

Professor of Algorithms and Data Structures (Algorithmics)

DTU Compute's Section for Algorithms, Logic and Graphs (AlgoLoG) invites applications for an appointment as Professor of Algorithms and Data Structures. The AlgoLoG Section is a group of leading researchers in foundations of computer science and discrete mathematics, especially algorithms, logic and graph theory. The group covers core areas in theoretical computer science with connections to pure mathematics as well as to applied areas and industry and basic research in discrete mathematics. Central areas of research in algorithms are Big Data and nature-inspired heuristic search strategies and compressed computation.

DTU Compute wishes to strengthen its activities in the area of algorithms and data structures, with possible focus on the following areas:

- compression schemes for data,
- nature-inspired and other heuristic search strategies for optimization,
- approximation algorithms for hard problems.

You will be affiliated with the department's Algorithms, Logic and Graphs section (AlgoLoG) and are expected to interact closely with the other faculty members of the section as well as relevant faculty members of the other sections at the department.

Responsibilities and tasks

The position covers research, research-based teaching and research-based public outreach activities within Algorithmics. You will have the responsibility to strengthen the research in algorithms and data structures at the department.

You are furthermore expected to:

- Initiate and develop research collaborations within the section, within the department, nationally and internationally.
- Initiate and develop cross-disciplinary research, e.g. combining different areas of Algorithmics, connecting to mathematical foundations or by investigating the ethical, philosophical, legal or societal aspects of Algorithmics.
- Develop and conduct excellent teaching within Algorithmics at all levels at the department, including continuing education activities.
- Do teaching and outreach activities that combine technical aspects of Algorithmics with its ethical, philosophical and societal aspects.
- Take a lead in innovation activities, if possible in collaboration with commercial actors.

You are expected to take a lead role in teaching at the BSc, MSc, and PhD levels. For international candidates, DTU offers Danish language courses for the purpose of being able to teach in Danish within the first 2-3 years.

Qualifications

You must document:

- Significant original scientific output at a high international level.
- Cross-disciplinary research collaboration.
- Research experience ranging from basic research to industrial applications.
- Significant experience in successful research dissemination at a wide range of levels and to a wide range of audiences within and outside academia.
- Significant experience in the teaching and development of new courses, including the development of high-quality course material.

- The ability to spot and develop talent.
- Significant experience in the supervision of students at BSc, MSc, and PhD level.

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:

- Experience, quality and breadth in public outreach activities.
- Quality and breadth in research communication.
- Experience in cross-disciplinary research.
- Significant experience in organising academic conferences.

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 terms of employment

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.

Further information

Further information may be obtained from Head of Department Per B. Brockhoff, tel.: +45 4525 6533, perbb@dtu.dk.

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

Application procedure

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

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 out 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.