

# Faik Kerem Ors

fors@purdue.edu | Personal Page | LinkedIn | GitHub

## EDUCATION

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### Purdue University

*Ph.D. in Computer Science*

**GPA:** 3.90/4.00, **Academic Advisor:** Prof. Elisa Bertino

**Focus:** Network Protocol Reverse Engineering

West Lafayette, IN, US

Aug. 2022 – May. 2027 (Anticipated)

### Sabanci University

*M.Sc. in Computer Science and Engineering*

**GPA:** 3.87/4.00, **Thesis Advisor:** Prof. Albert Levi

**Thesis:** Data Driven Intrusion Detection for 6LoWPAN Based IoT Systems

Istanbul, Turkey

Sep. 2019 – Jan. 2022

### Sabanci University

*B.Sc. in Computer Science and Engineering*

*Minor in Mathematics*

**GPA:** 3.86/4.00, **Ranked 3rd**

Istanbul, Turkey

Sep. 2014 – June 2019

## RESEARCH INTERESTS

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Network security, protocol reverse engineering, IoT security and privacy, systems and software security, machine learning for security.

## RESEARCH EXPERIENCE

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### Research Intern

*Purdue University - GoBoiler Internship Program (Selected Attendee)*

- Implemented a secure and robust context-based group pairing scheme for heterogeneous IoT devices.
- Accepted to IEEE S&P (Oakland) 2023, second cycle.
- Supervisor: Dr. Z. Berkay Celik

June 2020 – June 2021

West Lafayette, IN, USA

### Summer Research Intern

*Technical University of Berlin*

- Implemented deep learning models to optimize the bitrate selection decision on DASH clients.
- Reviewed the literature and delivered an overview presentation on Dynamic Streaming over HTTP (DASH).
- Attended M.Sc. lectures and seminars with the focus on content delivery techniques.
- Supervisors: Dr. Suzan Bayhan and Prof. Abdel-Karim Al-Tamimi

June 2018 – Sep. 2018

Berlin, Germany

## PEER-REVIEWED PUBLICATIONS

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- Habiba Farrukh\*, Muslum Ozgur Ozmen\*, **Faik Kerem Ors**, Z. Berkay Celik. One Key to Rule Them All: Secure Group Pairing for Heterogeneous IoT Devices. In *IEEE Security and Privacy (S&P '23)*.
- **Faik Kerem Ors**, and Albert Levi. Data driven intrusion detection for 6LoWPAN based IoT systems. In *Ad Hoc Networks*, 143, pages 103-120, April 2023.
- **Faik Kerem Ors**. Data Driven Intrusion Detection for 6LoWPAN Based IoT Systems. *M.Sc. Thesis*, December 2021.
- **Faik Kerem Ors**, Mustafa Aydin, Aysu Bogatarkan, and Albert Levi. Scalable Wi-Fi Intrusion Detection for IoT Systems. In *11th IFIP International Conference on New Technologies, Mobility and Security (Security Track)*, Paris, France, April 2021.
- **Faik Kerem Ors**, Suveyda Yeniterzi, and Reyhan Yeniterzi. Event Clustering within News Articles, In *Proceedings of the Workshop on Automated Extraction of Socio-political Events from News 2020*, pages 63–68, Marseille, France, May 2020. European Language Resources Association (ELRA). (Proposed system ranked 1st in the shared task).

## CONFERENCE PRESENTATIONS

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- Scalable Wi-Fi Intrusion Detection for IoT Systems. In *11th IFIP International Conference on New Technologies, Mobility and Security (Security Track)*, Paris, France, April 2021.
- Event Clustering within News Articles, In *Proceedings of the Workshop on Automated Extraction of Socio-political Events from News 2020*, pages 63–68, Marseille, France, May 2020. European Language Resources Association (ELRA).

## TEACHING EXPERIENCE

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### Teaching Assistant

*Purdue University*

Aug. 2022 – Present

*West Lafayette, IN, US*

- Held office hours, supervised student projects, designed and graded exams and assignments.
- Courses (reverse chronological): Computer Security (CS 426; Spring 2025, Fall 2023, Spring 2023), Cryptography (CS 555; Fall 2024), Information Security (CS 526; Spring 2024), Security Analytics (CS 529; Fall 2022)

### Guest Lecturer

*CS 426, Purdue University*

Fall 2023

*West Lafayette, IN, US*

- Gave lectures on buffer overflows, return oriented programming, SQL injection, and cross-site scripting.

### Teaching Assistant

*Sabancı University*

Feb. 2018 – Jan. 2022

*Istanbul, Turkey*

- Held office hours, designed and graded assignments, conducted lab sessions and supervised student projects.
- Courses (reverse chronological): Computer Networks (CS 408; 2022, 2021, 2020), Computer and Network Security (CS 432), Machine Learning (CS 412), Advanced Programming (CS 204), Database Systems (CS 306)

## SERVICES

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- External Reviewer in NDSS 2024, 2025
- External Reviewer in IEEE S&P 2024
- External Reviewer in USENIX Security 2024
- Reviewer in IEEE Transactions on Information Forensics and Security (TIFS) 2024
- Reviewer in ITU Journal on Future and Evolving Technologies (ITU J-FET) 2022
- Reviewer in IEEE International Conference on Communications (ICC) 2022
- Reviewer in IEEE Conference on Communications and Network Security (CNS) 2021
- Reviewer in The Computer Journal (Oxford University Press) 2020, 2021

## HONORS AND AWARDS

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- Tuition waiver and Graduate Teaching Assistantship offer by Purdue University for graduate studies (2022 – 2027).
- Full tuition waiver and stipend by Sabancı University for graduate studies (2019 – 2021).
- Dean's High Honor List, Sabancı University (2016 – 2019).
- Recipient of Sakıp Sabancı Encouragement Scholarship, which covers 100% of tuition fee, because of academic excellence (2016 – 2019).

## TECHNICAL SKILLS

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**Programming Languages:** Python, C++, C, C#, Java, SQL

**Frameworks and Libraries:** PyTorch, Tensorflow, Pandas, NumPy, Scikit-learn, Keras, Flask, Django

**Operating Systems:** Unix, Linux, macOS, Windows

**Technologies:** git, MySQL, PostgreSQL, Docker, Azure, JUnit, Android Studio

**Tools:** Wireshark, Metasploit, Hashcat, Burp Suite, Nmap, SQLmap, Wfuzz, IDA, Binwalk, The Harvester, Dirbuster

## ADDITIONAL WORK EXPERIENCE

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### **R&D Engineer**

Feb. 2019 – Aug. 2019

*PRODAFT*

*Istanbul, Turkey*

- Implemented a machine learning based phishing detection system from scratch.
- Developed RESTful microservices to be integrated into the threat intelligence ecosystem of the company.

### **Security Research Intern**

July 2017 – Sep. 2017

*PRODAFT*

*Istanbul, Turkey*

- Worked on penetration testing and developed penetration testing tools in Python.