

Professor in Decision Science in Healthcare

The Department of Technology, Management and Economics (DTU Management) at the Technical University of Denmark (DTU) invites applications for a position as Professor in Management Science with focus on decision science in healthcare.

The position as professor is a permanent faculty post, part of the division of Management Science. The position is also part of the Centre for Optimization Technology for Clinical Pathways co-funded by DTU and Region Zealand. You will be affiliated with Slagelse Hospital, where you will be offered the opportunity to work physically in the clinic. The position will provide you the opportunity to contribute significantly to establishing stronger ties between the theories and methods of decision science and the challenges met within the healthcare system. Attached to the position is also a PhD grant to support the research collaboration.

Responsibilities and qualifications

Healthcare systems are highly complex production systems calling for efficient planning of physical as well as human resources to offer the best possible care for patients. Such production systems cover the end-to-end logistics chain spanning the pre-hospital, the inpatient and the outpatient phases. An increase in the number of patients in healthcare systems combined with tight budgetary constraints demands a more efficient use of resources. To address the increasing challenges from short-term hospitalization, resource optimization, clinical specialization, and increased demand for specialized medical treatment in hospitals, the focus will be on the design of methods and technologies for optimising clinical pathways, including clinical workflows, clinical logistics, patient scheduling, staff scheduling, as well as the design and pilot testing of technologies for optimized coordination and communication.

Scientifically, experience within the following areas is relevant:

- Computer-aided decision support for clinical pathways, healthcare planning and clinical logistics.
- Methods from Operations Research and Operations Management for studying clinical optimization problems.
- Design and implementation of simulation-based methods like discrete-event, agent-based models and system dynamics.
- Data science and AI methods for resource optimization—deterministic as well as dynamic and stochastic.

Management Science considers it a strength to combine development of new theory with focus on real-life applications. The division is team-oriented, and the professor is expected to support this through peer activities.

This position requires strong experience with interdisciplinary academic work. You will therefore bring the following:

- A PhD in technical or natural sciences incorporating management science (operations research and/or operations management).
- A high level of original scientific production at the highest international level that has contributed to further development of the subject area in question.
- Experience in research management, including attracting grants and securing funding for new projects, supervision of early career researchers, handling managerial tasks in national or international projects, conferences etc.
- Innovation and industrial collaboration with the interest in supporting the application of research results in commercial contexts, etc.
- Experience with working in a healthcare setting will be seen as an advantage.

You are expected to take a lead role in teaching at the BEng, BSc, MSc, and PhD levels. If you have an international background, DTU can provide Danish language courses enabling you to teach in Danish within 2-3 years.

You will be assessed against the responsibilities and qualifications stated above and the following general criteria:

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

Salary and terms of employment

The appointment will be based on the collective agreement with the Danish Confederation of Professional Associations. The salary for the position will be determined by the applicants qualifications and in agreement with the relevant union. Further information on qualification requirements and job content may be found in the [Ministerial Order on Job Structure for Academic Staff at Universities](#).

The position is offered as a full employment at DTU under the cooperation program between DTU and Region Zealand of Denmark. The position is offered under the condition that you will work from two workplaces, which means that you have to divide your time between presence at both DTU campus in Lyngby and at Slagelse Hospital.

Representatives from Region Zealand Denmark will be part of the hiring process.

Further information

Further information may be obtained from Head of Management Science Professor Jesper Larsen, tel.: +45 4525 3385, email: jesla@dtu.dk.

You can read more about DTU Management at www.man.dtu.dk/english.

If you are applying from abroad, you may find useful information on working in Denmark and at DTU at [DTU – Moving to Denmark](#).

Application procedure

Your complete online application must be submitted no later than **1 September 2021 (Danish time)**. Apply online here: [Professor in Decision Science in Healthcare](#)

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
- Vision for teaching and research
- CV including employment history, list of publications indicating scientific highlights, H-index and ORCID (see <http://orcid.org/>)
- [Teaching portfolio](#) including documentation of teaching experience
- Academic Diplomas (MSc/PhD)

You can learn more about the recruitment process [here](#).

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

DTU Management conducts excellent research in the intersection between management, technology and economics. We develop solutions in close cooperation with companies and public authorities. Our research aims at strengthening welfare, productivity and sustainability within the society. A key element is the role of technology and its interaction with industry and individuals. The department's research is divided in four divisions: Innovation, Management Science, Sustainability and Transport.

Furthermore, the department hosts a UN Collaborating Centre. The UN DTU Partnership conducts research, policy analysis and advising on a global scale. The department offers a wide range of courses and programs at bachelor, master and PhD level across DTU's study programs. DTU Management employs about 300 people. We offer an international environment with around 50 different nationalities represented at the department.

Technology for people

DTU develops technology for people. With our international elite research and study programmes, we are helping to create a better world and to solve the global challenges formulated in the UN's 17 Sustainable Development Goals. Hans Christian Ørsted founded DTU in 1829 with a clear vision to develop and create value using science and engineering to benefit society. That vision lives on today. DTU has 12,900 students and 6,000 employees. We work in an international atmosphere and have an inclusive, evolving, and informal working environment. DTU has campuses in all parts of Denmark and in Greenland, and we collaborate with the best universities around the world.