

## Professor in Coding for Broadband Communication Technology

DTU Fotonik, Technical University of Denmark invites applications for a position as Professor in the area of Coding for Broadband Communication Technology within the Coding and Visual Communications group.

The Coding and Visual Communications group is part of the Section for Communication Technology at DTU Fotonik, which has a long-standing track record for conducting research, education and innovation in communication technology at the highest international level.

DTU Fotonik, DTU is one of the largest European institutions for communication and photonics engineering. DTU Fotonik cooperates with an extensive network of both Danish and foreign research institutions, organizations and business entities.

The research field is coding for communication systems with focus on source and channel coding for high bandwidth and high bit-rate communication systems.

The aim of the position is to strengthen the Department's research and teaching activities in coding for broadband communication. This should be based on a strong collaboration with both academia and industry, internationally and nationally.

### Responsibilities and tasks

You will be responsible for the advancement of the field of coding in communications systems and collaborate closely with other faculty in the section, department and the university where appropriate. The tasks include research, teaching and innovation in the area.

You will be responsible for teaching in the area of coding for communication systems, teaching different coding techniques ranging from source to channel coding.

You are expected to lead research within coding techniques and applications within communication systems for novel and future communication channels and broadband applications. You are expected to take an active part in attracting and conducting research programmes of excellence.

You must demonstrate group leader experience and experience in leading research projects, capability for cooperation with external and international academic and industrial partners, including industrial research collaboration.

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

Professors are expected to make a special effort with respect to research and research management. The applicant must be internationally recognized with documented research and/or research management with a broad research experience in coding for communication systems and documented results in most of the following areas:

- Channel coding for optical communication, incl. shaping
- Two-dimensional information and coding theory, e.g. for constrained coding.
- Distributed source and video coding
- Source coding for image and video for visual communication applications

Furthermore,

- You can document formal didactic training and you have experience in development of courses and preferably educational programs
- You are driven by pushing boundaries
- You enjoy working with complex topics

Furthermore, you must have a documented experience with course development at all levels of university teaching within the field of coding for communication and experience from research collaboration in excellence programs.

### **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

### **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 Lars-Ulrik Aaen Andersen, tel.: +45 4525 3816.

You can read more about DTU Fotonik at [www.fotonik.dtu.dk](http://www.fotonik.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).

To apply, please open the link "Apply online", fill out the online application form. The following must be attached in English:

- 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.