Professor in Applied Mathematics and Nonlinear Dynamical Systems

DTU Compute's Section for Dynamical Systems invites applications for an appointment as Professor within applied mathematics and nonlinear dynamical systems.

DTU Compute is an internationally unique academic environment spanning the science disciplines mathematics, statistics and computer science. At the same time DTU Compute is an engineering department covering informatics and communication technologies (ICT) in their broadest sense. Finally, DTU Compute plays a major role in addressing the societal challenges of the digital society where ICT is a part of every industry, service, and human endeavour.

DTU Compute strives to achieve research excellence in its basic science disciplines, to achieve technological leadership in research and innovation, and to address societal challenges in collaboration with partners at DTU and other academic institutions, nationally and internationally, and, equally important, with industry and organizations. DTU Compute interacts with leading centres and strategic partners in order to increase participation in major consortia.

DTU Compute plays a central role in education at all levels of the engineering programmes at DTU - both in terms of our scientific disciplines and our didactic innovation.

The aim of the new position is to expand the Departments teaching and research in applied mathematics and nonlinear dynamical systems with a focus on problems from industry and society.

Responsibilities and tasks
The professorship is a position through which DTU wishes to reinforce and develop a specific subject area. You are required to take the lead in this area and, where appropriate, work closely with other professors. The tasks include research, teaching and—ideally—innovation and/or scientific advice.

The successful candidate is expected to build up a portfolio of common research projects and research-based services within mathematics and nonlinear dynamical systems aimed at industry, public agents, other DTU partners as well as international partners. To further develop core competences within applied mathematics and nonlinear systems for the technical sciences; such as nonlinear partial differential equations, reaction diffusion advection problems, complexity, spatio-temporal pattern formation and solitons, with applications to optics, life-science, physics, superconductivity and traffic models.

The successful candidate is expected to participate in research-based teaching at bachelor-, master- and PhD levels. The professor must have a well-documented record, and is expected to participate, in the development of new courses at all levels, including development of e-learning.

The position includes research management in order to strengthen, develop and attract funding to applied and industrial mathematics with emphasis on dynamical systems. It also includes developing the department's internal and external cooperation.

Other duties are:

- Innovation and/or scientific advice with main focus on current societal challenges and industry.
- Guidance and supervision of assistant professors and researchers.
- Academic assessment work.

- Knowledge exchange with society and industry.
- Enhancing collaboration with other DTU departments in joint projects and fundraising. This may include DTU Fotonik, DTU Nanotech, DTU Mechanics, DTU Aqua, and DTU Energy.
- Promoting the department's internal cohesion through joint collaboration.

Qualifications
As a professor at DTU Compute you are expected to make a special effort in regards to research/innovation and research management. The general qualification requirements for the position are as follows:

- A high level of original scientific production at international level that has contributed to the further development of the subject area in question.
- Documented and successful teaching experience at different levels within University study programmes, including and in particular at the PhD level.
- Documented experience in at least one of the following two fields:
    - Research management, including handling management tasks in national or international projects, research programmes, and congresses.
    - Innovation, including building up patent areas and applying research results in a commercial context.

Flexibility, self-motivation and knowledge sharing are desired skills at DTU, as well as a natural interest in collaboration and personal responsibility. Moreover, you are highly motivated by spotting and developing the potential of others, and motivated by both personal and team accomplishments.

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

- the ability to teach
- scientific production at international level, research potential and ability to lead and develop a research team
- the ability to promote and utilize research results
- experience with innovation activities
- an all-round experience basis, including international experience
- the ability to contribute to the development of internal and external cooperation
- track record in attracting funding to the research area
- visions within the research area

For the specific position, consideration will also be given to:

- Leadership experience and collaboration skills
- Cooperation with other engineering areas as represented by other DTU Departments.
- Cooperation with partners from industry.

Salary and terms of employment
The appointment will be based on the collective agreement with the Confederation of Professional Associations. The allowance will be agreed with the relevant union.

Further information
Further information may be obtained from Head of Department, Professor Rasmus Larsen, tel.: +45 4525 3415, email rlar@dtu.dk.

You can read more about DTU Compute on www.compute.dtu.dk.

Application procedure:
Please submit your online application no later than **22 February 2017**. Apply online at www.career.dtu.dk.

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
- Diploma (MSc/PhD)
- List of publications indicating scientific highlights
- H-index, and ORCID (see e.g. http://orcid.org/)
- Documentation for teaching experience (e.g. in the form of a teaching portfolio)
- A plan for future research

All interested candidates—irrespective of age, gender, disability, race, religion, or ethnic background—are encouraged to apply.