

Professor in Polar Geodesy

DTU Space at Technical University of Denmark invites applications for a position as Professor in Polar Geodesy.

DTU Space is the leading institution of public space activities in Denmark. The mission of the institute is to conduct research, development, scientific advice, education, and innovation at the highest international level within the following areas: Space Technology & Instrumentation, Earth Observation & Geoscience, and Space & Astrophysics. DTU Space is engaged in several engineering programmes based on high international level research at the Institute. Particular emphasis is on the BSc and MSc programmes in Earth and Space Physics and Engineering.

DTU Space has established itself as an internationally recognized partner in research and applications of GPS in Greenland to develop advanced models of the melting of the ice sheet and the effects on the Earth's surface. The position of Professor in Polar Geodesy is central to DTU Space's strategic effort in the area of geophysics.

The professor will be attached to the division of Geodesy, which is one of the seven divisions comprising DTU Space.

The focus of the position is on observation-driven computational modelling and the development of new technologies based on Global Navigation Satellite Systems (GNSS), for the determination of geophysical models describing glacial, post-glacial, and current changes in the hydrosphere and associated crustal deformations, and on the development of the geodetic observation system, and the geodetic reference frames to support societal needs within mapping and navigation.

Responsibilities and tasks

The successful candidate is expected to develop and promote the Institute's activities within polar geodesy, with particular focus on geodetic applications of GNSS. The assignments include research, teaching, innovation and public-sector services. The successful candidate will lead the activities within data processing and mathematical modelling of geodetic parameters to support the institute's strategic research in the Arctic region, and through research and collaboration with other research entities at DTU Space, strengthening DTU's international leading position in this field. The research fields to be covered include: advanced processing of GNSS data to derive high accuracy positions and time series for reference frame realisation and modelling of crustal deformations and GIA, developing models relating changes in the hydrosphere to the observed deformations.

The applicant must demonstrate the ability to carry out world-class research in polar geodesy, and have experience with managing large international projects.

The primary tasks are:

- Research within polar geodesy, i.e. academic leadership, including identification and cultivation of new fields of research
- Design and lead the construction of reference frames based on GNSS
- Design of new methods for processing of GNSS data
- Research-based innovation and public-sector consultancy, mainly with positioning and reference frames
- Research-based teaching, including supervision of PhD, MSc, and BSc projects as well as training of postdoctoral researchers
- External collaboration
- Other duties:
 - Pedagogical guidance and supervision of assistant professors
 - Academic assessment work
 - Knowledge exchange with society at large
 - Collaboration with other research groups at DTU and at the institute.

The successful candidate is expected to take the lead in giving and developing geo-science courses by, e.g., advancing teaching methods, tutoring and summer courses, at various levels. There will be responsibility also for PhD supervision and for mentoring postdocs and associate professors. The successful candidate may be asked to complete DTU's education in university teaching (UDTU).

The successful candidate is expected to be involved in teaching activities related to BSc and MSc students. 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.

Qualifications

- A high level of original scientific production at international level, with the potential to contribute to the further development of polar geodesy.
- Documented experience in scientific advice within geodesy, mainly covering positioning and reference frames.
- Successful research management experience as well as capability of initiating and developing collaborations with external partners.
- Teaching experience on the University's study programmes—including and in particular at PhD level—as well as the potential to become a successful lecturer.

Assessment

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

- Experience and quality of teaching
- 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:

- Experience in field work in Greenland, including planning and accomplishment of field campaigns, development, and maintenance of instrumentation.

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 Director of DTU Space, Kristian Pedersen, tel.: +45 4525 9501.

You can read more about DTU Space at www.space.dtu.dk

Application procedure

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

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.