

## **Professor in Biophysics Modelling 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 activities in theoretical physics with focus on application of biological and statistical physics in micro- and nanotechnology encompassing healthcare engineering. The aim for DTU Nanotech is to secure the department's excellent position in this area.

The professor will be affiliated with the Stochastic Systems and Signals 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 expertise in the following areas and their teaching:

- Quantitative modelling (analytical, numerical, and by Monte Carlo simulation) of physical and biological systems, experiments, instruments, and data encompassing healthcare engineering.
- Development of theory, methodology, and computational tools for quantitative modelling of physical and biological systems, experiments, instruments, and data encompassing healthcare engineering.
- Providing quantitative modelling to non-experts on this matter in academic and industrial cross-disciplinary collaborations, nationally and internationally.

The professor will be affiliated with present teaching 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.

Further, for this particular position

- You will have a leading role in applying theoretical physics and mathematical statistics to model and analyse experiments in molecular and biophysics encompassing healthcare engineering
- You will become the scientific leader and driving force in the group for further development of such modelling and analysis
- You will lead such research activities within the Novo Nordisk Foundation Centre for Intestinal Absorption and Transport of Biopharmaceuticals
- You are expected to have relations to other relevant, internationally esteemed research groups
- You have an ability to motivate colleagues to be at their best and achieve ambitious goals
- 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 candidate is expected to take a lead position in teaching at the BSc, MSc, and PhD levels. For international candidates, DTU offers Danish language courses, with the purpose of being able to teach in Danish within the first two-three years.

### **Qualifications**

Candidates should already have obtained well-documented international recognition within their research field. Employment requires original research at the highest international level within all of the above-mentioned research themes.

The successful candidate must document substantial experience with teaching students of micro- and nanotechnology. The successful candidate must document a substantial record in the following areas:

- establishment of new courses
- renewal of teaching activities
- preparation of teaching materials.

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

- You are motivated by both personal and team accomplishments
- You are driven by exploring boundaries
- You have innovative skills, the ability to generate new ideas
- You have strong communication skills
- You enjoy teaching and will bring the skills and enthusiasm to lecture at undergraduate and graduate level, over a wide range of topics within biological and statistical physics, and to supervise students
- You will have substantial experience of research collaborations at both national and international level
- You have the ability to adapt theory to understand novel research questions and methodologies
- You will be willing to contribute to the growth of your subject area at DTU

### **Assessment**

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

- 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 instigate new teaching activities
- experience with outreach activities
- experience with international collaborations
- 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](http://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](http://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
- A vision for future research
- Views regarding teaching and research based on the "Assessment" bullets
- Documentation of previous teaching and research based on the "Assessment" bullets
- 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.