

Nureddin Kamadan

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EDUCATION

University of Oxford

Doctor of Philosophy (Ph.D.) Computer Science

Oxford, United Kingdom

Oct. 2025 - Ongoing

Georgia Institute of Technology

Master of Science (M.Sc.) Computer Science

Atlanta, GA, United States

Aug. 2022 - May 2025

Sabancı University

Bachelor of Science (B.Sc.) Computer Science and Engineering

Istanbul, Turkey

Sep 2018 - Jun 2022

PUBLICATIONS

Conference Proceedings

*Equal contribution

- **ECC.fail: Mounting Rowhammer Attacks on DDR4 Servers with ECC Memory**
N. Kamadan, W. Wang, S. van Schaik, C. Garman, D. Genkin, Y. Yarom.
USENIX Security Symposium, 2025.
- **TimeInspector: A Static Analysis Approach for Detecting Timing Attacks**
F. Durmaz*, N. Kamadan*, M.T. Oz*, M.S. Unal*, A. Javeed, C. Yilmaz, E. Savas.
IEEE European Symposium on Security and Privacy (EuroS&P) 2023 SILM Workshop.

EXPERIENCE

Oxford Secure Computer Architecture Research (OSCAR) Lab

Graduate Research Assistant; Advisor: Prof. Amro Awad

Oct 2025 – present

Oxford, UK

- Ongoing research on scalable security support for next-generation computing architectures
- My current focus is on confidential computing architectures, and on the efficient and secure integration of devices/accelerators

Hardware Security Lab

Graduate Research Assistant; Advisor: Prof. Daniel Genkin

Aug 2022 – May 2025

Atlanta, GA

- Published at USENIX Security Symposium 2025, known as ECC.fail
- Reverse engineered memory controller error correcting code (ECC) implementation and exploited server systems with Rowhammer attacks.
- Hands-on research experience in memory subsystems, memory RAS features, memory controllers, DRAM internals, Linux kernel drivers, BIOS/UEFI Firmware, logic analyzers, Machine Check Architecture (MCA) and ECC implementations.

Cryptography and Information Security Group (CISEC)

Undergraduate Researcher; Advisors: Prof. ErKay Savas, Prof. Cemal Yilmaz

Aug 2021 – Aug 2022

Istanbul, Turkey

- Developed a generic static analysis approach for detecting timing-based side channel attacks
- The work is published in IEEE European Symposium on Security and Privacy SILM Workshop (EuroS&PW 2023)

MilSOFT

Software Engineer

Nov 2021 – Apr 2022

Istanbul, Turkey

- Milsoft is a CMMI-5 certified defense industry company.
- Implementing and testing various components of MANET protocol stack in C++.

Scientific and Technological Research Council of Turkey (TUBITAK)

Star Scholar Research Intern

Feb 2021 – Sep 2021

Istanbul, Turkey

- Worked in the GIS - Real-Time Operating System project, currently deployed across multiple aerospace vehicles.
- Worst-case execution time (WCET) analysis for hard real-time systems.
- Worked on GCC toolchain components and cross-compilation infrastructure, facilitating multi-platform module integration.

AWARDS

Gold Medal <i>Genius Olympiad (State University of New York at Oswego)</i>	Among participants from 83 countries Jun 2016
Europe Finalist <i>Google Science Fair</i>	Google Aug 2016
Silver Medal <i>Bayer Project Olympiad</i>	Bayer Feb 2016
Bronze Medal <i>International Ligth Year Science Olympiad</i>	Portugal Apr 2015
Bronze Medal <i>TUBITAK</i>	Third best project in Asia region Feb 2015

SKILLS

Related Courses: Advanced Operating Systems, Advanced Computer Architecture, Reliability and Security in Computer Architecture, Applied Cryptography, GPU Hardware and Software, Drone Security, Network Security
Reverse Engineering: Radare2, Hopper Disassembler
Programming Languages: C/C++, Java, Python

TEACHING

Teaching Assistant <i>Operating Systems - CS307</i>	Sep 2021 – March 2022 Istanbul, Turkey
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- I held weekly office hours to assist students with their homeworks and operating systems related questions
- I conducted recitation hours to explain the material covered in the lectures

HOBBY PROJECTS

AUTOMED <i>Android Studio, Arduino</i>	Feb 2021 – Aug 2021
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- I developed a hardware-integrated mobile application for polypharmacy patients and individuals with Alzheimer's, helping them manage their medication schedules. The system prevents overdoses and sends notifications to family members if a dose is missed.

Self-Health <i>Android Studio, Arduino</i>	May 2020 – Feb 2021
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- I developed a telehealth system that allows patients to communicate with doctors remotely and transmits data (such as blood pressure and temperature) obtained from project-provided sensors to the doctor for diagnosis.

Braille-Read <i>Android Studio, Arduino</i>	Feb 2015 – Jun 2017
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- I developed an electronic reading device for visually impaired individuals.
- In this project, I developed a glove equipped with six vibration motors representing the six dots of the Braille alphabet. Using the application and the glove, visually impaired individuals can read any content they upload to the app in Braille. Additionally, the system can be used to detect geometric shapes and graphs.
- Me in 2015 presenting the early prototype of the project (Turkish):
<https://www.youtube.com/watch?v=6Aogi5rB34g>