

Arash Pourdamghani

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Research Interests

Self-Adjusting Data Structures
Digital Economy & Blockchain
Algorithms for Networked Systems

Education

- 2021-Present **TU Berlin**, Berlin, Germany.
PhD in Computer Science, continuation from University of Vienna
- 2020-2021 **University of Vienna**, Vienna, Austria.
Direct PhD in Computer Science
- 2014-2019 **Sharif University of Technology**, Tehran, Iran.
BSc in Computer Engineering

Publications

- SeedTree: A Dynamically Optimal and Local Self-Adjusting Tree**, with Chen Avin, Robert Sama, and Stefan Schmid.
IEEE Conference on Computer Communications (INFOCOM'23)
- Self-Adjusting Partially Ordered Lists**, with Vamsi Addanki, Maciej Pacut, Gabor Retvari, Stefan Schmid, and Juan Vanerio.
IEEE Conference on Computer Communications (INFOCOM'23)
- The Augmentation-Speed Tradeoff for Consistent Network Updates**, with Monika Henzinger, Ami Paz and Stefan Schmid.
ACM SIGCOMM Symposium on SDN Research (SOSR'22)
- Software-Defined Reconfigurable Intelligent Surfaces: From Theory to End-to-End Implementation**, with Christos Liaskos, Lefteris Mamatas, Ageliki Tsioliaridou, Sotiris Ioannidis, Andreas Pitsillides, Stefan Schmid and Ian Akyildiz.
Proceedings of the IEEE (PIEEE'22)
- Hybrid Mining: Exploiting Blockchain's Computational Power for Distributed Problem Solving**, with Krishnendu chatterjee and Amir Kafshdar Goharshady.
ACM Symposium on Applied Computing (SAC'19)
- Probabilistic Smart Contracts: Secure Randomness on the Blockchain**, with Krishnendu chatterjee and Amir Kafshdar Goharshady.
IEEE International Conference on Blockchain and Cryptocurrency (ICBC'19)
- Fence Insertion in Loop-less Programs**, with Mohammad Taheri and Mohsen Lesani.
International Symposium on Distributed Computing (DISC'19)

Work Experiences

- 2023-Present **Associate Researcher**, *Research Group Digital Economy, Internet Ecosystem, and Internet Policy, Weizenbaum Institute for the Networked Society*, Berlin, Germany.

- 2021-Present **Research Assistant**, *Intelligent Networks, TU Berlin*, Berlin, Germany, Under the supervision of Prof. Stefan Schmid.
- 2020-2021 **Research Assistant**, *Communication Technologies group, University of Vienna*, Vienna, Austria, Under the supervision of Prof. Stefan Schmid.
- Summer 2018 **Research Intern**, *Computer-Aided Verification group, IST Austria*, Vienna, Austria, Under the supervision of Prof. Krishnendu Chatterjee.
- Summer 2017 **Research Intern**, *Chinese University of Hong Kong*, Hong Kong, China, Under the supervision of Prof. James Cheng.
- Summer 2016 **Undergraduate Research Experience**, *Sharif University of Technology*, Tehran, Iran, Under the supervision of Dr. Amin Fazli.

Selected Courses

Data Structures and Algorithms: (20/20)
 Advanced Programming: (20/20)
 Network Algorithm: (20/20)
 Graph Theory: (20/20)

Awards

- Fall 2020 **Phd Grant for ERC project self-adjusting networks**, *ERC*.
- Fall 2020 **Career Grant**, *FFG Austria*.
- Fall 2019 **MacCracken PhD Fellowship**, *NYU*.
- Spring 2019 **Student Travel Grant**, *ACM SIGAPP for SAC 2019*.
- Summer 2018 **2-month scholarship**, *The Austrian Agency for International Cooperation in Education & Research (OeAD-GmbH)*.
- Fall 2016 **Awarded for Success in Studies**, *Sharif University of Technology*.
By the university president.
- 2014-2016 **Grant for Undergraduate Studies**, *Iran's National Elites Foundation*.
For outstanding academic success.
- Summer 2013 **Silver Medal**, *Iranian National Olympiad in Informatics (INOI)*.
I was selected among more than tens of thousands of Iranian top students.

Teaching

- 2021-Present **Tutor**, *TU Berlin*, Berlin, Germany.
 Algorithms for Networked and Distributed Systems (Winter 2021, Winter 2022)
 Cryptocurrency and Blockchain Networks Seminar (Summer 2022, Summer 2023)
 Network Protocols and Architectures (Winter 2021)
- 2015-2018 **Teaching Assistant**, *Sharif University of Technology*, Tehran, Iran.
 Algorithms Design and Analysis, Dr. Mohammad Ali Abam (Fall 2018)
 Data Structures and Algorithms, Dr. Ali Sharifi Zarchi (Spring 2016, Spring 2017, Spring 2018)
- 2014-2016 **Olympiad Teacher**, *Iranian National Olympiad in Informatics Summer Camp*, Tehran, Iran.

Skills

- Programming Python, Java, C++, Solidity
- Languages English (advanced), Persian (native), German (basic)