Postdoc in biologging and bioacoustics

Sound and movement tags are transforming how we study marine mammals. These high-tech devices capture detailed recordings of individual whales and dolphins, revealing everything from their baseline call rates to how calls differ by age or social context. They also shed light on how human activities might influence these animals' acoustic behavior—insights that are critical for both conservation efforts and accurate population estimates through passive acoustic monitoring.

At the Department of Ecoscience at Aarhus University, we are seeking a forward-thinking Postdoctoral Researcher to help drive this field forward. In this role, you will develop and validate state-of-the-art methods to identify calls from tagged marine mammals (using high-resolution DTAGs), and make these techniques accessible to a wide range of researchers and professionals. If you're excited by the prospect of shaping marine mammal science and contributing to the protection of our oceans, we encourage you to apply.

Expected start date and duration of employment

Expected start date for the selected candidate is 1 June 2025 or as soon as possible thereafter. Appointment is expected to be for 1 year with an option for extension of the position contingent on funding availability.

Job description

The selected candidate will contribute to the development and validation of methodologies for identifying calls from tagged marine mammals, with a particular emphasis on high sample-rate accelerometry and stereo acoustic recordings. You will also critically assess current approaches, outlining their limitations and identifying opportunities for refinement.

The candidate will work closely with Dr. Frants Jensen (Department of Ecoscience, Aarhus University, Denmark) and collaborators Dr. Susan Parks (Syracuse University, USA) and Dr. Douglas Gillespie (University of St. Andrews, UK). The main responsibilities include leading data analyses of archival tag data, contributing to reports, and contributing to or writing research papers.

Depending on skills and interests, the candidate may also take part in field data collection, help design and maintain project website, create and maintain open-source code (including thorough testing and documentation), and develop user-friendly how-to guides to ensure broad accessibility of the methods developed as part of the project.

Your profile

You are expected to hold a PhD in biology, oceanography, ecology or equivalent, or attach a letter from your supervisor certifying that you are expected to complete your PhD before the start of the appointment. Candidates with a physics, computer science, or engineering background would also be welcome if they can demonstrate relevant skills and experiences for the project.

As part of the position, you will work as part of a team to develop, validate, and document methods for identifying social calls from tagged animals. You will be expected to contribute to efforts to validate methods for identifying calls from tagged marine mammals for either toothed whales or baleen whales. You will also contribute to reports and presentations for the funding agency, and support development of a project website to present project, methods, and outcomes.

Further, the position requires:
•Strong analytical skills including programming (preferably Matlab, secondarily R or Python) and statistical analysis
•Experience with quantitative acoustics or inertial sensor (especially accelerometer) data processing and analysis
•Demonstrated experience with scientific writing and publication of research results.
•Excellent written and spoken English.

Additional desired skills:
•Experience managing research grants or contracts, time management, and ensuring timely production of deliverables
•Knowledge of biologging technology and hardware, especially multisensor sound and movement recording DTAGs, Acousonde tags, or similar instruments
•Experience with Github and version control

Application Deadline:
31 March 2025

Faculty:
Faculty of Technical Sciences

Institute/Faculty:
Department of Ecoscience

Academic contact person:
Frants Havmand Jensen
Seniorforsker
fjensen@ecos.au.dk
+4550223282

Vacant positions:
1

Hours per week:
37

Number of months:
12

Expected date of accession:
01/06/2025

Who we are

The Department of Ecoscience is engaged in research programs, teaching curricula and advisory work covering the major biological subdisciplines. We conduct world-class research in the areas of aquatic biology and ecology, arctic environment and ecosystems, biodiversity, and conservation biology. The Department holds a strong position in international marine research and is a national leader in research-based consultancy and knowledge exchange on effects of anthropogenic disturbances on the marine environment and species. The Department currently employs approximately 275 academic and technical staff, as well as many PhD students.

The successful candidate will work in a dynamic and internationally engaged scientific environment at the Section for Marine Mammal Research (for more information see: https://ecos.au.dk/en/researchconsultancy/research-areas/marine-mammal-research)

The department is, and wishes to continue to be, an active, dynamic and inspiring workplace with exciting challenges, enthusiastic colleagues and academic opportunities for development. The department wishes to support employees in creating a good balance between their work and home lives and to maintain and attract talented and committed staff, where freedom, creativity and respect for the long-term perspective are core values. For more information on the Department see: http://ecos.au.dk/en/

What we offer

The department offers:

- a well-developed research infrastructure, including access to boats and equipment, enabling you to conduct field work at sea
- an exciting interdisciplinary environment with many national, international and industrial collaborators,
- collaboration with a strong research team with extensive experience in marine mammal ecology and understanding of the effects of noise on marine mammals.
- a workplace characterised by professionalism, equality and a healthy work-life balance.

Place of work and area of employment

The place of work is Frederiksborgvej 399, DK-4000 Roskilde, and the area of employment is Aarhus University with related departments.

Contact information

For further information, please contact:
Dr. Frants Havmand Jensen, fjensen@ecos.au.dk

Deadline

Applications must be received no later than 31 March 2025.

Application procedure

Shortlisting is used. This means that after the deadline for applications – and with the assistance from the assessment committee chairman, and the appointment committee if necessary, – the head of department selects the candidates to be evaluated. All applicants will be notified 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 each applicant is given the opportunity to comment on the part of the assessment that concerns him/her self. 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.

If you wish to add a referee **after** you have submitted your application, you must send this person's details (name, job title, place of work, and email address) as well as the name of the position you have applied for to: HR.Nattech@au.dk

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.

Aarhus University also offers a Junior Researcher Development Programme targeted at career development for postdocs at AU. You can read more about it 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/