Tenure Track Assistant Professor or Associate Professor in Environmental Data Science

The Department of Environmental Science at Aarhus University aims to enhance and diversify our research and advisory programmes, with a focus on large environmental data trends, environmental pollutants, and chemometrics. We are therefore excited to invite applications for a faculty position at the level of Tenure-track Assistant Professor or Associate Professor, with the start date on 1 February 2025 or as soon as possible thereafter.

We are seeking a curious and open-minded researcher with a strong foundation in data science and machine learning, particularly in their application to environmental chemistry and environmental sciences. Aarhus University's Department of Environmental Science offers a dynamic and innovative research landscape, and we are expanding our efforts in digitalisation. Thus, we encourage applicants who meet the position's criteria, regardless of their specific research specialisation. Areas of particular interest include, but are not limited to:

- Chemometrics
- Non-target screening
- Machine learning in environmental chemistry
- Environmental metabolomics
- Early-warning systems
- Mass spectrometry imaging analysis and processing
- Advanced high-resolution mass spectrometric data treatment
- Data management of large monitoring schemes

At the Department of Environmental Science, we prioritise fostering a research environment of the highest excellence, allowing people from diverse backgrounds to thrive. The successful candidate will join a growing department with strong research sections in the areas of environmental chemistry, microbiology, and biotechnology; atmospheric chemistry and physics as well as environmental economics, geography, politics, and sociology. You will be based in the section of Environmental Chemistry and Toxicology, with opportunities to engage across other areas of the department.

Description of the position

The successful candidate will be expected to take a leading role in establishing an externally funded research programme within their area of expertise, provide research-based advisory to public authorities, and effectively disseminate research findings to the public. Additional responsibilities include contributing to advanced courses at MSc and PhD levels, as well as supporting continuing education initiatives offered by the department. The role will also involve research assessment tasks and research management, including the supervision and training of research fellows and other staff.

Our section provides science-based advisory to the Danish Ministry of Environment and other public authorities, and we take pride in working on issues that are of significant societal interest. The role may also include other departmental duties, such as participating in committees and public outreach initiatives. Engagement in university services and departmental community activities is an integral and valued aspect of all positions within the department.

Collaboration is key in this role, as you will be working within various teams across the department. Your ability to work well with others and contribute to a team environment will be a significant asset.

We place high value on fostering research, advisory, and teaching collaborations with the Danish industry and the public sector. We also emphasise the importance of interdisciplinary research, advisory and teaching, and we are actively involved in several cross-faculty research projects and educational programmes. As a successful applicant, you should have a strong interest in facilitating cross-disciplinary interactions within the department, across the university, and on an international level.

Qualifications requirements

Expertise in Applied Data Science
Applicants must have documented experience in applying prediction-focused data science methods and traditional statistical approaches to address real-world challenges. Applicants must provide examples of projects or research that showcase their skills in data manipulation, exploratory data analysis, visualisation, and the application of both supervised and unsupervised learning algorithms.

Foundational Knowledge
Applicants must possess a high level of proficiency in statistical analysis, predictive modelling, machine learning
algorithms, data mining techniques, and deep learning architectures. A strong understanding of the ethical considerations in AI and applied data science is essential. Additionally, applicants should have excellent programming skills and experience in developing of data science and visualisation tools.

Commitment to Mentorship and Education
Applicants must have a proven track record of engaging in mentoring and teaching activities related to
applied data science. Experience in designing and delivering coursework or workshops that connect theoretical concepts with practical applications will be highly regarded.

Qualifications needed at the Tenure-track Assistant Professor level

The ideal candidate will have a good trajectory of publications in high-level, international, peer-reviewed ISI journals and have secured personal research grants or a named part of major grants. Research plans and publication records should indicate a clear potential for attracting external funding. The candidate must have an academic standing showing internationally competitive research, and/or have high potential to make a future scientific impact at the international level. Experience in delivering high-quality research-based advisory and/or undergraduate/graduate teaching is not mandatory but will be an advantage.

Qualifications needed at the Associate Professor level

The ideal candidate will be an established researcher with a prominent standing in their field and possess a solid record of research-based advisory qualification and/or teaching qualifications at a high international level. Qualifications will be assessed based on:

- research output, including high-impact peer-reviewed publications, international research collaboration, and long-term research stay(s) ata internationally acknowledged university or research institution.

- Proven ability in attracting external funding, providing research based advisory work to ministries, and/or delivering high-quality undergraduate/graduate teaching and student supervision is essential.

- Strong communication skills, the ability to collaborate and build relationships, and a readiness to contribute to the development of the department's research and education at the highest international level are also required. The candidate should be committed to take part in fostering a positive work environment within the department.

Place of work

The place of work is Frederiksborgvej 399, 4000 Roskilde.The affiliation will be with the Department of Environmental Science.

Application procedure

Shortlisting is used. This means that after the deadline for applications – and with the assistance from the assessment committee chairman, and the assessment committee if necessary, – the head of department selects the candidates to be evaluated. The selection is made on the basis of an assessment of who of the candidates are most relevant considering the requirements of the advertisement. All applicants will be notified within 6 weeks whether or not their applications have been sent to an expert assessment committee for evaluation. The selected applicants will be informed about the composition of the committee and will receive his/her assessment. Once the recruitment process is completed a final letter of rejection is sent to the deselected applicants.

Letter of reference

If you want a referee to upload a letter of reference on your behalf, please state the referee's contact information when you submit your application. We strongly recommend that you make an agreement with the person in question before you enter the referee's contact information, and that you ensure that the referee has enough time to write the letter of reference before the application deadline.
Unfortunately, it is not possible to ensure that letters of reference received after the application deadline will be taken into consideration.

Formalities and salary range

Technical Sciences refers to the Ministerial Order on the Appointment of Academic Staff at Danish Universities under the Danish Ministry of Science, Technology and Innovation.

The application must be in English and include a curriculum vitae, degree certificate, a complete list of publications, a statement of future research plans and information about research activities, teaching portfolio and verified information on previous teaching experience (if any). Guidelines for applicants can be found here.

Appointment shall be in accordance with the collective labour agreement between the Danish Ministry of Taxation and the Danish Confederation of Professional Associations. Further information on qualification requirements and job content may be found in the Memorandum on Job Structure for Academic Staff at Danish Universities.

Salary depends on seniority as agreed between the Danish Ministry of Taxation and the Confederation of Professional Associations.

Aarhus University's ambition is to be an attractive and inspiring workplace for all and to foster a culture in which each individual has opportunities to thrive, achieve and develop. We view equality and diversity as assets, and we welcome all applicants.

Research activities will be evaluated in relation to actual research time. Thus, we encourage applicants to specify periods of leave without research activities, in order to be able to subtract these periods from the span of the scientific career during the evaluation of scientific productivity.

Aarhus University offers a broad variety of services for international researchers and accompanying families, including relocation service and career counselling to expat partners. Read more here. Please find more information about entering and working in Denmark here.

The application must be submitted via Aarhus University's recruitment system, which can be accessed under the job advertisement on Aarhus University's website.

Aarhus University

Aarhus University is an academically diverse and research-intensive university with a strong commitment to high-quality research and education and the development of society nationally and globally. The university offers an inspiring research and teaching environment to its 38,000 students (FTEs) and 8,300 employees, and has an annual revenues of EUR 935 million. Learn more at www.international.au.dk/