PhD scholarship in Environmental Microbiology

The Department of Environmental Engineering at the Technical University of Denmark (www.env.dtu.dk) invites applications for a position as PhD fellow on the topic: *Pathogen invasion in environmental biofilms: role of architecture and community composition".*

The fellowship is funded as part of the Marie Curie Initial Training Network (ITN) MERMAID – Microbial Resource Management for Closing the Urban Water Cycle, which is funded by EU-FP7 People. The aim of MERMAID is to provide research training in the emergent area of Microbial Resource Management and Engineering to close the Urban Water Cycle. The project considers microbial communities present in the urban water cycle as valuable resources that can be steered and exploited to produce, maintain, and deliver high quality water in an energy efficient way. The candidate will join a group of 13 PhD fellows with the opportunity to cooperate across countries and sectors, attend especially tailored courses, and be supervised by a team of excellent researchers who span the breadth from microbial ecology to bioenvironmental engineering.

Candidates must be eligible according to the ITN recruitment guidelines for Early Stage Researchers, i.e. they must have maximum 4 years research experience, measured from the time they completed their Masters, and cannot have resided or carried out their main activity in Denmark for more than 12 months in the 3 years immediately prior to their recruitment.

Responsibilities and tasks

Using molecular ecological and microscopic tools, targeted experimental platforms, and supported by ecological theories, the successful candidate will assess to what extent invasion of environmental biofilm by exogenous organisms, such as pathogens, is governed by biofilm architecture or biofilm community composition. We expect that findings from this research will provide important scientific (What governs invasion of microbial systems?) and practical (e.g., How to protect drinking water safety?) contributions.

The fellow will have the opportunity to benefit from secondments and research visits at one or more of the network partners. The candidate will closely interact with 3 other PhD fellows who focus on microbial community invasion.

The successful candidate will also contribute to teaching at DTU Environment.

Qualification requirements

At the time of appointment, the candidate will have an M.Sc. degree in Microbiology, Microbial Ecology, Biochemical, Chemical or Environmental Engineering or related discipline, evidence of research experience, and significant exposure to one or more of the following areas: environmental microbiology, microscopic or molecular techniques for microbial investigations, molecular biology, image analysis, or bioinformatics. The candidate will have a high motivation for research, evidence of solid written and oral communication skills, and enjoys working in an international and cross-disciplinary team.

We offer

Fellows will work in and contribute to an international and cross-disciplinary research environment. The fellow will be member of a team of PhD candidates, PostDoctoral Associates and Permanent Scientific Staff, with a joint interest in Microbial Ecological Processes. The candidate will benefit from the wide trans-sectoral and transdisciplinary training provided via the Mermaid ITN.

English is the operational language of the hosting department. We offer an exciting and challenging job in an international environment with a good team spirit and attention to professional and personal growth.

Assessment

The assessment of the applicants will be made by Professors BF Smets & HJ Albrechtsen.

Approval and Enrollment

The fellowships are subject to academic approval for admission to the PhD degree, and the candidates will be enrolled in the Life Science PhD program of DTU. For information about the general requirements for enrolment and the general planning of the scholarship studies, please see the DTU PhD Guide.

Salary and Terms of Appointment

The salary and appointment terms are consistent with the current rules for PhD degree students in combination with the salary rules for Marie Curie (ITN) early stage researchers. The period of employment is 3 years. The start date is February 1, 2014 or soon thereafter.

Further information
Further information may be obtained from Professors BF Smets & HJ Albrechtsen.

Please do not send applications to this e-mail address, instead apply online as described below.

Application Procedure

This ad and link to the online application link can be here: http://www.dtu.dk/Job

Applications must include the following:

- A cover letter stating your specific interest, motivation and qualifications for the project in question (max. two pages)
- A curriculum vitae including relevant information on previous employment, research training, experience and competencies, teaching experience, scientific publications, conference presentations, and personal contact information
- Authorized copies of BSc and MSc degree diplomas, including transcript of grades. Excel sheet with translation of grades to the Danish grading system (see guidelines and excel spreadsheet here). Copies of master thesis or coauthored scientific publications.
- Full contact details of at least 2 academic or professional references
- Documentation of English language competency.

To apply, please open the link "Apply online", fill in the online application form, and attach **all your materials for the application in English in one PDF file**. Deadline for submission of the online applications is Jan 15 2014.

Candidates may apply prior to obtaining their Master's degree, but cannot begin before having received it.

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

For almost two centuries DTU, Technical University of Denmark, has been dedicated to fulfilling the vision of H.C. Ørsted – the father of electromagnetism – who founded the university in 1829 to develop and create value using the natural sciences and the technical sciences to benefit society. Today, DTU is ranked as one of the foremost technical universities in Europe, continues to set new records in the number of publications, and persistently increases and develops our partnerships with industry, and assignments accomplished by DTU's public sector consultancy. The department of Environmental Engineering (DTU Environment) is a DTU-institution at the highest international level. We are working to develop new environmentally friendly and sustainable technologies and disseminate this knowledge to society and new generations of engineers. There are about 180 employees at DTU Environment, of which more than 60 are doctoral students. We have employees with 25 different nationalities. The academic breadth and the multidisciplinary approach to solving complex environmental problems are reflected in the scientific staffing profile. DTU Environment employs engineers, chemists, biologists, geologists and physicists who work with a broad group of Danish and international partners, for example public authorities, consultants, manufacturers, and the world's leading universities and research groups within our area.