



UiO : Universitetet i Oslo

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Standardtekst – fakta om UiO

Standardintro – fakta om RITMO

Doctoral Research Fellowship in Interactive multi-agent music systems

Job description

A Doctoral Research Fellowship (SKO 1017) in Interactive multi-agent music systems is available at [RITMO Centre for Interdisciplinary Studies in Rhythm, Time and Motion](#) at the University of Oslo.

RITMO is a Centre of Excellence funded by the Research Council of Norway. This interdisciplinary centre focuses on rhythm as a structuring mechanism for the temporal dimensions of human life. Methods from musicology, psychology, neuroscience, and informatics are combined to study rhythm as a fundamental property that shapes and underpins human cognition, behaviour and cultural expressions.

All RITMO researchers are co-located and work in a unique interdisciplinary constellation, with world-leading competence in musicology, psychology and informatics. It is expected that all members of the centre contribute to the general activities and collaborations within RITMO. The researchers have access to state-of-the-art facilities in sound/video recording, motion capture, eye tracking, physiological measurements, various types of brain imaging (EEG, fMRI), and rapid prototyping and robotics laboratories.

More about the position

In the [Interaction and Robotics cluster](#) at RITMO we are interested in how humans and machines interact. Recently, we have developed two multi-agent systems, the [Dr. Squiggles musical robots](#), and the [Self-playing guitars](#), to work on interactions between groups of humans and machines. We are now looking for a PhD fellow to continue developing and testing our existing systems or to develop a new multi-agent system. The PhD fellow will be affiliated with the [Interaction and Robotics cluster](#).

The focus of the proposed project should be on musical interactions based on rhythmic processes. This could be based on rhythm synchronization, adaptation, entrainment, and prediction. We are particularly interested in projects that employ bio-inspired, or psychology-inspired artificial intelligence methods. The developed platforms could be used in real-life experiments, public installations, and performances. All applications must include a [research outline](#).

The appointment is for a period of three years, starting 1 February 2022. There might be a possibility to extend the appointment to 4 years depending on the qualifications of the recruited candidate, the Department of informatic's need for teaching, or the centre's need for assistance.

Qualifications/requirements

- A master's degree or equivalent in music technology, computer science, robotics, or other relevant field is required. The applicant is required to document that the degree corresponds to the profile for the post. The degree must have been obtained by the time of application
- Programming skills
- Experience with one or more of the following: artificial intelligence, electronics, or prototyping, sound and music computing, new interfaces for musical expression, robot experimentation, development and prototyping of robotic platforms, swarm robotics, mathematical modelling, complex systems, and multi-agent systems
- Personal suitability and motivation for the position
- [Excellent skills in written and oral English](#)

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 and optionally a Scandinavian language.
- [English requirements for applicants from outside of EU/ EEA countries and exemptions from the 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.

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:

[Doctoral degree and PhD at the University of Oslo](#)

[Doctoral degree: PhD in Mathematics and Natural Sciences](#)

In assessing the applications, special emphasis will be placed on:

- The applicant's scientific merit, as well as the quality of the [research outline](#) and its relevance to the research objectives of RITMO
- The applicant's estimated academic and personal ability to complete the project within the time frame
- The applicant's ability to complete research training
- Very good collaboration skills and an ability to join interdisciplinary academic communities

Applicants who have recently graduated with excellent results may be given preference.

We offer

- Salary level 482 200-526 000 NOK, depending on qualifications
- A professionally stimulating working environment
- [Attractive welfare benefits](#)
- Membership in the [Norwegian Public Service Pension Fund](#)

How to apply

Applications must include:

- Application letter describing the applicant's qualifications and motivation for the position
- Curriculum Vitae (complete list of education, positions, teaching experience, administrative experience and other qualifying activities, including a complete list of publications with links to full version of published papers)
- Research outline, including relevant research questions and theoretical and methodological approaches (approximately 2-3 pages, see [template for research outline](#))
- Transcript of records of your Bachelor's and Master's degree. Applicants with education from a foreign university are advised to attach an explanation of their university's grading system
- [Documentation of English proficiency](#)
- 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, jobbnorge.no. Please note that all documents must be in English and preferably in pdf format.

Educational certificates, master theses and the like are not to be submitted with the application, but applicants may be asked to submit such information or works later.

The short-listed candidates will be invited to 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 [Acquisition of Rights Agreement](#) for the purpose of securing rights to intellectual property created by its employees, including research results.

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

Deadline: 1 September 2021

Contact information

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