

## **EuroSPIN** **European Study Programme in Neuroinformatics**

**Duration:** 3 – 4 years

**Programme description:**

The human brain is by far the most intricate and complex organ known. With  $10^{11}$  neurons and  $10^{15}$  connections, it effortlessly performs operations that far exceed the capability of any computer. Understanding how it achieves this will revolutionise science, health care and technology. Radical improvements in experimental methods are transforming the study of the brain into a data rich discipline, which requires the emerging discipline of neuroinformatics. Neuroinformatics combines neuroscience and informatics research to develop and apply computational tools and approaches that are essential for understanding the structure and function of the brain. Neuroinformatics thus forms an essential foundation for current and future brain research, and is critical both for basic research into brain function and biomedical research aiming at finding treatments for neurological and psychiatric diseases. Understanding the brain is also expected to have far reaching implications for information technology.

The objective of this doctoral training programme is to provide top quality training for PhD students within the neuroinformatics area. Four partners participate:

- Kungliga Tekniska Högskolan, Sweden
- University of Edinburgh, UK
- National Centre for Biological Science, India
- Albert-Ludwigs-Universität Freiburg, Germany

These four partners are research leaders in the neuroinformatics field, but they have complementary strengths. Each PhD candidate will pursue an interdisciplinary research project leading to a joint or a double PhD degree from two universities. The mobility periods, as well as the courses a student will follow, are planned based on which constellations of partners are involved. During the whole PhD period, which is a maximum of four years, the student will have visited all partners during an annual workshop in which all students and most of the supervisors participate. During the PhD period each student has one main supervisor from each of the two universities that grant the PhD degree. In addition to providing for the training within the field of neuroinformatics, all students are also offered training in secondary skills. The instruction language within the programme is English, and English scientific writing courses are offered, as are courses in the local languages in the different countries.

**Course website:** [www.kth.se/EuroSPIN](http://www.kth.se/EuroSPIN)

**Partners:**

KTH ROYAL INSTITUTE OF TECHNOLOGY, Sweden (Co-ordinating institution)

ALBERT-LUDWIG UNIVERSITY OF FREIBURG, Germany

UNIVERSITY OF EDINBURGH, United Kingdom

NATIONAL CENTRE FOR BIOLOGICAL SCIENCES, TATA INSTITUTE OF FUNDAMENTAL RESEARCH, India

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