

Mohsen Safari

Contact Information

Address: University of Twente, Faculty EEMCS, Formal Methods and Tools, Zilverling Building, room 3082, P.O. Box 217 7500 AE Enschede, The Netherlands.

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Personal Information

Date of Birth: April 5, 1991

Nationality: Iranian

Research Interests

Parallel Computing: Parallel and Distributed Graph Algorithms, Design of Many-core Programs, GPGPU Computing

Formal Methods: GPGPU Program Verification, Automated Verification of Massively Parallel Software

Education

University of Twente, Enschede, The Netherlands

Ph.D., Computer Science, 2018 - Present

- Main Subject: *Automated Verification of Parallel and Distributed Software (e.g., GPGPU Programs)*
- Advisor: Prof. Dr. Marieke Huisman

University of Zanjan, Zanjan, IRAN

M.S., Computer Engineering, 2014 - 2017

- Thesis Topic: *Designing and Implementing Parallel Algorithms for Finding Shortest Paths in Dynamic Weight Directed Graphs on GPUs*
- Advisors: Dr. Ali Ebneenasir and Dr. Mohsen Afsharchi
- GPA: 3.56 (out of 4)
- Courses with top grades: Multi Agent System, Advanced Software Engineering, Image Processing, Software Measurement and Quality Assurance, Graph Theory

University of Bojnord, Bojnord, IRAN

B.S., Computer Engineering, 2009 - 2014

- Thesis Topic: *A Survey on Routing Algorithms in Wireless Sensor Networks*

Visiting Research Experience

October 2016 - April 2017: Visiting Research Student at the Department of Computer Science and Information Technology, Institute for Advanced Studies in Basic Sciences (*IASBS*), Zanjan, Iran.

Conference/Workshop/Symposium Publications

2017: **M. Safari** and A. Ebneenasir “Locality-Based Relaxation: An Efficient Method for GPU-Based Computation of Shortest Path”. Second IFIP International Conference on Topics in Theoretical Computer Science (TTCS), LNCS, Springer.

2018: S. Joosten, W. Oortwijn, **M. Safari** and M. Huisman ”An Exercise in Verifying Sequential Programs with VerCors”. In Formal Techniques for Java-like Programs (FTfJP).

M. Huisman, S. Blom, S. Darabi and **M. Safari** ”Program Correctness by Transformation”. 8th International Symposium On Leveraging Applications of Formal Methods, Verification and Validation (ISoLA), LNCS, Springer.

Awards and Honors

September 2016: Acquiring an admission along with \$30000 full Graduate Teaching Assistantship from Michigan Technological University in PhD degree (USA visa was rejected).

February 2018: Joining the Formal Methods and Tools group at the University of Twente to work on MERCEDES project (maximal reliability of concurrent and distributed software) in PhD.

April 2018: Obtaining a travel grant to participate VerifyThis competition taking place as part of the European Joint Conferences on Theory and Practice of Software (ETAPS).

April 2018: Best student team (silver award) at VerifyThis competition taking place as part of the European Joint Conferences on Theory and Practice of Software (ETAPS).

May 2018: Obtaining a travel grant to participate Oregon Programming Languages Summer School (OPLSS) at University of Oregon (USA visa was rejected).

June 2018: Obtaining a travel grant to participate UPMARC Multicore Computing Summer School at Uppsala University, Sweden.

Teaching Assistantships

April-July 2018: Programming Principles, Patterns, and Processes by Dr. A. Fehnker, University of Twente.

Presentations and Talks

September 2017: Locality-based Relaxation. Presenting the paper ”Locality-Based Relaxation: An Efficient Method for GPU-Based Computation of Shortest Path” at TTCS conference, IPM, Tehran, IRAN.

March 2018: Vertex-based Shortest Path Algorithms on GPU. Group colloquium at the Formal Methods and Tools research group, University of Twente, the Netherlands.

April 2018: Arc-based Shortest Path Algorithms on GPU. Group colloquium at the Formal Methods and Tools research group, University of Twente, the Netherlands.

May 2018: Parallel Algorithms to solve Shortest Path Problems in large graphs on GPUs. 4TU NIRICT Workshop on GPGPU Systems, Utrecht, the Netherlands.

Hardware and Software Skills C/C++ Programming, Java Programming, CUDA/OpenCL Programming, LaTeX, Alloy Specification Language, SPIN Model Checker