Faik Kerem Ors

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

EDUCATION

Purdue University West Lafayette, IN, US
Ph.D. in Computer Science *Aug. 2022 – Present*
CGPA: 4.00/4.00, **Initial Academic Advisor**: Dr. Z. Berkay Celik

Sabancı University Istanbul, Turkey
M.Sc. in Computer Science and Engineering *Sep. 2019 – Jan. 2022*
CGPA: 3.87/4.00, **Thesis Advisor**: Prof. Albert Levi
Thesis: Data Driven Intrusion Detection for 6LoWPAN Based IoT Systems

Sabancı University Istanbul, Turkey
B.Sc. in Computer Science and Engineering, Minor in Mathematics *Sep. 2014 – June 2019*
CGPA: 3.86/4.00, **Ranked 3rd**

RESEARCH INTERESTS

IoT security and privacy; wireless network security; web security; systems and software security; privacy of machine learning applications; adversarial machine learning.

RESEARCH EXPERIENCE

Research Intern June 2020 – June 2021
Purdue University - GoBoiler Internship Program (Selected Attendee) *West Lafayette, IN, USA*
- Implemented a secure and robust context-based sensor pairing scheme in the smart home context.
- Accepted to IEEE S&P (Oakland) 2023, second cycle.
- Worked remotely due to COVID-19 circumstances under the supervision of Dr. Z. Berkay Celik.

Summer Research Intern June 2018 – Sep. 2018
Technical University of Berlin *Berlin, Germany*
- Implemented deep learning models (e.g., LSTMs) 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 especially on content delivery techniques.
- Supervisors: Dr. Suzan Bayhan and Prof. Abdel-Karim Al-Tamimi

PUBLICATIONS

- 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 Reyyan 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

- 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

Teaching Assistant   Aug. 2022 – Present
Purdue University   *West Lafayette, IN, US*
- Held office hours, prepared and graded exams and assignments.
- Courses (reverse chronological): Computer Security (CS 426; Spring 2023), Security Analytics (CS 529; Fall 2022)

Teaching Assistant   Feb. 2018 – Jan. 2022
Sabancı University   *Istanbul, Turkey*
- Held office hours, conducted lab sessions and supervised student projects and assignments.
- 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

- 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

- 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

Programming Languages: Python, C++, C, C#, Java, SQL
Frameworks and Libraries: Pandas, NumPy, Scikit-learn, Keras, PyTorch (basic), Tensorflow (basic), Flask, Django
Operating Systems: Unix, Linux, 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

R&D Engineer   Feb. 2019 – Aug. 2019
PRODAFT Cyber Intelligence and Cyber Security Services   *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 Cyber Intelligence and Cyber Security Services   *Istanbul, Turkey*
- Worked on penetration testing and developed penetration testing tools in Python.