



PhD Research Fellow in Mechanics

Job description

Position as a PhD Research Fellow in mechanics available at the Department of Mathematics. The fellowship period is 3 years. Starting date no later than 01.01.2020.

Job description:

We are searching for a highly motivated candidate with a strong background in computational science (mathematics/physics) and a passion to work on the intersection between scientific computing and machine learning.

The PhD position is part of the SciML- Scientific Computing & Machine Learning project, a collaborative initiative between the Department of Mathematics, UiO and Simula Research Laboratory. The initiative aims to bridge numerical algorithms developed for solving partial differential equations with recent techniques in machine learning, in order to both increase the flexibility of traditional numerical algorithms (such as finite element methods and multigrid techniques) and also to increase robustness for neural networks. Applications in focus are for example recent medical findings relating development of Alzheimer's disease with the fluid dynamical clearance of metabolic waste during sleep.

Qualification requirements

The Faculty of Mathematics and Natural Sciences has a strategic ambition of being a leading research faculty. Candidates for these fellowships will be selected in accordance with this, and expected to be in the upper segment of their class with respect to academic credentials.

- Master's degree or equivalent
- Foreign completed degree (M.Sc.-level) corresponding to a minimum of four years in the Norwegian educational system
- Fluent oral and written communication skills in English <http://www.mn.uio.no/english/research/phd/application/application.html>
- The candidate must have a strong background in either using numerical methods for partial differential equations or neural networks

In addition, the following qualifications are beneficial:

- The candidate should have good programming skills (Python/C/C++)
- The candidate should be able to work independently and structured, while at the same time engage in close collaboration with a multidisciplinary team
- In assessing the applications, special emphasis will be placed on the relevance of the candidate's background

Grade requirements:

The norm is as follows:

- the average grade point for courses included in the Bachelor's degree must be C or better in the Norwegian educational system
- the average grade point for courses included in the Master's degree must be B or better in the Norwegian educational system
- the Master's thesis must have grade B or better in the Norwegian educational system

The purpose of the fellowship is research training leading to the successful completion of a PhD degree.

The fellowship requires admission to the PhD programme at the Faculty of Mathematics and Natural Sciences. The application to the PhD programme must be submitted to the department no later than two months after taking up the position. For more information see:

<http://www.uio.no/english/research/phd/>

<http://www.mn.uio.no/english/research/phd/>

We offer

- salary NOK 479 900 - 523 200 per annum depending on qualifications in a position as PhD Research fellow, (position code 1017)
- attractive welfare benefits and a generous pension agreement,
- vibrant international academic environment
- Oslo's family-friendly surroundings with their rich opportunities for culture and outdoor activities

How to apply

The application must include

- cover letter - statement of motivation and research interests
- CV (summarizing education, positions and academic work)
- copies of educational certificates (academic transcripts only)
- documentation of english proficiency

- list of publications and academic work that the applicant wishes to be considered by the evaluation committee
- list of reference persons: 2-3 references (name, relation to candidate, e-mail and phone number)

The application with attachments must be delivered in our electronic recruiting system, please follow the link "apply for this job". Foreign applicants are advised to attach an explanation of their University's grading system. Please note that **all** documents should be in English (or a Scandinavian language).

Applicants may be called in for an interview.

Formal regulations

Please see the [guidelines and regulations](#) for appointments to Research Fellowships at the University of Oslo.

No one can be appointed for more than one PhD Research Fellowship period at the University of Oslo.

According to the Norwegian Freedom of Information Act (Offentleglova) information about the applicant may be included in the public applicant list, also in cases where the applicant has requested non-disclosure.

The appointment may be shortened/given a more limited scope within the framework of the applicable guidelines on account of any previous employment in academic positions.

The University of Oslo has an [agreement](#) for all employees, aiming to secure rights to research results etc.

Contact information

For further information please contact: Professor Kent-Andre Mardal, phone: +47 228 55828, e-mail: kent-and@math.uio.no.

For questions regarding the recruitment system please contact: HR officer Nina Holtan, phone +47 228 54424, e-mail: nina.holtan@mn.uio.no.

About the University of Oslo

The University of Oslo is Norway's oldest and highest rated institution of research and education with 28 000 students and 7000 employees. Its broad range of academic disciplines and internationally esteemed research communities make UiO an important contributor to society.

Department of Mathematics is part of the Faculty of Mathematics and Natural Sciences. The Department is engaged in research covering a wide spectrum of subjects within mathematics, mechanics and statistics.

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