## The big and the small of it

The Delta Institute for Theoretical Physics

Whether it is elementary particles, black holes or (quantum) matter, theoretical physics attempts to make sense of all of nature. What is a black hole made of? And how do you change the properties of materials? Following in the footsteps of physics giants such as Albert Einstein and Stephen Hawking, the Delta ITP consortium seeks to answer the most fundamental questions of our existence.

University of Amsterdam

The Lorentz Institute for theoretical physics in Leiden is one of the oldest physics institutes in the Netherlands and has an impressive track record. There, the full breadth of physics is studied, with figureheads such as quantum scientist Carlo Beenakker, cosmologist Ana Achúcarro, and superconductivity expert Jan Zaanen. The nearby Lorentz Center is the ideal venue for hosting workshops and conferences.

## Leiden University

## **DELTA ITP ACTIVITIES**

PhD and postdoctoral research projects (41)

Delta Fellowships (12)

Guest researchers (over 100)

Symposia, conferences, and

workshops (over 100)

Advanced Topics education courses (17)

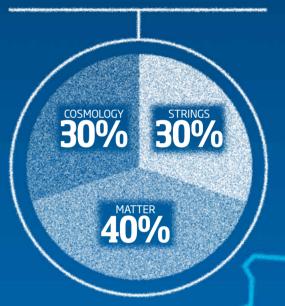
Theoretical Physics in
Amsterdam has quickly gained
considerable prestige in Europe. The
department is historically known for its
pioneering research focussing on string
theory and quantum matter. With help from
Delta ITP, the department has been able to
expand into the full breadth of theoretical
physics, with big names like Erik Verlinde
and Kareljan Schoutens, and up-andcoming talents like Miranda Cheng
and Gianfranco Bertone among its
ranks.

The Institute for

Utrecht University

Utrecht is the home of Nobel laureate Gerard 't Hooft. Traditionally, research here has focused on fundamental questions, but scientists now also study topics such as cosmology and (sustainable) materials. In addition to figureheads Cristiane de Morais Smith and René van Roij, the new generation - including Rembert Duine and Tanja Hinderer - is making considerable headway. The Advanced Topics education courses are organised from Utrecht.

50
PERMANENT
STAFF MEMBERS



120+
PHD'S AND POSTDOCTORAL RESEARCHERS

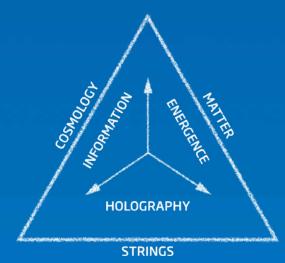
APPROXIMATELY

500

HAVE A VIDI, VICI OR ERC SCHOLARSHIP

## **INFINITE SUBJECTS**

The unique collaborations between the three participating institutes strengthen the unity of theoretical physics. After all, the main research themes – cosmology, matter, and strings – are sides of the same triangle. Within the Delta ITP consortium, the boundaries between physics disciplines are blurred, in order to get to the core of the matter.



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