

PhD scholarship in Ocean-Offshore Infrastructure Monitoring - DTU Aqua

If you are passionate about marine technology, data analytics, and ecosystem research, we have an opportunity for you!

DTU Aqua invites applications for a PhD position focused on developing and deploying an ocean-monitoring system for offshore installations. The research will integrate optical and acoustic sensors, autonomous data collection, and advanced perception methods to track fish-community dynamics and environmental conditions at offshore sites.

The successful candidate will join the Observation Technology research group at DTU Aqua and work in a collaborative project with TotalEnergies.

You will be enrolled in DTU's Section for Oceans and Arctic and assume a dual role: (1) Systems Engineer able to design and prototype an integrated in-situ observing platform that supports marine scientists and oceanographers in assessing ecosystem status. (2) Data Scientist able to build automated data-collection and processing pipelines tailored to research questions such as fish seasonality and diel vertical migrations. The aim is to perform research across ocean technology and marine ecology.

Responsibilities and qualifications

- Innovate and develop new platforms, sensors, and software, especially wide-band acoustic systems, to extend DTU Aqua's ocean-observation capabilities.
- Process and analyse multi-sensor data to characterise marine fish communities and their habitats.
- Contribute to multidisciplinary projects within the observation-technology domain.
- Produce high quality scientific and technical manuscripts that are suitable for publications in specialized journals

Qualifications

- Possession of a MSc degree (or equivalent) in oceanography, including components of ocean science and engineering
- Experience in ocean observation technology including remote sensing, *in-situ* observations and data analyses
- Demonstrated research background, inclusive of master thesis or articles published on pertinent subjects (e.g., time series analyses, ocean sensors, acoustic and optical data processing, automation and robotics).
- Proficiency in Python, MATLAB, and/or C++ programming dialects (knowledge in other languages will be valued).

Marine fieldwork experience with deployed platforms is an advantage.

You must have a two-year master's degree (120 ECTS points) or a similar degree with an academic level equivalent to a two-year master's degree.

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Approval and Enrolment

The scholarship for the PhD degree is subject to academic approval, and the candidate will be enrolled in one of the general degree programmes at DTU. For information about our enrolment requirements and the general planning of the PhD study programme, please see [DTU's rules for the PhD education](#) .

Assessment

The assessment of the applicants will be made by prof. Patrizio Mariani, Dr. Jon Christian Svendsen and Dr. Fletcher Thompson

We offer

DTU is a leading technical university globally recognized for the excellence of its research, education, innovation and scientific advice. We offer a rewarding and challenging job in an international environment. We strive for academic excellence in an environment characterized by collegial respect and academic freedom tempered by responsibility.

Salary and appointment terms

The appointment will be based on the collective agreement with the Danish Confederation of Professional Associations. The allowance will be agreed upon with the relevant union. The period of employment is 3 years.

Starting date is as soon as 1 October 2025 if possible or within 2025 (according to mutual agreement). The position is a full-time position.

You can read more about career paths at DTU here <http://www.dtu.dk/english/about/job-and-career/working-at-dtu/career-paths>.

Further information

Further information may be obtained from Prof. Patrizio Mariani on mail pat@aqua.dtu.dk <https://www.aqua.dtu.dk/english/research/research-areas/observation-technology>

If you are applying from abroad, you may find useful information on working in Denmark and at DTU at [DTU – Moving to Denmark](#) . Furthermore, you have the option of joining our monthly free seminar "[PhD relocation to Denmark and startup "Zoom" seminar](#) " for all questions regarding the practical matters of moving to Denmark and working as a PhD at DTU.

Application procedure

Your complete online application must be submitted no later than **15 July 2025 (23:59 Danish time)**.

Applications must be submitted as one PDF file containing all materials to be given consideration. To apply, please open the link "[Apply now](#)", fill out the online application form, and attach all your materials in English in one PDF file. The file must include:

- A letter motivating the application (cover letter)
- Curriculum vitae
- Grade transcripts and BSc/MSc diploma (in English) including official description of grading scale
- 2-page proposal on how the project will be conducted

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You may apply prior to obtaining your master's degree but cannot begin before having received it.

Applications received after the deadline will not be considered.

All interested candidates irrespective of age, gender, disability, race, religion or ethnic background are encouraged to apply. As DTU works with research in critical technology, which is subject to special rules for security and export control, open-source background checks may be conducted on qualified candidates for the position.

About DTU Aqua

DTU Aqua – National Institute of Aquatic Resources – works for well-functioning oceans, rivers, and lakes where biodiversity can thrive. Our research, advisory service, and education contribute to the development of a sustainable blue bioeconomy, robust aquatic ecosystems, and reduced effects of climate change. We have a large national and international network and cooperate with research partners, public authorities, industry, and NGOs. We have state-of-the-art research facilities and Denmark's only ocean- and arctic-going research vessel. The Institute has 360 employees, one-half being scientific staff, including about 50 PhD students. More than 35 nationalities are represented at the Institute, and we support an equal gender distribution. We are located in Lyngby, Hirtshals, Nykøbing Mors, and Silkeborg and have regular activities in Greenland. Learn more at aqua.dtu.dk

Technology for people

DTU develops technology for people. With our international elite research and study programmes, we are helping to create a better world and to solve the global challenges formulated in the UN's 17 Sustainable Development Goals. Hans Christian Ørsted founded DTU in 1829 with a clear mission to develop and create value using science and engineering to benefit society. That mission lives on today. DTU has 13,500 students and 6,000 employees. We work in an international atmosphere and have an inclusive, evolving, and informal working environment. DTU has campuses in all parts of Denmark and in Greenland, and we collaborate with the best universities around the world.

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