

Professor (with special responsibilities) in Immunoinformatics and Machine-learning

Department of Systems Biology at the Technical University of Denmark invites applications for a position as professor (with special responsibilities) in Immunoinformatics and Machine-learning. The position will be placed in our Protein Science section with about 50 staff members.

The section employs tools within protein structure, function, engineering and molecular interactions as well as proteomics, genomics and immunology to exploit biotechnological and therapeutic potential in relation to enzymatic biomass-processing, interplay of diet, host and gut microbiota, biomarker and vaccine discovery, and innate immune system and lifestyle diseases. The section also teaches Bachelor and Master students within the areas of Biotechnology, Biochemistry, Molecular Biology, Bioinformatics, and Systems Biology. The section has extended international and national collaborations including industrial and clinical partners.

Within Immunoinformatics the section has been frontier breaking, and has played a key role in bringing the field forward and established as an integrated part of immunological research within T and B cell epitope mapping and characterization. In particular has the section developed prediction tools recognised as second-to-none for rational identification of T and B cell epitopes. The backbone of the development of these tools has relied on the strong combined profile within the section on bioinformatics algorithms, machine learning and immunology.

Responsibilities and tasks

The successful candidate is expected to contribute through forefront research and innovation to maintain this edge within Immunoinformatics of our Protein Science section and also to lead further developments of our engineering education within the general area of bioinformatics and machine learning.

Research activities are expected to link to other relevant engineering areas including such that are related to or supporting the research within bioinformatics and systems biology.

The new professor in the Protein Science section will be expected to enter into collaborative projects with groups from the department and relevant DTU departments (DTU Vet, DTU Food, DTU Chemistry and DTU Nanotech). The aim will be to build on and extend existent competences and thereby create synergies with state of the art methodologies in proteomics and immunology to advance existing research agendas and create new ones.

The professor is expected to participate in teaching at the bachelor-, master- and PhD levels.

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 program.

Qualifications

Candidates should have obtained well-documented international recognition within Immunoinformatics and Machine Learning, and mentored young researchers.

The successful candidate should also be able to document teaching experience at all university levels in bioinformatics, immunoinformatics and systems biology.

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 the department's internal and external cooperation
- the ability to attract funding to the research area
- visions within the research area

For the specific position consideration will also be given to:

- internationally recognised researcher within Immunoinformatics and machine learning,
- experience with mentoring young researchers

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.

Further information

Further information may be obtained from Head of Department, Hanne Østergaard Jarmer, +45 4525 2477.

You can read more about Department of Systems Biology on www.bio.dtu.dk.

Application procedure:

Please submit your online application no later than **30 October 2015**.

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
- Diploma (MSc/PhD – an official translation into English)
- List of publications indicating scientific highlights
- Documentation for teaching experience (e.g. in the form of a teaching portfolio)
- A plan for future research

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

Stillingsanalyse - professorer/ingeniørdocenter - fortroligt

1. Instituddirektøren udarbejder stillingsanalysen og det lange stillingsopslag.
2. Stillingsanalysen skal omfatte de 4 punkter, der er nævnt nedenfor. Der skal fokuseres på de væsentligste forhold inden for hvert emne, og beskrivelsen skal være så konkret som mulig. Spørgsmål, der er irrelevante, kan blot springes over. I sidste punkt kan tilføjes oplysninger, der ikke er indeholdt i de første 4 punkter.
3. Stillingsanalysen sendes sammen med det lange stillingsopslag til HR Rekruttering (instituttets kontaktperson) **senest 6 uger før afholdelse af møde i Akademisk Råd**
4. HR Rekruttering kvalitetskontrollerer og sender herefter stillingsanalysen sammen med stillingsopslaget til G-dekanen.
5. G-dekanen godkender inden for 14 dage, at stillingen kan besættes ud fra stillingsanalysen og stillingsopslaget.
6. HR Rekruttering foranlediger, at stillingsanalysen og stillingsopslaget drøftes i direktionen.

Stilling og forskningsområde: Professor (MSO), Immunoinformatics and Machine-learning	Institut og sektion: DTU Systembiologi, Protein and Immune Systems Biology Udarbejdet af: Hanne Østergaard Jarmer, Instituddirektør Dato: 30. 07. 2015
Organisatorisk ramme	
Er stillingen indeholdt i instituttets UMV/handleplan for året?	Ja
Er der budgetteret med stillingen?	Ja
Har stillingen særlig fokus på et af følgende områder: forskning, innovation, forskningsbaseret rådgivning eller undervisning og uddannelse	Stillingen har fokus på forskning og undervisning
Vurderes det, at der vil være brug for midler til opstart af forskningsområdet ved rekruttering af professorer og professorer MSO fra stillinger i udlandet? (professorstartpakke). Beslutning om tildeling af opstatspakke træffes af rektor efter ansøgning fra instituddirektøren.	Nej
Hvorledes passer stillingen ind i instituttets forskningsstrategi og handleplan?	Vi ønsker at bibeholde vores verdensledende position inden for immunoinformatics og machine learning.
Hvorledes passer stillingen ind i instituttets undervisning?	Vigtigt for undervisning i teori og praksis inden for machine learning.

Stillingsanalyse - professorer/ingeniørdocenter - fortroligt

Hvorledes passer stillingen ind i instituttets innovations-strategi?	Området er også relevant på Innovationsområdet.
Hvorledes passer stillingen ind i instituttets forskningsbaseret rådgivning?	Ikke relevant.
Hvad er de strategiske mål i den forskningsgruppe, hvor stillingen er placeret?	The section for Protein Sciences employs tools within protein structure, function, and engineering, as well as proteomics, genomics and immunology to exploit biotechnological and therapeutic potential in relation to enzymatic biomass-processing, interplay of diet, host and gut microbiota, biomarker and vaccine discovery, and innate immune system and lifestyle diseases.
Hvor mange medarbejdere omfatter pågældende forskningsgruppe?	50 medarbejdere i sektioonen.
Er der andre institutter, der har professorater/ingeniørdocentstillinger inden for parallelt forsknings- og undervisningsområde?	Der forskes og undervises i Machine Learning på Compute, og der er god synergi men det mere biologiske og immunologiske fokus der er på Institut for Systembiologi.

Resultater

Hvilke strategiske mål er knyttet til professoratet/ingeniørdocentstillingen?	Bevare DTU's førerpositon inden for området.
Hvilken forbindelse er der mellem mål for dette professorat/ingeniørdocentstilling og med øvrige forskningsgrupper - på instituttet og det øvrige DTU?	Systembiologi arrangerer Protein-DTU møderne og er den samlende kraft inden for proteinområdet på DTU.

Rekruttering

Hvilke personlige og/eller ledelsesmæssige egenskaber	Evnen til at tegne området forsknings og undervisningsmæssigt.
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Stillingsanalyse - professorer/ingeniørdocenter - fortroligt

skal en egnet kandidat have?	
Er der interne kandidater til professoratet/ingeniørdocent-stillingen på instituttet eller det øvrige DTU?	Ja
Kender instituttet til mulige eksterne kandidater?	Ja
Vurderes det, at det vil blive vanskeligt at finde egnede kandidater?	Nej
Hvilke medier skal stillingen slås op i (danske og udenlandske)?	Begge
Hvornår skal stillingen slås op?	Snarest muligt.

Ansættelse

Hvornår skal stillingen besættes?	Snarest muligt.
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Øvrige oplysninger

Institutdirektøren bedes hér skrive, om der er andre forhold, der har betydning for godkendelsen af stillingsanalysen og stillingsopslaget?	
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