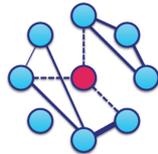


PhD Student in the Distributed Systems Group

*"Blockchain technology to provide trust in
federated telecom and ICT infrastructures"*

Delft University of Technology, the Netherlands



Delft University of Technology invites applicants for a PhD position in the Distributed Systems Group in the Department Software Technology of the Faculty of Electrical Engineering, Mathematics and Computer Science. This position has been established in the context of the NExTWORKx collaboration between TU Delft and KPN, the leading fixed and mobile telecom operator in the Netherlands. The goal of this collaboration is to perform research into both the fundamental properties and the implementation of the next generation telecommunication networks.

The Distributed Systems Group

The Distributed Systems group, under the leadership of Prof. Dick Epema, performs world-class research in the design, implementation, deployment, and analysis of large-scale, Internet-based computer systems. It currently has three research lines: scheduling and resource management in distributed computing systems (e.g., in clusters and clouds), big-data processing (e.g., graph processing), and cooperative systems (blockchain technology, trust and reputation systems). Its research is fundamental, aimed at the development and evaluation of new generic concepts in systems software, and application-driven, motivated by important application areas. Much of it is experimental, validating the proposed new concepts by means of implementation and deployment in prototypes that are used in the real world. The Distributed Systems Group leads the TU Delft initiative Delft Blockchain Lab (DBL), which is supported by the board of the university.

The Department Software Technology

The Department of Software Technology (ST) is one of the leading Dutch departments in research and academic education in computer science, employing over 150 people. The department ST is responsible for a large part of the curriculum of the bachelor's and master's programmes in Computer Science as well as the master's programme in Embedded Systems. The inspiration for its research topics is largely derived from technical ICT problems in industry and society related to large-scale distributed processing, embedded systems, programming productivity, and web-based information analysis.

The Faculty 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. Offering an international environment, the faculty has more than 1100 employees (including about 400 PhD students) and more than 2100 bachelor's and master's students. Together they work on a broad range of technical innovations in the fields of electrical sustainable energy, microelectronics, intelligent systems, software technology, and applied mathematics.

Job description

Blockchain is a very promising technology for generating trust in large-scale systems and for the tamper-proof recording of multiparty transactions. The goal of this PhD project is to adapt and apply blockchain technology to provide trust in the operation and management of telecommunication networks (e.g., in 5G networks) and in the users services (e.g., payment services) that telecom providers run on those networks.

Requirements

We are looking for candidates who satisfy the following requirements:

- an MSc degree with excellent results in Computer Science, preferably in distributed systems, distributed algorithms, blockchain technology, or related areas
- experience in writing system-level code and conducting scientific evaluations through experimentation
- good speaking and writing skills in 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. The gross salary for this position ranges from €2222 to €2840 per month.

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.

Information and application

For more information about this position, please contact Prof. D.H.J. Epema, e-mail:

D.H.J.Epema@tudelft.nl or Dr. J.A. Pouwelse, e-mail: J.A.Pouwelse@tudelft.nl. To apply, please send by e-mail an application letter, a curriculum vitae, transcripts of BSc and MSc degrees, copies of BSc and MSc diplomas, proof of language skills if applicable, and the names of two references by June 1, 2018 to Mrs L. Ophey at Hr-eemcs@tudelft.nl. When applying for this position, please refer to vacancy number EW12018-22.

Related web links

The Distributed Systems Group: <http://www.ds.ewi.tudelft.nl>

Delft Blockchain Lab: <https://www.tudelft.nl/delft-blockchain-lab>, <http://www.blockchain-lab.org>