

Exploring the Unknown

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The exhibition features new artworks by four former artists in residence at Arts at CERN.

The CERN Science Gateway is a new education and outreach centre that will immerse visitors in the discoveries, science, and technologies of CERN. With three exhibitions, hands-on laboratories, and an auditorium, the Science Gateway becomes both a real and a metaphorical bridge between science and society. Designed by world-renowned architect Renzo Piano, the building features tubes that appear to be suspended in space, evoking CERN's cutting-edge accelerators.

One of the two tubes is home to the exhibition Exploring the Unknown, which manifests as a fertile meeting ground where art and science dialogue, a conversation initiated by Arts at CERN a decade ago. The show presents four new art commissions by Julius von Bismarck, Chloé Delarue, [Ryoji Ikeda](#), and Yunchul Kim. As residents of Arts at CERN, their artistic practices have been nourished by their time at the Laboratory in dialogue with physicists.

Their interactions with CERN scientists and their interests in scientific themes have shaped their commissioned works, responding to Arts at CERN's aim to support art productions. Since 2018, CERN's leading art and science programme has supported 20 new commissions. Exploring the Unknown takes a decade-long work further, bringing together artists and physicists in a collaborative and interdisciplinary environment where new ideas are explored.

The Arts at CERN and CERN Exhibitions team joined forces to bring to the public an exhibition designed to inspire curiosity and wonder about the universe's unanswered questions. Curated by Mónica Bello, head of Arts at CERN, and Iliana Tatsi, curator of the CERN Exhibitions team, the three main themes of Exploring the Unknown – Space & Time, the Void (the Quantum Vacuum), and the Invisible (Dark Matter) – are introduced by CERN theoretical physicists who share their fascinations and challenges in their creative quest to investigate the limits of our knowledge.

'Space and time are useful classical concepts to describe what we experience, but we have not yet understood their quantum structure. We live through space and time because we have no choice', says physicist Luis Álvarez-Gaumé. In the search for dark matter, Nicholas Rodd describes how 'there is an enormous amount of evidence for the existence of dark matter, but its constituents represent a fundamental gap in our understanding. As theoretical physicists, we challenge the limitless possibilities of what its nature could be, looking for answers that may completely differ from what we have yet discovered.'

The four commissioned artists have employed the language of science to create precise metaphors and experiences to uncover, engage and return this knowledge as cultural artefacts.

Round About Four Dimensions by Julius von Bismarck takes on the challenge of envisioning beyond our familiar three-dimensional world, embodying the complex notion of a tesseract in a self-wrapping kinetic sculpture.

In Chroma VII, a 15-meter-long installation that folds in on itself utilises 320 transparent cells that subtly come to life as they react to invisible subatomic particles. The intricate knot produces a mesmerising display of light and colour that mirrors the dynamic nature of the cosmos.

Chloé Delarue plays with the physical perception of our environments and their translation into virtual universes. Her installation TAFAA – TINA UNFOLLOW ALICE interprets matter as the constituent of our tangible reality by questioning the uncertainty inherent in scientific research.

Ryoji Ikeda's *data.gram [n⁴]* employs scientific data to convey the scales of the universe. Reflecting their mysteries, such as the 'quietness' of the quantum vacuum and the nature of dark matter, the sensory explosion of images and sounds invites viewers to question their place within these scales.

Through their engagement with CERN's unique environment, the artists cast themselves as experimenters as they navigate the vastness of knowledge and confront the strangeness of elementary reality. At the heart of their work lies a relentless sense of wonder that permeates the worlds of art and science. Their compelling narratives become a means of appreciating and navigating our ever-shifting world, presenting them in a manner that both provokes contemplation and sparks the imagination.