

Alperen Keles

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Education

Doctorate of Philosophy - Computer Science 2021-2026(Expected)
University of Maryland, College Park Maryland, USA

Bachelor of Engineering - Computer Engineering 2017-2021
Middle East Technical University Ankara, Turkey
- Ranked **1713rd**, National University Entrance Examination (**top 0.1% in 2 million**)
- GPA: 3.66/4.0 (**top 5% in class of 229**)

Current Projects

Bug Mining and Injection for Benchmarking Property Based Testing

- As Part of Graduate Level Research

Creating benchmarking infrastructures for Property Based Testing tools and research using bug mining and injection.
(Coq, OCaml, Python)

Research and Publications

DroPPPP: A P4 Approach to Mitigating DoS Attacks in SDN

The 20th World Conference On Information Security Applications

G. Simsek, H. Bostan, A. Sarica, E. Sarikaya, A. Keles, P. Angin, H. Alemdar, E. Onur

Protocol Verification Language

IEEE/ACM International Symposium on Code Generation and Optimization Student Research Competition(Accepted as Poster Presentation)

Alperen Keles

Work Experience

University of Maryland - Maryland Cybersecurity Center(MC2)

- Research Intern

Worked on application of Inductive Program Synthesis Techniques on Automatic Exploit Generation Domain.

Maryland, USA(Remote)
July 2020 - December 2020

Havelsan

- Candidate Engineer

Worked on a browser based Video Conference Application. Designed and implemented a novel bandwidth detection and video optimization algorithm.
(Javascript, React)

Ankara, Turkey
July 2020 - July 2021

Emproof

- Remote Embedded Security Engineer

- Embedded Security Engineering Intern

Worked on translation validation of binary obfuscation techniques.
(C++, Z3 SMT Solver, ARM Assembly)

Bochum, Germany
January 2020 - April 2020
June 2019 - September 2019

Teaching Experience

University of Maryland - Computer Science Department

- Teaching Assistant for CMSC132 - Object Oriented Programming II

- Teaching Assistant for CMSC351 - Algorithms

Maryland, USA
January 2022 - Present
August 2021 - December 2021

Middle East Technical University - Computer Engineering Department

- Student Assistant for CENG140 - C Programming

Ankara, Turkey
February 2019 - June 2019

Previous Projects

Protocol Verification Language

-Domain Specific Language for Network Protocol Verification

Worked in core language design and developed a symbolic execution based verification engine.
(Rust, Z3 SMT Solver)

Network Intrusion Detection System

-As Part of Guided Research with A Faculty Member

Created a NIDS based on CICIDS17 dataset using Random Forest Classifier.
(Python, Scikit-Learn, Scipy)