

PhD in Applied Statistics / Decision Theory

Department/faculty: Electrical Engineering, Mathematics and Computer Science

Level: Master degree

Working hours: 38 hours per week

Contract: 4 years

Salary: €2125 to €2717 per month gross

Electrical Engineering, Mathematics and Computer Science

The Faculty of Electrical Engineering, Mathematics and Computer Science (EEMCS) is known worldwide for its high academic quality and the social relevance of its research programmes. The faculty's excellent facilities accentuate its international position in teaching and research. Within this interdisciplinary and international setting the faculty employs more than 1100 employees, including about 400 graduate students and about 2100 students. Together they work on a broad range of technical innovations in the fields of sustainable energy, telecommunications, microelectronics, embedded systems, computer and software engineering, interactive multimedia and applied mathematics. EEMCS: Your Connection to the Future.

Research is carried out at DIAM into the design, analysis and simulation of mathematical models. This research is both analytical and numerical in nature and is often inspired by technical applications. The department plays an active role in translating research results into concrete, practical applications. It maintains intensive contacts with other TU Delft departments, the major technological institutes (ECN, NLR, WL, Rijkswaterstaat, MARIN, TNO) and the research laboratories of major companies. Within its own subject field the department provides teaching for the Applied Mathematics BSc and MSc programmes, and also contributes to the teaching of mathematics courses within other academic programmes at the TU Delft and within national programmes such as "MasterMath". The Statistics group covers one of the key research areas at DIAM. It aims at developing theory within the field of mathematical statistics as well as applying state-of-the-art statistical theory to problems from practice. Within DIAM, there is close collaboration with the applied probability group, exemplified by a joint weekly seminar and joint educational efforts (basic probability and statistics courses and courses in the Finance minor and master tracks) and active participation in Delft Data Science (DDS). The Statistics Helpdesk constitutes an interesting interface with other disciplines present at the TU Delft, leading to new interesting statistical problems and appreciation of statistics by other research groups. The group is relatively small and communication lines are short.

Job description

The research project "Data injection for information gain and fast decision making" is a collaboration of Delft Data Science (DDS) and Capgemini. Within this project there are two vacancies for PhD students: one in the area of applied statistics and one in the web information systems group. The statistics project is aimed at early detection of risks based on publically available data streams. Many industrial/societal decisions are formulated in terms of well-defined quantities that can be hard to obtain in time and/or exactly. Based on models that use the dependence between the variables of interest and publically available data, early warning systems will be designed, enabling decision makers to anticipate possible decisions that need to be made in the near future. The PhD student will perform research in the area of applied statistics and decision theory, focusing on dependence modelling and the development of early warning systems for emergent risks. In particular, (s)he will work on modelling the dependence between data that are disclosed with delay and/or may be incomplete, and dynamic data streams which are available from public sources. An important ingredient of such a model is an assessment of the quality and added value of the second type of data. There will be close collaboration with the PhD student in the Web Information Systems group in the Computer Science and Engineering Department. The PhD student will present his/her results at high-quality, relevant conferences and publish them in quality peer-reviewed journals in the field, culminating in a PhD thesis to be defended in public. The position includes modest teaching duties.

Requirements

The candidate possesses an MSc degree in mathematics (specialisation in statistics, risk analysis or probability theory), computer science (specialisation in machine learning) or another relevant area. (S)he must be highly motivated and ambitious, have a strong curriculum in statistical methodology and data modelling and a keen interest in big data applications. In addition, we require very good communication skills and fluent spoken and written English.

Conditions of employment

The TU Delft offers a customisable compensation package, a discount for health insurance and sport memberships, and a monthly work costs contribution. Flexible work schedules can be arranged. An International Children's Centre offers childcare and an international primary school. Dual Career Services offers support to accompanying partners. Salary and benefits are in accordance with the Collective Labour Agreement for Dutch Universities.

As a PhD candidate you will be enrolled in the TU Delft Graduate School. The TU Delft Graduate School provides an inspiring research environment; an excellent team of supervisors, academic staff and a mentor; and a Doctoral Education Programme aimed at developing your transferable, discipline-related and research skills. Please visit <http://graduateschool.tudelft.nl/> for more information. The TU Delft sets specific standards for the English competency of the teaching staff. The TU Delft offers training to improve English competency.

Information and application

For more information about this position, please contact Dr. D. Kurowicka (D.Kurowicka@tudelft.nl) or Prof. G. Jongbloed (G.Jongbloed@tudelft.nl). Applications should include a letter of application emphasising your specific interest in and qualifications for this position, a detailed CV, a publication list if applicable, contact details of at least two references, and a transcript of the course programmes attended and the grades obtained. Please e-mail your application by 15 December 2015 to Mrs.Drs. P.T.M. van den Bergh, Hr-eemcs@tudelft.nl.

When applying for this position, please refer to vacancy number EW12015-43.

Enquiries from agencies are not appreciated.

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Factsheet

Department/faculty Electrical Engineering, Mathematics and Computer Science

Level Master degree

Hours per week 38
Location Delft
Contract 4 years
Salary €125 to €717 per month gross

Closing date 15-12-2015
Vacancy nr. EWI2015-43

Information

For more information about this job, please contact D. Kurowicka, Associate Professor.

T N/A

E D.Kurowicka@tudelft.nl

For more information about the application procedure, please contact Drs. P.T.M. van den Bergh/HRM.

E Hr-eemcs@tudelft.nl

<http://recruitment2.tudelft.nl/vacatures/index.php?lang=en&id=564781&type=a>