

## **Professor in Plasticity of Metallic Materials**

DTU Mechanical Engineering at Technical University of Denmark invites applications for a position as Professor in plasticity and deformation structures in metallic materials.

DTU Mechanical Engineering is contributing to research, innovation, and education within the following scientific areas: Structural and solid mechanics, fluid and hydrodynamics, applied thermodynamics, manufacturing technology, engineering design and product development, materials and surface engineering.

The professor will be affiliated with the Materials and Surface Engineering Section which is one out of six sections in the department.

### **Responsibilities and tasks**

The new professor will have a leading role in the research and innovation on deformation structures in metals at all scales, theoretically, experimentally and numerically. It is the vision that the new professor will contribute significantly to maintaining the leading international role of the section and build relationships to large-scale facilities such as MAX IV and ESS.

Faculty in the section is involved in teaching materials science and engineering with emphasis on metallic materials. The Section attracts students from various study lines. The new professor is expected to take a lead position in teaching at the BEng, BSc, MSc, and PhD levels. Candidates who do not speak Danish should be willing to learn Danish within the first two-three years in order to be able to teach in Danish.

The successful candidate is expected to have relations to other relevant, internationally esteemed research groups in academia (and industry) and has to establish or extend relations to other relevant research groups at DTU. In particular, the coupling of 3D characterization and 3D modelling at various length scales will play a major role in future research activities in the section. The candidate is expected to have demonstrated experience with attracting external funding for research and/or innovation activities.

### **Qualifications**

The new professor should have documented internationally visible research and teaching experience in various aspects of materials science and engineering at all academic levels.

Candidates are expected to be able to demonstrate notable achievements within research in several of the following areas:

- Evolution of material's microstructure during deformation in terms of crystal plasticity, texture development and dislocation structures
- Ex-situ and in-situ materials characterization at various length scales, including the application of large-scale facilities and electron microscopy
- Numerical modelling of plasticity of metals at various length scales.

Furthermore, the candidates must have the following qualifications:

- A high level of original scientific production at international level that has contributed to the further development of the area.
- Documented and successful teaching experience at all academic levels within the University's study programmes.
- Documented experience in at least one of the following two fields:
  - Research management, including handling management tasks in national or international projects, research programmes, congresses, etc.

- Innovation, including building up patent areas, applying research results in a commercial context, etc.

### **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

### **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 Confederation of Professional Associations. The allowance will be agreed with the relevant union.

### **Further information**

Further information may be obtained from Head of Department, Professor Hans Nørgaard Hansen, tel.: +45 4525 4816.

You can read more about Department of Mechanical Engineering on [www.mek.dtu.dk](http://www.mek.dtu.dk).

### **Application procedure**

Please submit your online application no later than **XXX 2017 (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.