

# Assistant Professor Position in Astrophysical Dynamos at Nordita

## NORDITA - The Nordic Institute for Theoretical Physics

NORDITA was founded in 1957 as a Nordic institute in theoretical (atomic) physics on the premises of the Niels Bohr Institute at Copenhagen University. It was decided in 2006 that NORDITA should be moved to Stockholm under the auspices of Stockholm University (SU) and the Royal Institute of Technology (KTH). NORDITA was established at the AlbaNova University Center, situated in the immediate vicinity of the two universities, on Jan. 1, 2007. Administratively, NORDITA is organized as a part of AlbaNova University Centre.

The European Research Council has decided to fund a concentrated 5-year effort at [Nordita](http://www.nordita.org/) in Stockholm through an [Advanced Grant of the European Research Council](http://www.nordita.org/~brandenb/AstroDyn/) to improve our understanding of astrophysical dynamos. For details, see the project page <http://www.nordita.org/~brandenb/AstroDyn/> on *Astrophysical Dynamos*. In connection with this 5-year project an assistant professor position ([forskarassistent](http://www.nordita.org/~brandenb/AstroDyn/positions/)) is announced with an expected starting date during the fall of 2009. Other positions announced in connection with the project can be found on <http://www.nordita.org/~brandenb/AstroDyn/positions/>.

The research in the group will focus on improving our understanding of the solar dynamo. This involves work on a number of topics including

- Turbulent dynamo action in spherical shells
- The formation of active regions, sunspots, and coronal mass ejections from dynamo-generated magnetic fields
- The ejection of dynamo-generated small-scale magnetic helicity in coronal mass ejections
- Magnetic helicity fluxes and turbulent transport coefficients in hydromagnetic turbulence.
- Dynamos from magneto-rotational and magnetic buoyancy instabilities
- Dynamos from deep convection with tachocline
- Solar cycle models and forecasts
- Applications to galactic and laboratory dynamos

The successful candidate will help with the supervision of the [PhD students and post-docs](http://www.nordita.org/~brandenb/AstroDyn/) working within this project. An extension to a fifth year is possible if the candidate takes on teaching duties at [Stockholm University](http://www.nordita.org/~brandenb/AstroDyn/) or at [Royal Institute of Technology \(KTH\)](http://www.nordita.org/~brandenb/AstroDyn/). The position start on 1 September 2009, or any other date to be agreed upon.

### Qualifications

Persons eligible for employment as Assistant Professor are those who have a doctoral degree, or a foreign degree deemed to be of corresponding quality. Precedence should be given to applicants who have graduated five years, or less, before the time of expiration of applications for these posts. Precedence should also be given to applicants holding older degrees, if special reasons for this should prevail.

### Employment

The position is supported for 4 years. The position will start on Sept 1st, 2009, or some other date agreed upon.

### Application

The applications should include a

- full curriculum vitae together with a list of publications,
- a short description of scientific, pedagogical and administrative experience,
- pdf files of up to 10 of the most important papers (those papers should also be marked in the list of publications),
- at least 2 letters of recommendation, to be sent separately by the issuer.

The application deadline is January 15, 2009, and applications should be filed through our web interface <http://apps.nordita.org/>. In exceptional cases, you may also send your application via e-mail to [brandenb@nordita.org](mailto:brandenb@nordita.org), or send it to

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