

Professor in MEMS and Healthcare Engineering

DTU Nanotech is a multi-disciplinary department at DTU, Technical University of Denmark, based on both top-down and bottom-up micro- and nanotechnology.

DTU Nanotech wishes to strengthen its research, innovation and teaching activities in the field of silicon based Micro Electro Mechanical Systems (MEMS) and its applications within healthcare engineering including bringing such systems to clinical research. The aim for DTU Nanotech is to secure and further develop the department's excellent position in this area.

The professor will be affiliated with the MEMS Group in the Physics Section, which is one of two research sections at DTU Nanotech.

Responsibilities and tasks

DTU Nanotech therefore seeks a professor with both research, innovation and teaching experience in the following areas:

- Cleanroom based fabrication of MEMS components with applications in the field of healthcare engineering such as biomedical imaging
- Characterization of MEMS devices (electrical, mechanical and acoustical)
- Development of theory, methodology, and computational tools for modelling of MEMS devices
- Development of fully functional MEMS based systems for healthcare engineering (i.e. devices that can be used in the clinic) with special focus on transducers for biomedical imaging.

The professor will contribute to teaching, innovation and research activities in the department, and is expected to participate actively in international as well as national collaborative projects. The professor is expected to establish relations with other research groups at DTU and at the department, working with related topics. The professor is also expected to establish relations with companies in the field to create collaborative innovation projects.

Further, for this particular position

- You will have a leading role in managing a research team that works with design, fabrication and characterization of MEMS devices and systems for healthcare engineering with the aim at bringing these to clinical research
- You will become the scientific leader and driving force in the group for further development of such activities
- You are expected to have relations to relevant, internationally esteemed research groups in the field as well as research and development groups in industry
- You will lead ongoing research projects and develop new research fields and alliances, strengthening the research team and further accelerate the overall academic publication output.

The successful applicant will have a lead position in research and innovation based teaching and supervision at all academic levels, i.e. BSc, MSc, and PhD. For international candidates, DTU can provide Danish language courses enabling the candidates to teach in Danish within 2-3 years.

Qualifications

The new professor should already have obtained well-documented international recognition within the field of MEMS based healthcare engineering.

The successful applicant must document substantial experience and competence with teaching and supervision including:

- establishment of new courses and educations
- documented didactical and pedagogical training
- development of new teaching methods
- preparation of teaching materials
- supervision of BSc, MSc and PhD students

Furthermore, you have strong academic, innovation and leadership qualifications, including:

- You are motivated by both personal and team accomplishments
- You have the ability to motivate colleagues to be at their best and achieve ambitious goals
- You have strong communication skills
- You enjoy teaching and will bring the skills and enthusiasm to teach and supervise at undergraduate and graduate level, over a wide range of topics within semiconductor physics and devices, MEMS and nano and microfabrication
- You have substantial experience on research collaborations with both academia and companies
- You have innovative skills.
- You will contribute to the growth of your subject area at DTU

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:

- The ability to facilitate active learning
- Experience in leadership of university education
- Experience with industrial collaborations
- 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 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 Acting Head of Department, Prof. Rolf Henrik Berg, tel.: +45 4525 8106.

You can read more about DTU Nanotech on www.nanotech.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.