

Professor in Structural and Multidisciplinary Optimization within Wind Energy

DTU Wind Energy at Technical University of Denmark invites applications for a position as Professor in Structural and Multidisciplinary Optimization within Wind Energy.

DTU Wind Energy is a department at Technical University of Denmark with the overall mission to develop and create value using the natural and technical sciences and focusing on wind energy for the benefit of society. This includes research and education in siting and integration, wind turbine technology, and offshore wind energy as well as scientific advice and testing and other research-based services. The department is an internationally leading center in wind energy and cooperates with industry and institutions worldwide.

The professor will be an important part of the section for Wind Turbine Structures and Component Design (SAC), one of the nine sections comprising the department employing 240 persons including presently a faculty of 10.

Responsibilities and tasks

DTU Wind Energy has a strategic aim through this professorship to strengthen the research in structural and multidisciplinary optimization particularly within offshore wind energy. The candidate is expected to contribute to the following:

- Research within theory, modelling, and method development in structural and multidisciplinary optimization.
- Research-based teaching in theoretical and applied numerical optimization at the master- and PhD levels.
- Academic leadership and fundraising within the above-mentioned areas.
- External collaboration.
- Innovation through development of software for optimal structural design and for multidisciplinary optimization.
- Educational guidance and supervision of PhD students, postdocs, and researchers.
- National and international academic assessment work.

The field shares scientific methodologies with other departments at DTU. Thus, the Professor should sustain and develop collaboration in research, education and innovation with, e.g., DTU Mechanical Engineering, DTU Compute, and DTU Civil Engineering. The Professor should also strengthen and coordinate the research within other areas of optimization at DTU Wind Energy such as wind farm optimization.

The successful candidate is expected to take a lead position in teaching at the BSc, MSc, and PhD levels. Candidates who do not speak Danish should be willing to learn Danish within the first two-three years in order to be able to teach in Danish.

Qualifications

Candidates should already have obtained well-documented international recognition within the relevant research field, including extensive publication activity in international journals. Employment implies original research at the highest international level within one or more of the above-mentioned research themes.

The applicant should document successful teaching experience at different levels within the University's study programmes, including and in particular at MSc and PhD levels.

Furthermore, the applicant should document experience with initiation, coordination, and management of larger national and international research projects. Emphasis will be on the ability to combine a high research level with promotion of external cooperation and exploitation of the research results. A national and international network within the research community is important.

Important qualifications, which will be taken into account in the assessment of the current position, comprise research and knowledge within the following topics:

- Development and implementation of advanced optimization theory and models, numerical optimization methods, and optimization software
- Applications in structural and multidisciplinary optimization

Assessment

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

- 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

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 an academic freedom tempered by responsibility.

Salary and terms of employment

The appointment will be based on the collective agreement with the Danish Confederation of Professional Associations. The allowance will be agreed with the relevant union.

Further information

Further information may be obtained from Head of Department Peter Hauge Madsen, (+45) 4677 5001, npha@dtu.dk

You can read more about DTU Wind Energy at www.vindenergi.dtu.dk

Application procedure

Please submit your online application no later than **XXX 2018 (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
- Views regarding teaching and research based on the "Assessment" bullets
- Documentation of previous teaching and research based on the "Assessment" bullets
- 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.