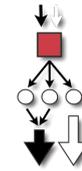




Technical University  
of Denmark

CENTER FOR  
BIOLOGICAL  
SEQUENCE  
ANALYSIS  
CBS



Cellular  
Signal  
Integration  
Group

## Senior Researcher in Bioinformatics & Computational Biology

The Cellular Signal Integration Group (C-SIG) is a network biology research group located at the Center for Biological Sequence Analysis (CBS) at the Technical University of Denmark (DTU). The center was formed in 1993 to conduct basic research in the fields of bioinformatics and subsequently systems biology and is divided into twelve specialist research groups. CBS represents one of the largest computational biology centers in academia in Europe and has a highly multi-disciplinary profile (biologists, biochemists, MDs, physicists, statisticians, and computer scientists) with a ratio of 2:1 of bio-to-nonbio backgrounds. In C-SIG, we explore biological systems by developing and deploying algorithms aimed to predict cell behavior with accuracy similar to that of weather or aircraft models. Our focus is on studying cellular signal processing and decision-making.

### Job description

A Senior Researcher position is available in Dr Rune Linding's Cellular Signal Integration Group (C-SIG, <http://www.lindinglab.org>) at CBS. Dr Linding is a world-leading network and systems biologist whose laboratory is interested in the mechanisms by which cells use signaling networks to respond to changes in their environment. We are seeking highly motivated, bright researchers and our lab is a dynamic, highly productive and stimulating environment, where we provide world-class multi-disciplinary training. In this position, a successful applicant will work in a fast-paced dynamic environment developing and deploying algorithms to address critical questions related to cellular processes and disease. We are seeking an experienced and motivated computational biologist and research associate to support research projects within the lab.

The goal of the job is to advance research into biological systems in order to develop new understanding and therapies of complex human diseases like cancer. The work will involve bioinformatics, computational, statistical and machine learning-based analyses, software engineering, development and maintenance of the scientific algorithms and applications developed within the lab.

The post-holder should evaluate and analyze data of heterogeneous types and apply computational biology and bioinformatics (including statistics, machine learning and sequence analysis) to reach a deeper understanding of data at hand.

The post-holder will support the wide range of demanding computational biology projects within the Rune Linding Research Group. Pre-eminence in bioinformatics, software development, machine learning and statistical (e.g. Bayesian inference) data analysis and mining is increasingly critical to maintaining the scientific and technological leadership of DTU. The position reports to Dr Rune Linding and will assist him in strategic planning, grant writing and day-to-day running of the computational branch of the lab.

The work will involve modeling of large-scale/systems-biology data sets using approaches such as Bayesian model averaging techniques over Bayesian Networks via Markov chain Monte Carlo simulations or Artificial Neural Networks, Principal Component Analysis, Orthogonal Partial Least Square Regression or related approaches.

The work will involve development and deployment of computational and bioinformatics research applications and databases in collaboration with other lab systems members. Participation in computational projects and software development and optimization of code will be important (in languages such as C, C++, R, Python, JAVA and Fortran).

The work will also involve setting up or developing bioinformatics analysis tools and databases within DTU. The post-holder will also be responsible for training students and postdocs in bioinformatics and

computational biology as well as data analysis, statistics and machine learning and in software interface development of high-throughput proteomics, robotics and imaging platforms/instruments.

### **Qualifications**

The successful applicant will

- Hold a PhD in bioinformatics, computer science, biology, physics, mathematics, statistics or a closely related field. Knowledge of biology and bioinformatics and working experience in a life-science research environment is essential
- Have obtained academic qualifications equivalent to those expected for Researchers or Postdocs
- Possess strong skills in bioinformatics, sequence analysis, machine learning and statistical algorithms and data analysis
- Be able to engineer and develop software applications as stand-alone/pipeline or web-application of enterprise size and quality
- Have strong communication and teamwork skills in addition to the ability to work individually and supervise others
- Be able to provide data analysis and statistical support for the lab and for high-throughput pipelines
- Be capable of interacting with both biologists and developers to ensure that requirements are known and that deadlines are met
- Be able to develop algorithms and perform data processing and statistical analysis for Mass-spec, RNAi and imaging projects
- Be able to develop measurement correction algorithms and statistical data analysis for SILAC based Mass Spectrometry data
- Function as research associate to Dr Linding

### **Assessment**

In the assessment of the candidates, consideration will be given to:

- Scientific production and research potential at international level.
- Innovative skills and the ability to generate new ideas
- Ability to communicate at all levels such as the provision of scientific advice to public sector authorities
- Ability to promote and utilize research results.
- An all-round experience basis, preferably including international experience
- Ability to contribute to development of the department's internal and external cooperation

### **DTU offers**

DTU offers an interesting and challenging job in an international environment focusing on education, research, public-sector consultancy and innovation, which contribute to enhancing the economy and improving social welfare. We strive for academic excellence, collegial respect and freedom tempered by responsibility. DTU is a leading technical university in northern Europe and benchmarks with the best universities in the world. We will offer an attractive salary and the opportunity to take part in a frontier cancer combating research program. Foreign nationals will be able to enter Denmark on a very low tax rate.

### **Salary and terms of employment**

The appointment will be based on the collective agreement with the Confederation of Professional Associations. The allowance will be agreed with the relevant union.

The period of employment is 4 years with the possibility of extension.

### **Further information**

Further information may be obtained from Dr Rune Linding, tel: +45 2365 1941 or [linding@cbs.dtu.dk](mailto:linding@cbs.dtu.dk).

**Do NOT send applications to this e-mail address, but use the electronic submission system - see below!**

You can read more about the Center for Biological Sequence Analysis on <http://www.cbs.dtu.dk> and about Rune Linding's Research Group at <http://www.lindinglab.org>.

### **Application**

We must have your online application by **12 September 2011**. Apply for the position at [www.dtu.dk/career](http://www.dtu.dk/career) - To apply, please open the link "apply for this job online" and fill in the application form and attach your application, CV and diploma. The material that should be given consideration in the assessment must be attached.

Applications should be submitted in English.

Applications and enclosures received after the deadline will not be considered.

All interested candidates irrespective of age, gender, race, disability, religion or ethnic background are encouraged to apply.