2018-05-04

PhD student in Computer Science

at BTH, Blekinge Institute of Technology with placement at the Department of Computer Science and Engineering, Karlskrona

Reference number: BTH 3.1.2-0352-2018

About the position:
The PhD student will conduct the research within the research subject area of Computer Science with focus on automation of test environments for cyber security.

The student will have an individual study plan in Computer Science, which details a research, study and teaching plan. Rules and benefits for PhD students in Sweden apply to this position.

Teaching at basic and advanced level in Computer Science is also part of the position (up to 20% of full time).

About the research focus:
High-profile cyber-attacks that aim to disturb services vital for society or harm national interests are on the raise. The Stuxnet worm that damaged uranium enrichment equipment in Iranian nuclear power plants and the recent cyber-attack on electricity distribution companies in Ukraine that left hundreds-of-thousand customers without electricity are striking examples of modern cyberwarfare. Other types of cyber-attacks, such as ransomware, rely on less damaging malware, but can nonetheless result in high financial loss due to compromised data and service downtime.

Being able to test network services and monitor connected devices is essential for discovering potential vulnerabilities or ongoing cyber-attacks. These requirements are being challenged by the transition to IPv6, by the prevalence of multihoming and mobility features in networked devices and by the increased usage of network virtualization mechanisms.

The researchers at the Department of Computer Science and Engineering (DIDD) have tackled system performance and security problems during many years. We are now looking to expand our research group that works with cybersecurity and cloud computing infrastructure. We are looking for a strong candidate that has a significant interest, driving force and ability to learn how to identify, formulate, analyze and solve complex problems independently as well as together with a research team.

The PhD student will be associated mainly with research project Test Arena Blekinge where BTH collaborates with companies from the region in developing a testbed that enables safe analysis of cyberattacks and malware as well as efficient testing of countermeasures against these threats.

About the department:
The Department of Computer Science and Engineering (DIDD) was established on January 1, 2014. DIDD belongs to the Faculty of Computing and currently includes 53 staff members out of which 25 are senior researchers and 15 are PhD students. The department offers education and conducts research in computer science and computer engineering as well as related areas. The University profile is applied IT and innovation for sustainable development. The research and education at DIDD are completely aligned to this profile, and are conducted in close collaboration with partners from both the private and the public sector.

Requirements:
- Hold a Masters degree in either Computer Science or Electrical Engineering, with emphasis on security, tele- or data communication.
- Demonstrate good system administration and security skills.
- Demonstrate proficiency in English (reading, writing, speaking).
- Show ability to work independently as well as in a team.

Desired qualifications also include:
- Good knowledge about IPv6
- Experience with cloud administration or cloud performance analysis, in particular with OpenStack and SDN.
- CISCO certification(s)
- Experience with Chef, Puppet, Ansible, Salt or similar frameworks for automatic configuration and orchestration.
- Pedagogical skills.
- Experience with working in a research environment and collaborating with researchers.
- Proficiency in Swedish (reading, writing, speaking).

Appointment:
Only those who are being admitted or already have been admitted to postgraduate studies at an institution of higher education may be appointed to the position.

Commencement: 2018-09-01 or according to agreement.

Employment:
100%

Duration:
Employment until licentiate exam, which means 2,5 years if employment is divided as 80% research and 20% departmental work. If possible, e.g., depending on external financing, the employment can be extended to PhD exam.

Salary:
For PhD students at BTH a standard salary scale is applied, which means that the salary is adjusted upwards as the student progresses through the program.

For more information:
About the department: http://www.bth.se/didd

Contact persons for more information about the position:

- Prof. Lars Lundberg, Head of department, phone +46 455-38 58 33
- Mikael Åsman, Union representative (SACO), +46-455-38 57 20

- Carina Petersson, Union representative (OFR) +46-455-38 50 28.

Application:
The application should include the following:

- A letter of interest, including a statement of the applicant's background and experience/knowledge in the targeted areas.
- CV.
- Certified copies of certificates and diplomas.
- Contact information for 2 References.
- The earliest date the candidate can start work.
- Appendix with current publications (if applicable).
- Link to their thesis (latest/highest degree).

BTH is an equal opportunity employer, thus all applicants are welcome to apply.

Please submit your application, marked with the **reference number BTH 3.1.2-0352-2018**, by **August 8th, 2018 at the latest**. Applications should be sent to: The Registrar: diarium@bth.se.

Blekinge Institute of Technology, BTH,

Blekinge Institute of Technology, BTH, is one of the most distinctly profiled universities in Sweden, where applied IT and innovation for sustainable growth are in focus. In our education and research, engineering and IT are integrated with other disciplines such as urban planning, industrial economics, design and health sciences to contribute to solving the challenges facing society. Everything we do at BTH has three distinct perspectives: innovation, sustainability and in real life, which means cooperation and exchange with both business and industry as well as society. A characteristic of BTH is the close cooperation with industry and society, which permeates both education and research at the regional, national and international level. We conduct education and research at a high international level. BTH has two faculties – the Faculty of Computing and the Faculty of Engineering.

Welcome with your application!