

MUSLUM OZGUR OZMEN

EDUCATION

PERIOD	January 2020 — Present	
DEGREE	Ph.D. in Computer Science	
ADVISOR	Dr. Berkay Celik	
	Purdue University	West Lafayette, IN, USA

PERIOD	September 2016 — June 2018	
DEGREE	Master of Science in Computer Science	
CGPA	3.96/4.00	
ADVISOR	Dr. Attila Altay Yavuz	
THESIS	Low-Cost Standard Public Key Cryptography Services for Wireless IoT Systems	
	Oregon State University	Corvallis, OR, USA

PERIOD	September 2012 — June 2016	
DEGREE	Bachelor of Science in Electrical and Electronics Engineering	
CGPA	3.49/4.00	
	Bilkent University	Ankara, Turkey

RESEARCH INTERESTS

My primary interests include light-weight cryptography for IoT systems (drones and medical devices), public key cryptography (digital signatures), privacy enhancing technologies (dynamic symmetric and public key based searchable encryption), post-quantum cryptography and blockchains.

WORK EXPERIENCE

PERIOD	January 2020 — Present	
EMPLOYER	Purdue University	West Lafayette, IN, USA
JOB TITLE	Research Assistant	

PERIOD	December 2018 — December 2019	
EMPLOYER	University of South Florida	Tampa, FL, USA
JOB TITLE	Research Assistant	

PERIOD	September 2016 — December 2018	
EMPLOYER	Oregon State University	Corvallis, OR, USA
JOB TITLE	Research Assistant	

PERIOD	January 2018 — March 2018	
EMPLOYER	Oregon State University	Corvallis, OR, USA
JOB TITLE	Teaching Assistant	
	CS496 - Mobile and Cloud Software Development	

PERIOD	September 2017 — December 2017	
EMPLOYER	Oregon State University	Corvallis, OR, USA
JOB TITLE	Teaching Assistant	
	CS261 - Data Structures	
	CS/ECE578 - Cyber-security	
PERIOD	January 2017 — March 2017	
EMPLOYER	Oregon State University	Corvallis, OR, USA
JOB TITLE	Teaching Assistant	
	CS492 - Mobile Software Development	

PUBLICATIONS

Peer-reviewed conference publications:

- C1 **Muslum Ozgur Ozmen**, Attila A. Yavuz and Rouzbeh Behnia. *Energy-Aware Digital Signatures for Embedded Medical Devices*. In IEEE CNS: IEEE Conference on Communications and Network Security 2019.
- C2 Rouzbeh Behnia, **Muslum Ozgur Ozmen** and Attila A. Yavuz. *ARIS: Authentication for Real-Time IoT Systems*. In IEEE ICC: International Conference on Communications 2019.
- C3 **Muslum Ozgur Ozmen**, Rouzbeh Behnia and Attila A. Yavuz. *Fast Authentication from Aggregate Signatures with Improved Security*. In FC: Financial Cryptography and Data Security 2019.
- C4 Rouzbeh Behnia, **Muslum Ozgur Ozmen**, Attila A. Yavuz and Mike Rosulek. *TACHYON: Fast Signatures from Compact Knapsack*. In ACM CCS: Conference on Computer and Communications Security 2018.
- C5 **Muslum Ozgur Ozmen** and Attila A. Yavuz. *Dronecrypt-An Ultra-Low Energy Cryptographic Framework for Small Aerial Drones*. In IEEE MILCOM: Military Communications Conference 2018.
- C6 **Muslum Ozgur Ozmen** and Attila A. Yavuz. *Compact Energy and Delay-Aware Authentication*. In IEEE CNS: IEEE Conference on Communications and Network Security 2018.
- C7 **Muslum Ozgur Ozmen**, Thang Hoang and Attila A. Yavuz. *Forward-Private Dynamic Searchable Symmetric Encryption with Efficient Search*. In IEEE ICC: International Conference on Communications 2018.
- C8 **Muslum Ozgur Ozmen** and Attila A. Yavuz. *Low-Cost Standard Public Key Cryptography Services for Wireless IoT Systems*. In IoT S&P: Workshop on Internet of Things Security and Privacy 2017 (Affiliated with ACM CCS).
- C9 Rouzbeh Behnia, Attila A. Yavuz and **Muslum Ozgur Ozmen**. *High-Speed High-Security Public Key Encryption with Keyword Search*. In DBSec: IFIP Annual Conference on Data and Applications Security and Privacy 2017.

