

## **Professor in Photonic Technologies for Metro-Access and Short Range Communications**

DTU Fotonik, the Department of Photonics Engineering, is the department of light science and technology, whose research activities cover a unique spectrum of core areas within communications, devices, sensors, optics and material research.

DTU Fotonik wishes to increase focus on achieving the technological breakthroughs required to bring sustainable photonic communications to the end-user eliminating the current bandwidth and flexibility bottleneck.

### **Responsibilities and tasks**

DTU Fotonik therefore is searching for a dynamic professor with expertise in photonic communications with focus on physical layer technologies including the following areas:

- Technologies for high capacity optical fibre metro-access networks
- Technologies for radio-over-fibre systems and networks
- Cognitive optical networking enabled by photonic-digital signal processing
- Performance monitoring in coherent digital transmission systems
- Advanced modulation formats and optical fibre transmission links
- Energy efficient strategies for routing in optical networks
- High capacity hybrid optical fibre-wireless data links
- Technologies for high capacity short-range data links
- Technologies for optical labelling and packet switching

The professor will be responsible for developing research within photonic communication technologies, in particular with focus on providing wireless and wired broadband connectivity to the end-user. The research is expected to contribute to solving significant challenges in society as identified by the Horizon2020 and FORSK2020 visions. The professor is expected to develop collaboration with other parties within DTU, other Danish universities and industry, as well as with international parties. In addition, the professor will be strongly integrated into the innovation activities of the department and will also perform tasks related to knowledge transfer to society and public authorities.

The successful candidate is expected to take a lead position in teaching at the bachelor-, master- and PhD levels.

### **Qualifications**

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

Candidates must demonstrate research management experience, capability for cooperation with external partners, for example in the form of EU-projects, research projects with industry, documented experience in experimental and/or theoretical research on high capacity photonic communication systems and hybrid optical-fibre wireless communication links. Candidates must also demonstrate strong teaching experience, including supervision of Ph.D. and M.Sc. projects.

### **Assessment**

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

- the ability to teach
- scientific production at international level, research potential and ability to lead and develop a research team
- the ability to promote and utilize research results
- experience with innovation activities
- an all-round experience basis, including international experience
- the ability to contribute to development of the Department's internal and external cooperation
- track record in attracting funding to the research area
- visions within the research area

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

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

### **Application procedure**

Please submit your online application no later than **XXX 2013**. 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
- List of publications indicating scientific highlights
- Documentation of teaching experience
- A plan for future research

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

*DTU is a technical university providing internationally leading research, education, innovation and public service. Our staff of 5,000 advance science and technology to create innovative solutions that meet the demands of society; and our 9,000 students are educated to address the technological challenges of the future. DTU is an independent academic university collaborating globally with business, industry, government, and public agencies.*