

Professor in Logic and Artificial Intelligence

DTU Compute's Section for Algorithms, Logic and Graph theory (AlgoLoG), invites applications for a position as Professor of Logic and Artificial Intelligence.

The AlgoLoG Section consists of a group of leading researchers in foundations of computer science and discrete mathematics. 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. Our focus areas are algorithms, logic, and graph theory. Core areas of research are structuring, indexing, searching, and interpreting Big Data, logic-based verification and model synthesis, logical foundations of multi-agent systems, and investigating structural properties of graphs and their influence on algorithmic efficiency.

DTU Compute wishes to strengthen its activities in Artificial Intelligence (AI) with focus on logic-based techniques and its applications to problems such as automated planning, knowledge representation/reasoning, and social intelligence. Furthermore, the department wishes to strengthen the public understanding of AI, the understanding of how it works its strength and weaknesses, and its impact on society.

The professor will be affiliated with the Algorithms, Logic and Graphs section (AlgoLoG) of the department and is 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 logic and AI. The successful applicant will have the responsibility to strengthen the research in symbolic AI at the department, as well as the integration of symbolic AI with other approaches to AI such as statistical learning.

The successful candidate is furthermore expected to:

- Initiate and develop research collaboration within the section, within the department, nationally and internationally
- Initiate and develop cross-disciplinary research, e.g. combining logic-based AI with other areas of AI, with its mathematical foundations or by investigating the ethical, philosophical, legal or societal aspects of AI
- Be visionary in the development of new research fields and alliances
- Develop and conduct excellent teaching within logic and AI at all levels at the department, including continuing education activities
- Be visionary in the development of new curriculum and teaching activities
- Develop and conduct teaching based on state-of-the-art within higher education research
- Engage in excellent research communication at all levels, including public outreach to the general public, outreach activities to specialised audiences, and invited talks at international research conferences
- Do teaching and outreach activities that combine technical aspects of AI with its ethical, philosophical and societal aspects.
- Organise national and international conferences and other activities to stimulate industrial collaboration, research collaboration and general international interest and visibility.

The successful candidate is expected to take a lead role in teaching at the BSc, MSc, and PhD levels. For international candidates, DTU can provide Danish language courses enabling the candidates to teach in Danish within 2-3 years.

Qualifications

Successful candidates 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 organising academic conferences as well as public outreach events
- 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 successfully motivate and engage students and spread enthusiasm
- Significant experience in the supervision of students at BSc, MSc, and PhD level
- The ability to interact with non-experts within the technical area of the position as well as its societal aspects

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

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 **XXX 2018 (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.