Peer-reviewed journal publications:

- J1 Attila A. Yavuz and **Muslum Ozgur Ozmen**. *Ultra Lightweight Multiple-time Digital Signature for the Internet of Things Devices*. In IEEE TSC: IEEE Transactions on Services Computing.
- J2 Thang Hoang, **Muslum Ozgur Ozmen**, Yeongjin Jang and Attila A. Yavuz. *Hardware-Supported ORAM in Effect: Practical Oblivious Search and Update on Very Large Dataset*. In PoPETS: Proceedings on Privacy Enhancing Technologies 2019.
- J3 Rouzbeh Behnia, **Muslum Ozgur Ozmen** and Attila A. Yavuz. *Lattice-Based Public Key Encryption with Keyword Search from Experimental Perspectives*. In IEEE TDSC: IEEE Transactions on Dependable and Secure Computing.

PATENTS

- P1 Rouzbeh Behnia, **Muslum Ozgur Ozmen** and Attila A. Yavuz. *Efficient Identity-Based and Certificateless Cryptosystems*, USF-19A051, Provisional Application No: 16/442,467, Submitted: June 15, 2019
- P2 Attila A. Yavuz, **Muslum Ozgur Ozmen** and Rouzbeh Behnia. *Energy-aware Digital Signatures*, USF-19A001, Provisional Application No: 62/788,572, Submitted: January 4, 2019
- P3 **Muslum Ozgur Ozmen**, Thang Hoang, and Attila A. Yavuz *Forward-Private Dynamic Searchable Symmetric Encryption with Efficient Search*, USF-18B151, OSU-17-55, Provisional Application No: 62/572,339, Submitted: October 10, 2017

PRESENTATIONS

Conference and Workshop Talks:

- T1 *Energy-Aware Digital Signatures for Embedded Medical Devices*. IEEE Conference on Communications and Network Security. Washington, DC, USA, June 2019.
- T2 *Fast Authentication from Aggregate Signatures with Improved Security*. Financial Cryptography and Data Security. St Kitts and Nevis, February 2019.
- T3 *TACHYON: Fast Signatures from Compact Knapsack*. ACM Conference on Computer and Communications Security 2018. Toronto, ON, Canada, October 2018.
- T4 *Forward-Private Dynamic Searchable Symmetric Encryption with Efficient Search*. IEEE International Conference on Communications 2018. Kansas City, MO, USA, May 2018.
- T5 *Low-Cost Standard Public Key Cryptography Services for Wireless IoT Systems*. Workshop on Internet of Things Security and Privacy. Dallas, TX, USA, November 2017.

Invited Talks:

- I1 *Lightweight, Delay-Aware and Scalable Cryptographic Services for Smart-Grid Systems*. Cyber Resilient Energy Delivery Consortium (CREDC) Pacific Northwest Industry Workshop. Richland, WA, USA, November 2017.

SERVICES

- Reviewer in IEEE Transactions on Services Computing - 2020
- Reviewer in IEEE Access - 2019
- Reviewer in Journal of Ambient Intelligence and Humanized Computing - Springer, 2018
- External Reviewer in ACSAC 2017, 2018, 2019
- External Reviewer in WWW 2019
- External Reviewer in IEEE Milcom 2019
- External Reviewer in DBSec 2017, 2018, 2019
- External Reviewer in SmartGridComm 2018

AWARDS AND HONORS

- Recipient of IEEE CNS 2019 Travel Grant (1,250\$).
- Sharpeye - Acoustic Localization of Gunshot, funded by The Scientific and Technological Research Council of Turkey, 2016.
- Turkish Educational Foundation, Outstanding Success Scholarship (awarded to 50 students nationwide), September 2013 — June 2016.
- Full Scholarship from Bilkent University, September 2012 — June 2016.
- 467th out of 1,805,433 students in Turkish National University Entrance Exam, June, 2012.