Postdoc position in deep learning applied to magnetic resonance imaging/physics

Department of Radiology and Nuclear Medicine, St. Olav’s University Hospital, Trondheim, Norway

About the position

One postdoc position is available at the Department of Radiology and Nuclear Medicine at St. Olav’s University Hospital in Trondheim, Norway, to start in the autumn of 2021. The position is full time (100%), and has a fixed term of two years. The postdoc will join one other postdoc and one PhD student working on the project “Deep learning cancer diagnostics from diffusion-weighted magnetic resonance imaging”, funded by the Research Council of Norway. The project is led by Dr. Peter T. While, physicist and researcher at the Department of Radiology and Nuclear Medicine at St. Olav’s University Hospital, and adjunct associate professor at the Department of Circulation and Medical Imaging at the Norwegian University of Science and Technology (NTNU).

This project will open up new, non-invasive means for assessing cancer. Presently, cancer diagnosis and treatment monitoring using an MRI scanner require the injection of a contrast agent, whereas contrast-free alternatives are too inefficient and imprecise for clinical use. The approaches developed during this project will combine highly efficient, novel imaging strategies with artificial intelligence, to permit fast, contrast-free and robust cancer diagnostics.

Main duties and responsibilities

- Perform research towards the fulfilment of the project objectives
- Disseminate results through the publication of scientific papers and the delivery of seminars and conference presentations
- Keep abreast with current developments in the research field through regular literature surveys
- Initiate and/or participate in new research projects in collaboration with the research group
- Assist with the supervision of research fellows and/or students

Selection criteria

Eligibility requires the completion of a doctoral degree in physics, applied mathematics, computer science or a similar discipline, which is recognized as equivalent to a Norwegian doctoral degree. Applicants who expect to complete their doctoral degree by autumn 2021 may also apply.

Desired criteria:

- Strong background and experience in MR physics and image processing
- Strong background and experience in deep/machine learning
• Good computer programming skills in Matlab, Python or similar
• Excellent written and oral English language skills
• Good publication record relative to career stage

In the evaluation of which candidates are best qualified, emphasis will be placed on education, experience and personal suitability, in terms of the qualification requirements specified in the advertisement.

Personal characteristics

• Strong motivation for the position
• Takes initiative and excels in problem solving
• Professional independence
• Actively participates in teams
• Good communication skills
• Contributes to a supportive and friendly working environment

We offer

• Stimulating tasks of international relevance in a strong academic environment
• An open and inclusive work environment based on mutual respect and goodwill
• Favourable salary and pension scheme by international standards

Salary and conditions

Postdoctoral fellows are placed in code 1352, and are normally remunerated at gross from NOK 545 300 per annum before tax, depending on qualifications and seniority. From the salary, 2% is deducted as a contribution to the Norwegian Public Service Pension Fund.

It is a prerequisite that the employee can be present at and accessible to the institution on a daily basis. After the appointment, the employee must assume that there may be changes in the area of work.

It is a goal that the workforce of the institution reflects the diversity of the population. We therefore encourage anyone who is qualified to apply, regardless of age, gender, disability or cultural background.

Under Section 25 of the Freedom of Information Act, information about the applicant may be made public even if the applicant has requested not to have his or her name entered on the list of applicants.

About the application

The application and supporting documentation must be in either English or a Scandinavian language. The application should show clearly how the applicant’s skills and experience meet the criteria set out above.
The application must contain:

- The applicant’s CV, including contact information for at least 2 references
- Copies of academic diplomas and transcripts; applicants from universities outside of Norway are requested to send a diploma supplement (or a similar document) which describes in detail the study and grading system
- A complete list of publications and other scientific work; in cases where the applicant is not the primary author, a short summary outlining the applicant’s contribution must be attached in order to be considered
- Applicants from outside the Nordic countries where English is not the official language must provide official documentation of their English competence. Approved tests and results include: TOEFL iBT – 92 (writing 22); IELTS Academic – 6.5 (no section lower than 5.5); PTE Academic – 62; Cambridge CAE/CPE – grade A or B

Applications are encouraged to attach any additional documents they consider to be of relevance to the application. Applicants may optionally provide a brief research statement outlining a possible additional project that could be undertaken in collaboration with the research group during the employment period.

Applicants invited for interview must provide at least two reference letters, as well as certified copies of their transcripts.

Applications must be submitted electronically via the corresponding advertisement in Webcruiter: https://7483.webcruiter.no/Main2/Recruit/Public/4403552874?link_source_id=0

For further information about the position, please contact Dr. Peter T. While, email: Peter.Thomas.While@stolav.no, phone: +47 728 36627

Application deadline: 15.07.2021

General information

Norway provides all residents universal healthcare, free schooling, subsidized child-care and overall equality. Trondheim is the innovation capital of Norway, with a population of 200,000. It offers great opportunities for education (including international schools) and possibilities to enjoy nature, culture and family life, and has low crime rates and clean air quality. St. Olav’s University Hospital in Trondheim is one of Europe’s most modern hospital facilities. It is closely integrated with the Faculty of Medicine and Health Sciences at NTNU, where clinicians, researchers and students work side by side. The hospital has approximately 10,500 employees and a gross budget of NOK 10 billion. The Department of Radiology and Nuclear Medicine currently operates eight MRI scanners, including a hybrid PET-MRI (3T) scanner and PET cyclotron, and an ultra-high field 7T scanner.