UNIVERSITETET I OSLO

Jobbnorge ID: 167105
Deadline: 5/8/2019
Website: http://www.uio.no/
Scope: Fulltime
Duration: Fixed Term

Postdoctoral Research Fellow in blockchain technologies

Job description

One postdoctoral researcher Fellowships in blockchain technologies are available at the Department of Informatics at the University of Oslo. The position is in the context of the newly funded project called SmartMed: Secure and accountable sharing of medical records using smart contracts and blockchain.

The fellowship period is for 34 months (that is, two years and 10 months). In addition to the main research activities, the position carries the following responsibilities:

- Coordination of collaboration between all national and international partners. Even though the position is at the University of Oslo, part of the time is expected to be spent at the Cancer Registry of Norway while working on the same research agenda.
- Facilitation of cooperation between the PhD students and scientific programmer employed in the project.
- Participation in the dissemination of results.

There is a potential for the research to be conducted in collaboration with Cornell University, which is one of leading research centers in the world in the area of blockchain.

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

More about the position

Increasing amounts of health data are recorded in health registries, with the strategic initiatives of data sharing and fusion across different registries in Norway. This forms an excellent opportunity for world-class medical research as few countries have such a high-quality infrastructure. However, it also constitutes a very high privacy risk should a security breach occur.

Publicized incidents of leaked medical records pose a major challenge for the digital trust in eHealth where storing, accessing and exchanging sensitive patient-related data must comply with several regulations, while remaining accessible to authorized health practitioners. Governmental legislations regarding data privacy, such as the EU's GDPR, present an additional source of concern for healthcare registries which are now faced with severe legal and financial consequences in case data confidentiality is breached.

Our principal approach is to facilitate solutions for health registries by using Smart Contracts and the emerging Blockchain Paradigm. From the data safety, authenticity, and nonrepudiation standpoint, blockchain is a perfect fit for sharing medical records since it provides an easily accessible, immutable, and transparent history of all contract-related data, adequate for building applications with trust and accountability. Use of smart contracts brings a number of additional advantages for sharing medical data by healthcare registries: consent management, fine-grain privacy control, transparency, and reduced bureaucracy and expenses.

hereSmartMed is proposed in cooperation with the Cancer Registry of Norway (CRN), which will validate technological advances. CRN presently contains health information on over 1,4 million cancer patients. Managing and using the data for medical research in a secure way as to minimize any privacy concerns is paramount. Improving privacy control and transparency will bolster public's trust in the use of CRN data for vital research on preventive medicine.

We are seeking a postdoctoral researcher who is interested in designing, developing, and evaluating techniques related to the above.

Additional information can be found here.

The main purpose of a postdoctoral fellowship is to provide the candidates with enhanced skills to pursue a scientific top position within or beyond academia. To promote a strategic career path, all postdoctoral research fellows are required to submit a professional development plan no later than one month after commencement of the postdoctoral period.

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 are expected to be in the upper segment of their class with respect to academic credentials.

- Applicants must hold a degree equivalent to a Norwegian doctoral degree in Computer Science, with excellent results.The applicant is required to document that the degree corresponds to the profile for the post. Doctoral thesis must have been submitted for evaluation by the closing date. The thesis must have been approved and defended before appointment.
- The evaluation considers many aspects of excellence, as well as the personal drive and organizational skills.
- It is important for the position to have strong background in distributed computing. The ideal candidate will have expertise in blockchain.
- Knowledge of Norwegian is not a prerequisite for application. English is our working language for research.

We offer

- A strong research environment. Our students have won best paper and best demo awards at several conferences. Our alumni are employed by IBM Research, Microsoft, Spotify, and highly reputable academic institutions in Europe.
- The group of Networks and Distributed Systems offers a work environment that is well equipped with the newest hard- and software technology. The research group has tight bonds with Simula Research Laboratory. Furthermore, we have well-established links to national and international research institutions. We conduct collaborative research projects that are funded by Norwegian research funds, and the European Community.
- A strong international network
- Highly relevant for the prioritized initiatives at the department such as the Strategic Research Initiative for Concurrent Security and Robustness of Networked Systems (Conserns)
- salary NOK 515 200 - 597 400 per annum depending on qualifications in position as Postdoctoral Research Fellow (position code 1352)
- a professionally stimulating working environment
- vibrant international academic environment
- postdoctoral development programmes
- attractive welfare benefits and a generous pension agreement, in addition to Oslo's family-friendly environment with its 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 - scientific publications)
- Copies of educational certificates, transcript of records and letters of recommendation
- List of publications and academic work that the applicant wishes to be considered by the evaluation committee
- Names and contact details of 2-3 references (name, relation to candidate, e-mail and telephone number)

The application with attachments must be delivered in our electronic recruiting system. 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 for an interview

Formal regulations

Please see the guidelines and regulations for appointments to Postdoctoral fellowships at the University of Oslo.

According to the Norwegian Freedom and 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

Professor Roman Vitenberg, e-mail: romanvi@ifi.uio.no

For technical 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 1400 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 scientific staff is 75, mostly Full/Associate Professors.

Additional information

Place of service:

Gaustadalléen 23 B 0373 Oslo (Oslo Municipality)