The Nordic Institute for Theoretical Physics

Nordita

Where we are





Nordita in a nutshell

Nordita's mission

".. is to disseminate new research in physics and related areas in the Nordic countries, as well as to stimulate Nordic research and make it more visible to the international community."

Brief history of Nordita:

- Founded in 1957 as the Nordic Institute for Theoretical Atomic Physics
- Located next to the Niels Bohr Institute in Copenhagen.
- Research at Nordita widened to new areas of fundamental theoretical physics.
- Nordita moved to Stockholm on January 1, 2007
- Hosted by Stockholm university, KTH, the Royal Institute of Technology, and Uppsala university
- Located at the AlbaNova University Center

Funded by:









Copenhagen - the first 50 years





The original Nordita building

- Originally strong activity in atomic and **nuclear physics**
- Expansion into new areas
 - Particle physics
 - Astrophysics
 - Condensed matter physics
 - Complex systems/biophysics



In-house research

Research areas

- High energy physics
- Cosmology
- Astrophysics
- Condensed matter physics
- Complex systems and Biophysics



The excellence of the research at Nordita is reflected in

- # of publications, citations, and invitations
- # of large grants held by Nordita faculty (ERC, KAW, VR..)
- the large # of internationally renown scientists participating in programs, conferences and schools
- the high quality of postdocs and assistant professors
- the career path of previous assistant professors

Who we are

- 4 Nordita Professors
- **Senior** 3 Affiliated Professors
- faculty 1 Guest Professor
 - 3 Emeriti Professors
 - 5 Corresponding fellows
- **Junior** 7 Nordita assistant professors
- faculty 3(+2) Nordic assistant professors
- Postdocs 10 Fellows
 - 21 Postdocs
 - + about 10 PhD students + guests
 - + 8 administrative staff + director



External activities

- Summer & winter schools 1 2 weeks
- Conferences
 - Anyone can apply
 - More than10 per year
 - Decision by director
- Programs
 - Anyone can apply
 - 6/7 per year
 - Deadline early December
 - Decided by Nordic committee and board
 - Very popular, often oversubscribed

The Nordic importance

- 124 Nordita alumni have, obtained faculty positions in the Nordic countries (2015 data).
- Nordita has at present three Nordic lectors and is in the process of hiring two more.
- Approximately one third of the visitors and program/ workshop participants come from the Nordic countries.
- The summer and winter schools and attract many Nordic Masters and PhD students.

Where are we going?

Nordita is primarily engaged in curiositydriven basic research in theoretical physics.

Thus there is no "grand plan"

for the research, but there

- is a continuous evaluation and redirection of current lines of research depending on the progress of the field at an international level.
- is a continuous renewal of topics due to the recruitment of new junior faculty with experience from top international institutes.
- is a conscious effort from the faculty to solicit conferences, programs and schools in emerging fields.
- is a systematic build up of collaborative relations to institutes and centers in theoretical physics world wide.

International connections

Collaborative agreements with many institutes, for example:

- SISSA, Italy
- Natal and San Paolo, Brazil
- ICAM, USA

Our most recent agreement is with:

- Tsung-Dao Lee Institute
- Wilczek Quantum center
- Content: Common postdocs
 - Exchange program
 - Schools







and where we will be ~ 2020/21





