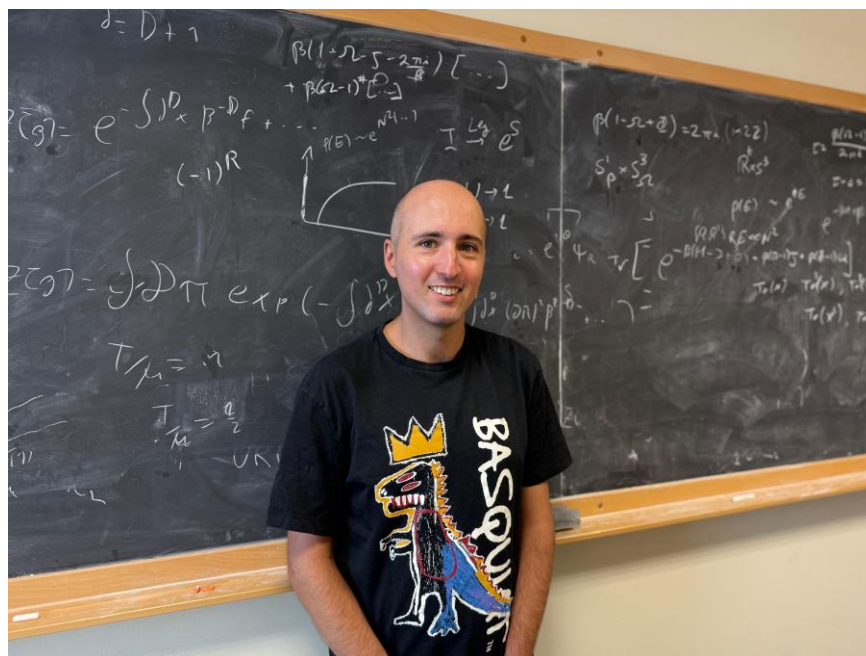


PRESS RELEASE

SISSA: €1.2 million ERC Grant for physicist Gabriel Cuomo to explore new frontiers of physics



The prestigious European grant has been awarded to the young Sicilian scientist. The ERC Starting Grant will support five years of research on extended objects in quantum systems and the physics of confinement

Trieste, 03 September 2026

Gabriel Francisco Cuomo, a physicist at SISSA, has been awarded an ERC Starting Grant worth €1.2 million for his theoretical physics project, *Extended Probes in Quantum Field Theory: from Impurities to Confining Strings*. The announcement was made today by the European Research Council (ERC), the European organisation that awards one of the most prestigious funding schemes supporting research excellence. Starting Grants are aimed at emerging researchers with up to 10 years of experience since obtaining their PhD. As stated in this year's announcement of the winners: "The grants will help researchers develop ambitious ideas, build their own teams and establish their independence at a pivotal stage in their careers." The competition for the funding



is extremely strong: this year, only 8.8% of the 4,807 proposals submitted were funded.

33, Sicilian, with an international career: meet the ERC grant winner

A 33-year-old Sicilian, Gabriel Francisco Cuomo has built an international career at institutions of outstanding scientific reputation. After earning his bachelor's degree at the University of Catania, he completed his master's degree through a joint programme between SISSA and the University of Trento. He then obtained his PhD at EPFL in Lausanne, before joining Stony Brook University in New York. This was followed by a research position within a joint project involving Princeton University and New York University.

Extended objects and the physics of confinement: the focus of the funded project

Since 2025, Cuomo has been at SISSA, where he will continue his research also thanks to the newly awarded Grant: "The project is based on theoretical physics. Many of the quantities we use to describe a physical system are local, meaning that they are associated with what happens at a single point in space and time, such as the energy density or the value of the electric field at a given point. There are, however, phenomena and observables that are intrinsically extended, for example along a line or across a surface. I will study these extended objects and how they can be used to understand systems in which quantum effects and fluctuations play an essential role. In particular, we will focus on the so-called physics of confinement, the phenomenon whereby some fundamental particles, especially quarks, cannot be observed in isolation. More broadly, these studies are relevant to fields ranging from particle physics to condensed matter physics."

Gabriel Cuomo comments on the achievement

Gabriel Cuomo comments on this important achievement: "I wanted to return to Europe and SISSA is an ideal place to carry out high-level research. I am very happy about this result, naturally also as a personal recognition, but above all because it represents a strong vote of confidence in the research programme I proposed. It will allow me to begin my career as a faculty member and researcher with the resources and scientific freedom needed to build a group, develop the project's ideas and, above all, do interesting physics."

The comment of SISSA Director Professor Andrea Romanino

SISSA Director Andrea Romanino comments: "This new prestigious ERC grant awarded to a young faculty member who has only recently joined SISSA is a confirmation of the quality of our recruitment. These new colleagues are not only scientists of great scientific calibre, but also demonstrate great rigour, responsibility and ethical standards. This combination makes me particularly confident about the future of SISSA."

The ERC Grant awarded to Gabriel Cuomo is SISSA's 35th ERC grant since 2007.

IMAGE

Credits: SISSA

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