Gizem **Akman**

Doctoral Researcher

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Education

University of Helsinki	*Helsinki, Finland*
PH.D. IN COMPUTER SCIENCE	*May 2019 – Exp. 2023*

- Thesis: Security and Privacy for Massive Machine Type Communication (mMTC) in 5G Networks
- Supervisor: Valtteri Niemi, Secure Systems Group

University of Turku	*Turku, Finland*
MSc. IN INFORMATION SECURITY AND CRYPTOGRAPHY	*Sep. 2015 – Jun. 2018*

- Thesis: Proving Identity Privacy in 5G Networks by Using Pseudonyms
- Major: Cryptography and Data Security, Minor: Networked Systems Security
- Graduated in 1st place in the department

Bilkent University	*Ankara, Turkey*
BSc. IN MATHEMATICS	*Sep. 2009 – Jun. 2015*

- Graduated in 3rd place in the department
- Qualified for a Comprehensive Scholarship based on the university entrance exam result
- Erasmus in Stockholm University (2014), Mathematics

Experience

University of Helsinki, Secure Systems Group (Prof. Valtteri Niemi)	*Helsinki, Finland*
RESEARCHER ASSISTANT	*Jul. 2016 - Aug. 2016*

- Researched on 5G authentication and communication protocols
- Designed a primary authentication protocol for 5G by using pseudonyms
- Implemented a demo of the designed protocol in Java

Skills

Security	Protocol design, ProVerif, Tamarin prover
Programming	Java, Python
Languages	English (professional C1), Turkish (native), Finnish (B1), Dutch (B2), Spanish (reading), German (A2)

Publications

AKMA for Secure Multi-access Edge Computing Mobility in 5G (Gizem Akman, Philip Ginzboorg, Valtteri Niemi)	*Computational Science and Its Applications – ICCSA 2022 Workshops*
CONFERENCE PAPER	*2022*

- `https://doi.org/10.1007/978-3-031-10542-5_30`

Privacy-Aware Access Protocols for MEC Applications in 5G (Gizem Akman, Philip Ginzboorg, Valtteri Niemi)	*Network*
JOURNAL ARTICLE	*2022*

- `https://doi.org/10.3390/network2020014`

Privacy-Preserving Access for Multi-Access Edge Computing (MEC) Applications (Gizem Akman, Philip Ginzboorg, Valtteri Niemi)	*Computational Science and Its Applications – ICCSA 2021*
CONFERENCE PAPER	*2021*

- `https://doi.org/10.1007/978-3-030-87010-2_4`

AKMA Support in Multi SIM User Equipment (Gizem Akman, Philip Ginzboorg, Valtteri Niemi)	*Proceedings of the 25th Conference of Open Innovations Association FRUCT, Helsinki, Finland*
CONFERENCE PAPER	*2019*

- `https://doi.org/10.23919/fruct48121.2019.8981494`

Presentation

ICCSA 2022 - 22nd International Conference on Computational Science and Its Applications
Malaga, Spain

PRESENTER FOR <AKMA FOR SECURE MULTI-ACCESS EDGE COMPUTING MOBILITY IN 5G>
Jul. 2022

- Presented a solution to provide secure and privacy-preserving access to the MEC application when the user is mobile.
- Used AKMA services of 5G for the solution.

ICCSA 2021 - 21st International Conference on Computational Science and Its Applications
Cagliari, Italy

PRESENTER FOR <PRIVACY-PRESERVING ACCESS FOR MULTI-ACCESS EDGE COMPUTING (MEC) APPLICATIONS>
Sep. 2021

- Presented a solution that provides privacy-preserving access for a user to the MEC application in the mobile operator.

FRUCT 2019 - 25th Conference of Open Innovations Association
Helsinki, Finland

PRESENTER FOR <AKMA SUPPORT IN MULTI SIM USER EQUIPMENT>
Nov. 2019

- Presented a solution that would provide a secure and continuous connection for using AKMA in Multi-SIM and eUICC devices.

Extracurricular Activity

ICCSA 2022 - The 22nd International Conference on Computational Science and Its Applications
Malaga, Spain

MEMBER OF ORGANIZING COMMITTEE
29 Jun 2022 – 8 Jul 2022

- Arranged the conference premises and designed the badges for the participants.
- Had a part in the conference sessions as a technical assistant.
- Helped with the registration and guided people around the conference premises.

FRUCT 2019 - 25th Conference of Open Innovations Association
Helsinki, Finland

MEMBER OF ORGANIZING COMMITTEE
5 Nov 2019 – 8 Nov 2019

- Helped with the registration and guided people around the conference premises.

Forró Abraço Nordestino (Brasilian Dance Association)
Helsinki, Finland

BOARD MEMBER (COMMUNICATION & PR)
Jan 2020 – PRESENT

- Designed event covers and flyers.
- Prepared social media announcements, including Facebook and Instagram posts and webpage updates.

BilMathS (Bilkent Mathematical Society)
Ankara, Turkey

COFOUNDER & BOARD MEMBER (COMMUNICATION & PR)
Sep 2012 – Jun 2015

- Had a part in founding the university club with fellow students during my Bachelor's studies.
- Prepared Facebook announcements, informed the club members, and invited new people.
- Organized scientific talks and meetings.