PhD Research Fellow on Learning and optimization in Vehicular Networks

Job description

The Department of Informatics, University of Oslo, is looking for a PhD student to work on communication and computation aspects of vehicular networks for enhancing traffic safety through cooperative communication between vehicles and the infrastructure.

The position is fully funded by the Research Council of Norway for 3 years under the Transport 2025 project Crisp. In addition to University of Oslo, the project consortium includes Volvo cars, Asta Zero, and Tracsense as industrial partners, and The Institute for Transport Economics, Oslo, Norway, Østfold University College, Halden, Norway, and Western Norway University of Applied Sciences, Norway. The goal of the project is to enhance the current electronic safety and stability control systems in vehicles by deriving and communicating a critical speed to vehicles in motion in challenging terrain and/or in adverse weather conditions.

The PhD student’s main task will involve precisely estimating the critical speed limit for the vehicles approaching a possibly dangerous situation. This will include machine learning and computation optimization techniques. In particular, the student is expected to analyze data from real traffic systems, and design machine learning algorithms to estimate the critical speed. Further, the student may explore edge computing and communications in an edge network to achieve low latency response.

The starting date for the position is negotiable, but we prefer commencing employment not later than November 2020.

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

Qualification requirements

The Faculty of Mathematics and Natural Sciences has a strategic ambition to be among Europe’s leading communities for research, education and innovation. 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 in Electrical Engineering, Communication Engineering, Computer Science or other relevant disciplines
- Foreign completed degree (M.Sc.-level) corresponding to a minimum of four years in the Norwegian educational system
- Must have documented significant Knowledge/Research Background on Data Analytics and Machine Learning
- Must have documented some Knowledge on wireless communication/vehicular communication networks
- Must have very good programming competence in Python, Java, C/C++ or equivalent
- The candidate should also possess good interpersonal and communication skills and show high level of motivation to work as part of an international team.

The following will be advantageous:

- Excellent Presentation Skills
- Experience working in an International team

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 the grade B or better in the Norwegian educational system
- Fluent oral and written communication skills in English.
- English requirements for applicants from outside of EU/EEA countries

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
How to apply

The application must include:

- A cover letter (one page) explaining the candidate’s background, qualifications, motivation for the position, and how/why the candidate is qualified for the position;
- Curriculum vitae (summarizing education, positions and academic or industrial work experience, scientific publications);
- Academic transcripts;
- A copy of Master thesis
- Documentation of English Proficiency
- Contact information (Name, relation to candidate, email and telephone number) of two-three references, including the Master supervisor(s).

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).

When evaluating the application, emphasis will be given to the cover letter and the applicant’s academic and personal prerequisites to carry out the project.

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.

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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 University of Oslo has an agreement for all employees, aiming to secure rights to research results etc.

The University of Oslo aims to achieve a balanced gender composition in the workforce and to recruit people with ethnic minority backgrounds.

Contact information

Associate Professor Sabita Maharjan: sabita@ifi.uio.no

For questions regarding the recruitment system, please contact HR Adviser Torunn Standal Guttormsen, phone:+47 22854272, e-mail:t.s.guttormsen@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.

The Department of Informatics (IFI) is one of nine departments belonging to the Faculty of Mathematics and Natural Sciences. IFI is Norway’s largest university department for general education and research in Computer Science and related topics.

The Department has more than 1800 students on bachelor level, 600 master students, and over 240 PhDs and postdocs. The overall staff of the Department is close to 370 employees, about 280 of these in full time positions. The full time tenured academic staff is 75, mostly Full/Associate Professors.

Jobbnorge-ID: 190033, Søknadsfrist: 8. august 2020