

Jobbnorge-ID: 155404

Søknadsfrist: Avsluttet

Nettside:

Omfang:

Varighet:

Post Doctor position on Development of Online Sensor Concepts for Energy Recovery from Waste (IE 148-2018)

The Faculty of Information Technology and Electrical Engineering (IE) at the Norwegian University of Science and Technology (NTNU) has a vacancy for a 2 year full-time position as a Post Doctor researcher at the Department of Electronic Systems (IES) (<http://www.ntnu.edu/ies>). The Post Doctor position is part of the "Waste-to-Energy 2030" project (WtE2030), a Knowledge-Building Project for Industry co-funded by the Research Council of Norway and industry and public partners. WtE2030 is a collaboration between three research partners, five industry partners, and one public partner. The primary objective is to strengthen the position of WtE in the Norwegian renewable energy future and the upcoming circular economy by improvement of energy, environmental & economic performance.

Information about the Department

Currently IES has approximately 165 full-time employees spread across 45 professors/associate professors, 70 PhD, 25 research/Post.Doc and 25 engineering/administration. IES has the principal responsibility for education and research in electronics at NTNU. IES encompasses research and education within the areas of photonics, electronic devices and materials, acoustics, radio systems, signal processing, circuit and systems design.

Project description

Waste-to-Energy (WtE) is an integral part of the Norwegian and European energy system. However, Municipal Solid Waste (MSW) is a challenging feedstock, mainly because of its physical and chemical heterogeneity. To improve performance (operation, emissions, energy, costs) in this complex environment, the project team is especially interested in the development of new sensors (also to measure "new" operational parameters) as well as advanced sensor networks/systems that seem like a promising path as it will provide additional information to the process control system. The goal of this project is to explore solutions especially adapted to a harsh, unstable environment that requires both accuracy, real-time and robustness. The solutions will have to rely on a multitude of sensor technologies, combined with robust sensor fusion algorithms and machine-learning techniques. The research areas include sensor development, sensor networks, and sensor fusion. Solutions developed in similar settings - bioenergy, pharmaceutical or food industries for example - may provide a good starting point.

Qualifications

The candidate is expected to be able to work independently, in collaboration with other researchers at NTNU and SINTEF Energy Research (<https://www.sintef.no/en/sintef-energy/>), as well as industry partners. The candidate should have a strong background in mathematics/statistics/sensors as well as a practical, hands-on approach and be ready to learn about WtE specificities. Good command in English language (spoken and written) is a prerequisite.

An eligible candidate should have submitted a PhD thesis for assessment by the application deadline.

Language requirements

Applicants, who do not master a Scandinavian language, must provide evidence of good written and spoken English language skills. The following tests can be used as such documentation: TOEFL, IELTS or Cambridge Certificate in Advanced English (CAE) or Cambridge Certificate of Proficiency in English (CPE). Minimum scores are: i) TOEFL: 600 (paper-based test), 92 (Internet-based test), ii) IELTS: 6.5, with no section lower than 5.5 (only Academic IELTS test accepted), iii) CAE/CPE: grade B or A.

Salary conditions

Depending on qualifications and academic background, postdoctoral fellows will be remunerated at a minimum of NOK 512 200 per year before tax. There will be a 2 % deduction to the Norwegian Public Service Pension Fund from gross wage. The appointment is subject to the conditions in effect at any time for employees in the public sector.

The application

The following documents need to be attached in the application:

- CV as PDF including a full list of publications with bibliographical references. Indicate the most important publications (max 10) relevant for the evaluation of the applicant's qualifications.
- A brief research statement (max 3 pages), describing the candidate's research interests and plans, and publication plan.
- Testimonials and certificates.
- Other documents which the applicant would find relevant.

Incomplete applications will not be taken into consideration.

General

Appointments are made in accordance with the regulations in force regarding terms of employment issued by the Ministry of Education and Research. The person who is appointed must comply with the conditions that apply at any time to employees in the public sector. In addition, a contract will be signed regarding the period of employment.

As far as possible, the State workforce should reflect the diversity of the population. Goals of our personnel policy therefore include a balanced distribution in terms of age and gender as well as recruitment of people of immigrant background. NTNU wants to increase the proportion of women in its scientific posts. Women are encouraged to apply.

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

The Faculty of Information Technology and Electrical Engineering wants to attract outstanding and creative candidates who can contribute to our ongoing research activities. We believe that diversity is important to achieve a good, inclusive working environment. We encourage all qualified candidates to apply, regardless of the 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.

For further information about the position, contact Professor Dag Roar Hjelme by e-mail: dag.hjelme@ntnu.no

Application deadline: September 10, 2018

Tilleggsinformasjon

Arbeidssted: