Amir Naseredini

London, UK

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Technical Interests

- Open Source Software
- Vulnerability Patching
- Formal Security
- Secure Information Flow
- Vulnerability Analysis
- Microarchitectural Attacks

Education

University of Sussex, Brighton, UK

Ph.D. in Informatics (Computer Science), Sep. 2018 - October 2023

- PhD Thesis: “Towards Automatic Analysis of Microarchitectural Attacks”

Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran

M.S. in Information Security, Sep. 2015 - Feb. 2018

- Master’s Thesis: “Algebraic Cryptanalysis of ARX-Design Hash Functions”, (Ranked 3rd among 10 classmates)

University of Kurdistan, Sanandaj, Iran

B.S. in Information Technology, Sep. 2011 - July 2015

- Overall GPA: 18.47/20 - 1st Student Award, in Computer Eng. and IT Department

Work/Research Experience (Notable Projects)

Canonical, London, UK

- **Security Engineer, Jan. 2023 - Present**
  - Analyse, fix, and test vulnerabilities in Ubuntu packages
  - Keep track of vulnerabilities in Ubuntu releases as they are discovered, researched and fixed
  - Snap reviewer at the Snap Store
  - Audit source code for vulnerabilities

Google, London, UK

- **Security Engineer Intern, Sep. 2022 - Dec. 2022**
  - Developed a full stack device in crosvm in order to make the DRAM analysis easier
  - Worked under the supervision of Alexandra Sandulescu.

Royal Holloway University of London, London, UK

- **Postdoctoral Research Assistant, March. 2022 - Sep. 2022**
  - Conducted research on “Automata Learning” and “Rowhammer Attacks” under the supervision of Dr. M. Sammartino.

University of Sussex, Brighton, UK

- **Researcher, Sep. 2018 - October 2023**
  - Conducted research on “Automation” and “Formal Security” under the supervision of Dr. M. Berger.

TU Graz, Graz, Austria

- **Visiting Researcher, Sep. 2020 - March 2021**
    - Conducted research on “Microarchitecture Attacks” under the supervision of Dr. D. Gruss.

Skills

Programming Language

- Rust
- Haskell
- Python
- Java
- C/C++

Languages

- Kurdish: Native proficiency
- Persian: Native proficiency
- English: Full Professional proficiency
- Arabic: Elementary proficiency

Honors and Awards

- Awarded with the School of Engineering and Informatics' Fully-Funded Scholarship by University of Sussex, September 2018
- Selected as a Talented Student, two times (University of Kurdistan): Dec 2013 to Dec 2015.
- Ranked #27 in the PhD National Entrance Test of Iran (Among 1093 persons).
- Ranked #2 in the M.S. National Entrance Test of Iran, With Respect to my B.S. GPA.
- Ranked #6 in Lahijan ACM Contest, on site, March 2014.

Publications and Presentations

- A. Naseredini, M. Berger, M. Sammartino, S. Xiong, "ALARM: Active LeArning of Rowhammer Mitigations", Hardware and Architectural Support for Security and Privacy (HASP) 2022, October 1, 2022 -- co-located with MICRO 2022
- A. Naseredini, S. Gast, M. Schwarzl, P. Bernardo, A. Smajic, C. Canella, M. Berger, D. Gruss, "Systematic Analysis of Programming Languages and Their Execution Environments for Spectre Attacks", 8th International Conference on Information Systems Security and Privacy (ICISSP2022), February 2022
- “ALARM: Active LeArning of Rowhammer Mitigations”. Presented at the Informatics department, King's College London, UK, March 2023
- “Systematic Analysis of Programming Languages and Their Execution Environments for Spectre Attacks”. Presented at the Computer Science department, University College London (UCL), UK, February 2022
- “Systematic Analysis of Programming Languages and Their Execution Environments for Spectre Attacks”. Presented at the Informatics department, University of Sussex, UK, March 2021
- A. Naseredini, B. Sadeghiyan, "Security Assessment of ARX-Design Hash Functions against Algebraic Cryptanalysis ", 26th Iranian Conference on Electrical Engineering (ICEE2018), May 2018

- “Cryptographic Hash Functions: Definition, History and Cryptanalysis”. Presented at CE department, Amirkabir University of Technology (Tehran Polytechnic), Iran, May 2017