Finansiering: UiO:Livsvitenskap konvergensemiljø-ordning.
Instituttilknytning: IMV

Standardtekst – fakta om UiO

Standardintro – fakta om RITMO

Postdoctoral fellowship in organoid motion analysis

A three-year postdoctoral research fellowship (SKO 1352) to stimulate, track, and analyze motion, forces, and shape changes in developing organoids is available at RITMO Centre for Interdisciplinary Studies in Rhythm, Time and Motion in the project Integrated technologies for tracking organoid morphogenesis (ITOM) funded by the UiO:Life Science initiative.

About the project

The position is part of the UiO: Life Science convergence environment "Integrated technologies for tracking organoid morphogenesis" (ITOM). Embryonic stem cell (ESC) technology has allowed the development of organoids that show features of organ induction, but lack further maturation and show large variations. The field, therefore, requires high-content tracking tools and algorithms to guide organoid development.

The project will use advanced correlative imaging technologies and data analysis to guide the differentiation of ESC-derived organoids. The ITOM project unites three different Centres of Excellence in the Oslo area: Hybrid Technology Hub (HTH), Njord Centre for Studies of the Physics of the Earth, and RITMO. As such, the candidate will be part of a large and closely interacting interdisciplinary team of basic scientists, developmental biologists, chemists, physicists, computational scientists, and rhythm researchers. The postdoctoral fellow will be employed at RITMO and will use laboratory facilities at Njord and HTH.

Job description

The recruited postdoctoral fellow will explore and develop novel techniques to study cellular organisation, forces, motion, and shape changes in developing organoids. This will be done using microfluidics to rhythmically stimulate the organoids and track their response using advanced microscopic imaging tools. It will be particularly relevant to explore image analysis methods that investigate the spatiotemporality and rhythmicity of cellular development. The aim is to combine rhythm analysis and machine learning models developed at RITMO with physical models developed by another postdoctoral fellow to be employed in the ITOM project.

The candidate will be supervised by Professor Alexander Refsum Jensenius (RITMO and Department of Musicology) and Dag Kristian Dysthe (Njord Centre and Department of Physics) and work closely with three other early career researchers recruited to the project and three postdoctoral fellows in the gastruloid team at HTH.

The applicant should upload a research statement giving the motivation and research interests in the project.

The appointment is for a period of three years, starting 1 September 2022. There is a 10% component of the position which is devoted to teaching and administrative duties. There might be a possibility to extend to four years depending on the qualifications of the recruited candidate, the departments' needs for teaching, and the centre's need for assistance.

Qualifications/requirements

- A PhD or equivalent in physics, applied mathematics, computer science, or another relevant field. The applicant is required to document that the degree corresponds to the profile for the post.
- Strong programming skills (preferably in Python and/or Matlab, additional languages is positive)
- Experience with one or more of the following: image analysis, computer vision, rhythm analysis, statistics, machine learning, experimental work
- Interest in biophysics and biology
- Fluent oral and written communication skills in English
- Personal suitability and motivation for the position.

The doctoral dissertation must be submitted for evaluation by the application deadline. The appointment is dependent on the public defence of the doctoral thesis being approved.

No one can be appointed for more than one postdoctoral period at the University of Oslo.

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

- The applicant's academic qualifications.
- The research statement.
- The applicant's estimated academic and personal ability to carry out the project within the allotted time frame and contribute to the research objectives of ITOM and RITMO.
- Collaboration skills and the ability to successfully join in academic teamwork within and across disciplines.

We offer

- Salary level 534 400-615 800 NOK per annum, depending on qualifications
- A professionally stimulating working environment
- Attractive welfare benefits
- Membership in the Norwegian Public Service Pension Fund

How to apply

The application must include:

- Cover letter including a research statement giving the motivation and research interests in the project
- CV (summarizing education, positions and academic work)
- Copies of educational certificates (academic transcripts only)
- A complete list of publications and academic works
- List of at least two reference persons (name, relation to candidate, e-mail and phone number)
- Letters of recommendation (optional)

Please note that all documents must be in English or a Scandinavian language.

The application with attachments must be delivered in our electronic recruiting system, jobbnorge.no.

Short-listed candidates will be invited for an interview.

Formal regulations

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

No one can be appointed for more than one Postdoctoral Fellow period at the University of Oslo.

Following the Freedom of Information Act (Offentleglova) § 25, Chapter 2, demographic information about the applicant may be used in the public list of applicants even if the applicant opts out from the entry in the public application list.

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

Inclusion and diversity are a strength. The University of Oslo has a personnel policy objective of achieving a balanced gender composition. We also want to have employees with diverse expertise, combinations of subjects, life experience and perspectives. We will make adjustments for employees who require this.

If there are qualified applicants with special needs, gaps in their CVs or immigrant backgrounds, we will invite at least one applicant in each of these groups to an interview.