Ehsan Poorhadi

Division of Theoretical Computer Science, KTH Royal institution of Technology, Stockholm, Sweden

poorhadi@kth.se | https://www.kth.se/profile/poorhadi | ehsan-poorhadi-5aa4a5179

Fields of Interest

- Formal Specification
- Formal Verification
- Safety and Security Interaction
- Model-Based System Engineering
- Mathematical Modeling

Education

KTH Royal Institution of Technology *Stockholm, Sweden*

Ph.D. in Computer Science Jun. 2019 - Jun. 2024

- Research Focus: Formal Modeling of the Impact of Cyberattacks on the Safety of Networked Control Systems
- Supervisor: Elena Troubitsyna

Isfahan University of Technology (IUT) *Isfahan, Iran*

MS in Applied Mathematics-Combinatorics and Graph Theory 2013 - 2016

- Research Focus: Ad-Words and Online Matching
- Supervisor: Ramin Javadi

Azad University of Isfahan *Isfahan, Iran*

BS in Applied Mathematics 2009 - 2013

Publications

[1] **E Poorhadi**, E Troubitsyna, G Dán. "Analysing the Impact of Security Attacks on Safety Using SysML and Event-B," *Model-Based Safety and Assessment: 8th International Symposium, IMBSA* , 2022. [Link]

[2] **E Poorhadi**, E Troubitsyna, G Dán. "Formal modelling of the impact of cyber attacks on railway safety ," *Computer Safety, Reliability, and Security. SAFECOMP Workshops: DECSoS*, 2021. [Link]

[3] **E Poorhadi**, E Troubitsyna, G Dán. "Formalising the impact of security attacks on IoT safety," *Computer Safety, Reliability, and Security. SAFECOMP Workshops: DECSoS*, 2020. [Link]

[4] R Javadi, **E Poorhadi**, F Fallah. "Packing cliques in 3 uniform hypergraphs," *Journal of Combinatorial Designs*, 2020. [Link]

Awards and Honors

2013 Rank 1^{st} among graduates in Applied Mathematics in Azad University of Isfahan

2016 Rank 1^{st} among graduates in Combinatorics in Isfahan University of Technology

Teaching Experience

- Software Safety and Security (DD2460), KTH
- Programming Techniques (DD1310), KTH
- Protocols and Principles of the Internet (IK2218), KTH
- Logic for Computer Scientists (DD1351), KTH
- Algorithms and Complexity (DD2352), KTH
- Graph Theory, IUT
- Fundamental of combinatorics, IUT

Projects

- **EBSysMLSec**: A translation tool based on ATL from SysML to Event-B (2022)
- **RBC ID block assignment**: An optimization tool developed for Trafikverket to configure a number of RBCs (2021)

Technical Skills

Programming	Python
Professional Softwares	Magic Systems of Systems Architect, Gephi, LaTeX, AddressSanitizer
Formal methods	Event-B, Frama-C, NuSMV, Java PathFinder
Operating Systems	Linux (Ubuntu), Windows
Model transformation languages	ATL
Languages	English, Farsi

Volunteer Services

Software and Systems Modeling and EasyChair conferences (ABZ, SEFM, ICFEM)

Peer Reviwer

Isfahan Mathematics House *Isfahan, Iran*

Teaching / Organizing seminars 2013 - 2019

References

- Prof. Elena Troubitsyna
  Division of Theoretical Computer Science, KTH Royal Institution of Technology, Stockholm, Sweden
  +46 70 087 71 09 elenatro@kth.se
- Prof. György Dán
  Division of Network and Systems Engineering, KTH Royal Institution of Technology, Stockholm, Sweden
  +46 8 790 42 53 gyuri@kth.se