

Professor (with special responsibilities) in Biogeochemical Modelling

DTU invites applications for a position as Professor with special responsibilities in the research field of Biogeochemical modelling. The professorship is affiliated with the National Institute of Aquatic Resources (DTU Aqua), Danish Shellfish Centre (DSC), and is based at DTU, Kgs. Lyngby. The successful candidate is expected to lead the newly established research group in Coastal ecology and, in collaboration with the head of section, strengthen the field of coastal ecology in the department by expanding the activities and field of research.

DSC conducts research, gives advice, and fosters innovation in coastal ecology with focus on sustainable utilization of living resources in the coastal zone. DSC currently covers research addressing the interactions between exploitation of natural living resources and the aquatic environment. We want to expand the activities within coastal ecology with focus on the impact of a broad range of pressures including eutrophication and measures to mitigate eutrophication as well as integrated coastal zone management assessing marine ecosystem response to anthropogenic and natural disturbances.

Responsibilities and tasks

A position as Professor with special responsibilities is held for a limited period and involves the usual duties associated with a full professorship, as well as the following fixed-term specific duties. The professor is expected to develop a research group on coastal ecology on internationally leading level focusing on the development, implementation and application of biogeochemical and coupled bio/physical modelling tools and benchmarking of environmental development in coastal areas against environmental quality indicators. The objective is to assess coastal ecosystem dynamics and response to natural disturbances, including climate change, as well as anthropogenic pressures. This includes nutrient loading through various sources, utilization of lower trophic level aquaculture to capture nutrients, the impact of fisheries on food web structure and nutrient recycling, the impact of resource extraction, fisheries and offshore constructions on benthic habitats and their role in the nutrient cycle.

The professor is expected to give advice on implementation and following up of environmental directives, such as the Marine Strategy Framework Directive, the Water Framework Directive, and the Species and Habitats Directive including contributions to regional seas conventions, such as HELCOM and OSPAR. Research activities are expected to be conducted in cooperation with other research sections at the institute, other units at the University and relevant research groups in Denmark and Europe. The professor is expected to establish a strong team for delivering advice on environmental issues in coastal zones to public management and thereby strengthening the institute capacity to maintain and upgrade its responsibilities in research-based consultancy. Dissemination of results should aim at informing management authorities, stakeholders and the public at large and foster national and international collaboration.

The professor is expected to participate in teaching at the BSc, MSc, and PhD levels, including supervision of PhD students and postdocs and contribution to lifelong learning. For international candidates, DTU can provide Danish language courses enabling the candidates to teach in Danish within 2-3 years.

Qualifications

The position is intended for a candidate with an internationally recognized track record in

- nutrient loading and eutrophication of coastal areas
- benthic fauna and their effects on biogeochemical processes
- modelling of benthic and pelagic nutrient cycling, incl. coupled hydrodynamic and ecological modelling
- measures to mitigate eutrophication
- environmental management consultancy and research-based advising
- interacting effects of natural and anthropogenic pressure on good environmental status
- integrated coastal zone management.

Employment requires innovative research at high international level within relevant research themes and a track record in research leadership, including i) visionary strategic development of the research area, ii) leading multidisciplinary research groups, iii) planning, implementing, and running interdisciplinary research projects and iv) supervision and training of PhD students and postdocs as well as contribution to teaching at MSc level. Specifically, the candidate is expected to have extensive experience in giving advice on marine environmental directives to policy development and management authorities.

Assessment

In the assessment of the candidates, consideration will be given to:

- Documented experience and quality of teaching and curriculum development
- Research impact and experience, funding track record, and research vision
- Societal impact
- Documented innovation activities, including commercialization and collaboration with industry
- International impact and experience
- Leadership and collaboration
- Communication skills

Consideration will also be given to:

- scientific production and research potential
- experience in giving advice to public authorities
- research leadership in implementing and coordinating multidisciplinary research programmes
- the ability to promote and utilize research results

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 position is available for a 5-year period and may be extended for up to 3 additional years. At the end of the period, the employee in question will transfer to a position as associate professor at the university. More information can be found here: [Career paths at DTU](#).

Further information

Further information may be obtained from Institute Director Fritz Köster, tel.: +45 3396 3300, email: fwk@aqu.dtu.dk or Head of Danish Shellfish Centre Prof. Jens Kjerulf Petersen, tel.: +45 61222429, email: jekjpk@aqu.dtu.dk.

You can read more about DTU Aqua on www.aqua.dtu.dk

Application procedure

Please submit your online application no later than **XXX 2019 (local time)**.

Applications must be submitted as **one pdf file** containing all materials to be given consideration. To apply, please open the link 'Apply online,' fill in the online application form, and attach **all your materials in English in one pdf file**. The file must include:

- Application (cover letter) addressed to the President
- CV
- A vision for future research
- Teaching and research statement, with a focus on the 'Assessment' bullet points listed above
- Documentation of previous teaching and research, as related to the 'Assessment' bullet points listed above
- List of publications indicating scientific highlights
- H-index, and ORCID (see e.g. <http://orcid.org/>)
- Diploma (MSc/PhD)

Applications and enclosures 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.