Professor (with special responsibilities) in 3D Image Analysis

DTU Compute's Image Analysis and Computer Graphics section invites applications for a position as Professor (with special responsibilities) in 3D Image Analysis.

DTU Compute is an internationally unique academic environment spanning the basic science disciplines mathematics, statistics, and computer science. At the same time, DTU Compute is an engineering department covering informatics and communication technologies (ICT) in their broadest sense. Finally, DTU Compute puts emphasis on addressing the societal challenges of the digital society where ICT is a part of every industry, service, and human endeavour.

DTU Compute plays a central role in education at all levels of the engineering programmes at DTU—both in terms of its scientific disciplines and its didactic innovation.

The aim of the new position is to strengthen the department's teaching and research activities in 3D imaging. Furthermore, the Professor will be heading 'QIM: The Centre for quantification of imaging data from MAX IV', a collaborative effort between the MAX IV Laboratory, the University of Lund, the University of Copenhagen, and the Technical University of Denmark. The overall goal of the centre is to facilitate the analysis of (3D-imaging) data from beam lines at MAX IV. It is expected that the centre will promote the formation of clusters of industrial and institutional users benefitting from the data analysis activities at the centre.

The centre is financed by the four partners and by a grant from the Capital Region of Denmark. The grant from the Capital Region of Denmark is part of a strategic initiative on promoting development based on sustainable materials science solutions. It is expected that the activities will facilitate industrial innovation and smart growth. In addition, the development of image analysis tools is expected to create synergies with the health sector.

Responsibilities and tasks
The tasks include research, teaching, and innovation within image data analysis focusing on 3D data from different sources, including large-scale facilities. Further tasks of interest are tomographic/volumetric analysis of surface scan data, including appropriate mathematical modelling. Special emphasis is placed on the development of tools aimed at facilitating user-performed data analysis. Such tools should include state-of-the-art prior knowledge of the (physical) properties of the items that are imaged.

The successful candidate is expected to have the leading role in establishing the centre. A special challenge is that the centre has four different locations, and special emphasis must be placed on ensuring a high level of cooperation between the units. Securing further funding of the centre is obviously important. Possible sources will be general funding agencies as well as industrial and institutional partners.

The successful candidate is expected to offer scientific advice, including consultancy at a national and an international level, and to promote industrial innovation.

The Professor is expected to participate in departmental teaching at all levels—BSc, MSc, and PhD—thus valuing visionary and meaningful communication. Bachelor courses are taught in Danish, other courses in English. Non-Danish speakers are not disqualified for the role, but will be trained in Danish in order to participate in teaching at all levels.

Of special importance is the cooperation with the 3D Imaging Centre at DTU, a research facility involving DTU Compute, DTU Energy, and DTU Physics.

A position as Professor with Special Responsibilities is held for a limited time period and involves all the usual duties associated with a full professorship, as well as fixed-term specific duties which will vary according to the research programme.

Qualifications
The general qualification requirements for the position are a high level of original scientific production at an international level, with the potential to contribute to the further development of the area. Further qualifications are teaching experience at various levels on the University's study programmes—including and in particular at PhD level—as well as the potential to become a successful lecturer. Finally, there must be documented experience in at least one of the following 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 candidate consideration will be given to

- the candidate's qualification for handling the special, function-related assignment(s) that are associated with the position
- scientific production at international level, research potential and ability to lead and develop a research team
- the ability to teach
- 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 the development of internal and external cooperation
- the ability to attract funding to the research area
- visions within the research area

For the specific position, we will give consideration to participation in interdisciplinary projects as well as the potential for (experience with) leading such projects. Candidates must have an entrepreneurial spirit and be motivated by both personal and team accomplishments. Moreover, the following qualifications are also considered important:

- a background in mathematical modelling with theoretical contributions and computational implementations
- a strong background in image analysis, including analysis of 3D data from x-ray sources
- a background in analyzing and developing tools for real imaging data from a diverse range of applications
- experience in working with large-scale facilities.

Salary and appointment terms
The appointment will be based on the collective agreement with the Confederation of Professional Associations. The allowance will be agreed with the relevant union.

The position is available for a 5-year period and may be extended for up to 3 years more. At the end of the period, the employee in question transfers to a position as associate professor at the university.

Further information
Further information may be obtained from Head of Department, Professor Per B. Brockhoff, tel.: +45 4525 3365.

You can read more about DTU Compute on www.compute.dtu.dk.

Application procedure:
Please submit your online application no later than **XX 2017**. Apply online at 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
- A plan for future research
- CV
- Documentation for teaching experience (e.g. in the form of a teaching portfolio)
- 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.