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Information

For more information about this vacancy you can contact: julien.schmaltz@ou.nl or www.cs.ru.nl/~julien/

For additional information about the Open Universiteit or the faculty of Informatics, you can visit our website: www.ou.nl

The Open Universiteit offers flexible working conditions and good secondary benefits such as training, mobility, part-time employment and paid parental leave.

Application Procedure

Letters of application should be accompanied by a Curriculum Vitae and contact details of at least 2 references. Please write the vacancy number both on the letter and the envelope and send the application to: Open Universiteit, Financial Administrative Service centre (FAS), P.O. Box 2960, 6401 DL Heerlen, The Netherlands. You can also apply by sending these documents via e-mail to solliciteren@ou.nl. Do not forget to mention the vacancy number.

Closing date: The position remains open until filled.

The Software Technology group is part of the faculty of Computer Science. The research program focuses on ICT and education, functional programming, and formal methods. There is a strong collaboration with the university of Utrecht and the Institute of Computing and Information Sciences(ICIS) of the Radboud University Nijmegen. During the last national research assessment, an international committee ranked ICIS as best among all computer science research institutes in the Netherlands.

The faculty of Computer Science invites applications for a PhD position in the context of the project "Functional correctness of communication fabrics: deadlock, livelock, and memory consistency". This project is partially funded by a grant from Intel Corporation.

PhD candidate

(1,0 fte) temporary position for 4 years

Vacancy number FAC/INF/11044

Technology scaling is expected to continue to the 2020-2025 time frame increasing the number of logic blocks on a single die. In particular, the number of cores will increase significantly. In this multi-core era, communication fabrics are critical for the quality of future computer industry products. Communication fabrics range from regular rings and meshes to irregular SOC systems. One of the greatest challenge faced by industry is the design of the communication fabrics, also called Networks-on-Chips.

The goal of the project is to develop a formal verification environment to prove liveness and safety properties such as cache coherency, producer-consumer relation, and memory consistency proofs taking into account micro-architectural details. The goal is to produce tools to automatically analyze microarchitectural descriptions of communication fabrics with 100s of agents and 1000s of queues.

Our project is part of a larger cluster involving groups from USA, Canada, Sweden and Spain. There will be regular visits to Intel premises in Oregon and collaborations within the cluster are expected. The research of this PhD student will be done in close collaboration with ICIS, Radboud University Nijmegen.

Requirements

The candidate must hold an MSc or equivalent with top performance in a field that is closely related to computer science or mathematics. He or she should have interest in conducting original scientific research, publishing the results in top conferences and scientific journals, and participating in teaching duties. Maturity, self-motivation, and the ability to work both independently and as a team player in local and international research teams are expected. Dutch language skills are not required, English is mandatory.

Salary

The PhD candidate will be appointed for a period of one year. The appointment will be extended to four years when progress and performance are good. The salary is € 2.042,- gross per month in the first year and is expected to increase to € 2.612,- in the fourth year, for a full time appointment, contingent on satisfactory performance.

Station
Nijmegen

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