

NTNU - knowledge for a better world

The Norwegian University of Science and Technology (NTNU) creates knowledge for a better world and solutions that can change everyday life.

**Faculty of Information Technology and Electrical Engineering
Department of Engineering Cybernetics (ITK)**

2 PhD research fellowship positions

Two PhD research fellowship positions at the Department of Engineering Cybernetics, NTNU, within the research project:

"David versus Goliath: single-channel EEG unravels its power through adaptive signal analysis - FlexEEG"

2 PhD research fellowship positions are vacant within the research project **"David versus Goliath: single-channel EEG unravels its power through adaptive signal analysis - FlexEEG"**, funded by NTNU Enabling Technologies. The PhD scholars will work on challenging research problems in an active research team at the NTNU Department of Engineering Cybernetics, the NTNU Department of Electronics Systems, the NTNU Dept. of Psychology, Developmental Neuroscience Laboratory, and the NTNU Dept. of Circulation and Medical Imaging, Faculty of Medicine, and with an extensive international cooperation.

The main research objective is to develop an "in-house" Wireless Dry Electrode based EEG System and to implement it for Non-invasive Functional Human Brain Mapping.

Relevant competences are:

- Advanced electronics and signal processing
- Adaptive signal analysis
- Forward and inverse problems in brain functional imaging with EEG
- Biosensor applications, bio-engineering, physics of materials for microelectronics
- Biomedical microelectromechanical systems
- Application specific integrated circuit for readout and digital transformation of the EEG sensor signal including wireless communication.
- Optimization problems

The advisor/co-advisor team consists of

- Marta Molinas, Professor, Dept. Engineering Cybernetics, NTNU
- Lars Lundheim, Professor, Dept. of Electronics Systems, NTNU
- Trond Ytterdal, Professor, Dept. of Electronics Systems, NTNU
- Audrey van der Meer, Professor, Dept. of Psychology, Developmental Neuroscience Laboratory, NTNU
- Nils Kristian Skjærvold, Postdoctoral Researcher, Dept. of Circulation and Medical Imaging, Faculty of Medicine, NTNU

The PhD scholarships are offered for a period of 3 years.

Required backgrounds for the PhD-positions are MSc degrees in electronics/control engineering/biomedical engineering or similar. Solid scientific qualifications, relevant MSc research topics, relevant publications, motivation and personal qualities are important. Applicants must be qualified for PhD studies at NTNU, please see <http://www.ime.ntnu.no/forskning/phd> for information about PhD studies at NTNU.

Applications under the scheme of NTNU Integrated Master/PhD are encouraged and welcome.

It is a prerequisite that the PhD scholar applies for and is granted admission to the NTNU PhD studies as soon as possible after employment. NTNU's PhD-rules require a Master degree or equivalent with at least 5 years of studies and an average grade of A or B within a scale of A-E for passing grades (A best). Candidates from universities outside Norway are kindly requested to send a Diploma Supplement, transcripts or a similar document, which describes in detail the study and grade system and the rights for further studies associated with the obtained degree.

The position is placed in salary code 1017, which currently corresponds to a yearly gross income of NOK 436 500. From this 2 % will be deducted for mandatory membership in the National Pension Fund. The appointment will be made in accordance with current regulations with supplementary rules for research fellowship appointments in universities and polytechnics. Applicants must agree to participate in organized doctoral study programs within the period of the appointment.

Candidates will be required to enroll in a PhD program within the period of employment, and must sign a contract regulating the period of employment.

Contact person for both positions: Professor Marta Molinas, e-mail: marta.molinas@ntnu.no

Applicants from non-English-speaking countries outside Europe must document a TOEFL score of 600 or higher.

According to Norwegian policies, the government workforce should, as closely as possible, reflect the diversity of the population at large. It is therefore a goal of NTNU, as a government institution, to have a workforce which is balanced with respect to age and gender, and to recruit persons of immigrant background. NTNU also wishes to increase the number of women on its workforce, and women are specifically encouraged to apply.

NTNU can offer an informal and friendly workplace with dedicated colleagues, academic challenges and attractive schemes for home loans, insurance and pensions in the Norwegian Public Service Pension Fund.

The appointment is subject to the conditions in effect at any time for employees in the public sector, and assessments regarding the legislations regulating export control and knowledge transfer.

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.

The application must include information about education, exams and earlier experience. Certified copies of certificates and diplomas must be enclosed. Relevant scientific works should be submitted. Joint works will be taken into account. In cases where it is difficult to determine the applicant's contribution, a short note of explanation should be supplied.

Applications are to be submitted electronically through this page. Preferably, we want the attachments in one file.

Applications should be marked: IE 112-2018.

Application deadline: July 12th 2018.

Jobbnorge-ID: 152803, Søknadsfrist: Søknadsfristen er gått ut