

# Denmark:PhD Scholarship in Collection, Visualization, and Prediction of Early Warning Signs in ECG Monitoring

DTU Compute's Section for Embedded Systems and Copenhagen Center for Health Technology (CACHET), would like to invite applications for a 3-year PhD position starting November 1<sup>st</sup> 2017. The project is financed by CACHET.

CACHET is an interdisciplinary research center spanning the technical and health sciences and consists of a unique academic network of researcher working together on the design, realization, evaluation, and implementation of personal health technology.

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

## Project Description

The aim is to design and develop an integrated monitoring and treatment IT platform for cardiovascular diseases. This platform consists of three main components: (i) ECG monitoring devices, (ii) an end-user mobile application for patients to allow for greater self- and risk awareness, and (iii) a clinical cloud-based data collection and visualization system that enables collaboration between the clinical stakeholders and hence enables the intended reorganization of the treatment.

The scientific focus is on researching a generic framework and architecture for detection, visualization, and communication of early warning signs (EWS) with a special focus on streaming data like ECG. The goal is to design and implement a system, which is put into clinical trail and evaluation.

## About the role

Applications are sought from candidates interested in pursuing a PhD in ubiquitous computing and software architecture. Candidates will be based in DTU Compute, Denmark and will be registered for the doctoral program within Technical University of Denmark.

You will be part of a large interdisciplinary research project called the " [REAFEL - Reaching the Frail Elderly Patient for optimizing diagnosis of atrial fibrillation](#) ", which spans both the technical and medical sciences and involving a wide range of partners. The project has been funded from the Danish Innovation Fund.

## Qualifications

Candidates should:

• have a minimum of a master's degree with substantial knowledge in the fields of software technology, or pervasive healthcare.

• provide evidence of strong software engineering competences.

• provide evidence of excellent competence in communication in English – both oral and in writing.

## Approval and enrolment

The scholarship for the PhD degree is subject to academic approval, and the candidate will be enrolled in the DTU Compute PhD School Programme. For information about the general requirements for enrolment and the general planning of the scholarship studies, please see the [DTU PhD Guide](#) .

## Assessment

The assessment of the applicants will be made by Professor Jakob E. Bardram.

## We offer

We offer an interesting and challenging job in an international environment focusing on education, research, scientific advice and innovation, which contribute to enhancing the economy and improving social welfare. We strive for academic excellence, collegial respect and freedom tempered by responsibility. The Technical University of Denmark (DTU) is a leading technical university in northern Europe and benchmarks with the best universities in the world.

## Salary and appointment terms

The salary and appointment terms are consistent with the current rules for PhD degree students. The period of employment is 3 years.

## Further information

Further information may be obtained from prof. Jakob E. Bardram, [jakba@dtu.dk](mailto:jakba@dtu.dk) , tel.: +45 2555 0446.

You can read more about Copenhagen Center for Health Technology on [www.cachet.dk](http://www.cachet.dk) and about DTU Compute on [www.compute.dtu.dk/english](http://www.compute.dtu.dk/english) .

Further information concerning the application is available at the DTU Compute [PhD homepage](#) or by contacting PhD coordinator Lene Matthisson +45 4525 3377 .

## Application

Applications must be submitted in English as **one single PDF** containing all materials to be given consideration and we must have your online application by **1 September 2017** . Please open the link in the red bar in the top of the page: "apply online" ("ansøg online"). Applications must include:

• A letter motivating the application (cover letter)

• Curriculum vitae

• Grade transcripts and BSc/MSc diploma

• Excel sheet with translation of grades to the Danish grading system (see [guidelines](#) and [excel spreadsheet here](#) )

Candidates may apply while completing their master's degree, but cannot begin before having received it. In this case a letter from the master thesis supervisor or expected finishing date should be attached.

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

**Tentative Submission Deadline : 1 September 2017**

[Further Information](#)