



The University of Bergen (UiB) is an internationally recognised research university with more than 14,000 students and close to 3,500 employees at six faculties. The university is located in the heart of Bergen. Our main contribution to society is excellent basic research and education across a wide range of disciplines.

## PhD position in Computational Biology

There is a vacancy for a PhD position in Computational Biology at the [Department of Informatics](#). The position is for a fixed-term period of 3 years with the possibility of a 4<sup>th</sup> year. A PhD degree in computational biology is highly requested by corporate organizations and academia.

### About the project/work tasks

If a trait is inherited (runs in families), the genome must contain traces of it, that is, there will be genetic variants that are more common among those with the trait than those without it. Thousands of such variants have been discovered for hundreds of traits and diseases in human, raising two fundamental questions: **which** variants are truly causal for a trait and **how** does genetic variation lead to trait variation? The answer to both questions is hidden in the gene networks that map the cascading effects of genetic variants on epigenetic modifications and downstream gene expression changes. However, learning the structure of these networks from modern genome-wide data remains a deeply challenging task.

The aim of this project is to develop novel machine learning methods for the inference of causal gene networks from large-scale genetic association studies and gene perturbation and time course experiments, to identify trait and disease-causing molecular mechanisms and to understand how they differ among individuals.

For more information about the research group, [see here](#).

### Qualifications and personal qualities

- Applicants must hold a master's degree or the equivalent in Bioinformatics, Informatics, Physics, Mathematics or related field, or must have submitted his/her master's thesis for assessment prior to the application deadline. It is a condition of employment that the master's degree has been awarded.
- Experience of programming in at least one programming language (C, C++, Java) is a requirement.
- Experience of working in a numerical computing environment (Python, R, Matlab) is a requirement.
- Experience with the analysis of genome-wide data (genome, epigenome or transcriptome sequencing or microarray data) is an advantage.
- Experience with the application of machine learning algorithms to large-scale data is an advantage.
- Applicants must be able to work independently and in a structured manner, and demonstrate good collaborative skills.
- Applicants must be proficient in both written and oral English.
- Personal and relational qualities will be emphasized. Ambitions and potential will also count when evaluating the candidates.

### About the PhD position

The fellowship will be for a period of 3 years, with the possibility for a 4th year, consisting of 25 % work related to teaching, recruitment or dissemination, distributed across the employment period. The 4th year is contingent on the qualifications of the candidate and the teaching needs of the department, and will be decided upon appointment.

The employment period may be reduced if you have previously been employed in a qualifying post (e.g. research fellow, research assistant).

### About the research training

As a PhD candidate, you must participate in an approved educational programme for a PhD degree within a period of 3 years. A final plan for the implementation of the research training must be approved by the faculty within three months after you have commenced in the position. It is a condition that you satisfy [the enrolment requirements for the PhD programme](#) at the University of Bergen.

### We can offer:

- a good and professionally challenging working environment
- salary at pay grade 50 (Code 1017/Pay range 20, alternative 8) in the state salary scale. This constitutes a gross annual salary of NOK 436 900. Further promotions are made according to length of service in the position.
- enrolment in the Norwegian Public Service Pension Fund
- a position in an inclusive workplace (IA enterprise)
- good welfare benefits

### Your application must include:

- a brief account of the applicant's research interests and motivation for applying for the position
- the names and contact information for two referees. One of these should be the main advisor for the master's thesis or equivalent thesis
- CV
- transcripts and diplomas showing completion of the bachelor's and master's degrees, or official confirmation that the master's thesis has been submitted

- relevant certificates/references
- a list of any works of a scientific nature (publication list)
- any publications in your name

The application and appendices with certified translations into English or a Scandinavian language must be uploaded at Jobbnorge.

#### **General information**

For further details about the position, please contact [Professor Tom Michoel](#), Computational Biology Unit, Department of Informatics, Email: [Tom.Michoel@uib.no](mailto:Tom.Michoel@uib.no).

The state labour force shall reflect the diversity of Norwegian society to the greatest extent possible. Age and gender balance among employees is therefore a goal. It is also a goal to recruit people with immigrant backgrounds. People with immigrant backgrounds and people with disabilities are encouraged to apply for the position. We encourage women to apply. If multiple applicants have approximately equivalent qualifications, the rules pertaining to moderate gender quotas shall apply.

The University of Bergen applies the principle of public access to information when recruiting staff for academic positions. Information about applicants may be made public even if the applicant has asked not to be named on the list of persons who have applied. The applicant must be notified if the request to be omitted is not met.

Jobbnorge ID: 154134, Deadline: Closed