

Ahmet Kurt, Ph.D.

Assistant Professor of Computer Science

Bryan, TX, USA

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Summary

Interests Cybersecurity, Blockchain, Wireless Networks, IoT Security, Distributed Systems.

Prog. Lang. Python, C++, C, Bash, Rust, JavaScript, Go.

Skills Linux, LaTeX, Wireshark, Core Lightning, Ind, Rust Lightning, Bitcoin Core, PyCharm, CLion, VSCode, AWS, GCP, Matplotlib, NumPy, SciPy, TensorFlow, Keras, NetworkX, Pandas.

Education

2019–2023 **Ph.D. in Electrical and Computer Engineering**, *Florida International University*, Miami, FL, GPA: 3.92/4.00
Dissertation: *Enabling Third Layer Bitcoin Applications Using Lightning Network*
Advisor: Prof. Kemal Akkaya

2019–2021 **M.Sc. in Electrical and Computer Engineering**, *Florida International University*, Miami, FL
Cumulative GPA: 3.90/4.00

2013–2018 **B.Sc. Double Major**, *Antalya Bilim University*, Antalya, Turkey
Computer Engineering & Electrical and Electronics Engineering

Media Appearances

Featured at **Forbes** [🔗](#), **Decrypt 1** [🔗](#), **Decrypt 2** [🔗](#), **ZenGo** [🔗](#), **FIU News** [🔗](#) and many other smaller sites.

Patents

US 11,755,958 Systems and Methods for Detecting Cryptocurrency Wallet Artifacts in a File System [🔗](#)

Work Experience

Aug 2024–Present **Assistant Professor of Computer Science**, *East Texas A&M University*, Bryan, TX
Joined the Computer Science and Information Systems department (RELLIS campus).

- Teaching courses, conducting research and performing service.
- **Courses Taught:** CSCI 451 (Wireless and Mobile Security), CSCI 463 (Systems Security & Trusted Computing), CSCI 399 (Junior Cyber Design Project), CSCI 499 (Senior Cyber Design Project), CSCI 458 (Network Security & Management), CSCI 459 (AI Enhanced Security), CSCI 353 (Threat and Vulnerability Management).

Jun–Sep 2024 **Security Apprenticeship Program [PhD]**, *Nethermind*, Remote

- Worked on Ethereum smart contract security audits within the Nethermind security team.

2023–2024 **Postdoctoral Associate**, *Florida International University*, Miami, FL

- Conducted research on blockchain, security, and wireless network projects.

2019–2023 **Graduate Research and Teaching Assistant**, *Florida International University*, Miami, FL
Key Projects:

- **LNMesh**: Implemented true offline Bitcoin Lightning payments using WiFi & Bluetooth; created a Python simulator. Publication: [🔗](#)
- **LNGate & LNGate²**: Enabled secure LN payments for resource-constrained devices using threshold cryptography. Publications: [🔗](#), [🔗](#)
- **LNBot & D-LNBot**: Designed a covert hybrid botnet on the Lightning Network to demonstrate security vulnerabilities. Publications: [🔗](#), [🔗](#)
- **Crypto Wallet Forensics**: Designed and implemented a Machine Learning-based artifact detection framework for crypto wallets. Publications: [🔗](#), [🔗](#)
- **Ns-3 Simulations**: Modified ns-3 IEEE 802.11s HWMP protocol in C++ for distributed connectivity maintenance.

Teaching: Instructor for EEL 3712L (Logic Design I Lab); Main TA for EEL 3110 (Circuit Analysis).

2016–2017 **Embedded Software Engineer**, *Desird Design R&D*, Antalya, Turkey

- Developed software for a product using ESP8266 WiFi Modules in C++ and Lua.

2017 **Intern**, *Havelsan*, Istanbul, Turkey

- Developed a desktop GUI application using QT in C++.

2016 **Erasmus+ Intern**, University of Bristol, Bristol, UK
o Contributed to 'optically reconfigurable microwave switches' research project.

Honors and Awards

2023 FIU Dissertation Year Fellowship [↗](#)
2021 Black Hat USA 2021, Student Scholarship [↗](#)
2020 RSA 2020 Conference, Security Scholar [↗](#)

Selected Publications

2025 A. Bhattacharai, A. Sahin, M. Veksler, **A. Kurt**, D. Aras, C. Imery, K. Akkaya. *Cryptocurrency Forensics Automation: A Deep Learning and NLP-based Approach for Mobile Platforms*, in **Discover Computing**. [↗](#)

2024 **A. Kurt**, E. Erdin, K. Akkaya, A. S. Uluagac, M. Cebe. *D-LNBot: A Scalable, Cost-Free and Covert Hybrid Botnet on Bitcoin's Lightning Network*, in **IEEE TDSC**. [↗](#)

2024 **A. Kurt**, K. Akkaya, S. Yilmaz, S. Mercan, O. Shlomovits, E. Erdin. *LNGate²: Secure Bidirectional IoT Micro-payments Using Bitcoin's Lightning Network and Threshold Cryptography*, in **IEEE TMC**. [↗](#)

2023 **A. Kurt**, A. Sahin, R. Harrilal-Parchment, K. Akkaya. *LNMesh: Who Said You need Internet to Send Bitcoin? Offline Lightning Network Payments Using Community Wireless Mesh Networks*, in **IEEE WoWMoM**. [↗](#)

2023 A. Bhattacharai, M. Veksler, A. Sahin, **A. Kurt**, K. Akkaya. *Crypto Wallet Artifact Detection on Android Devices Using Advanced Machine Learning Techniques*, in **ICDF2C**. [↗](#)

2022 S. Mercan, **A. Kurt**, E. Erdin, K. Akkaya. *Cryptocurrency Solutions to Enable Micro-payments in Consumer IoT*, in **IEEE Consumer Electronics Magazine**. [↗](#)

2021 **A. Kurt**, S. Mercan, O. Shlomovits, E. Erdin, K. Akkaya. *LNGate: Powering IoT with Next Generation Lightning Micro-payments using Threshold Cryptography*, in **ACM WiSec**. [↗](#)

2021 **A. Kurt**, S. Mercan, E. Erdin, K. Akkaya. *Enabling Micro-payments on IoT Devices using Bitcoin Lightning Network*, in **IEEE ICBC**. [↗](#)

2021 **A. Kurt**, N. Saputro, K. Akkaya, A. S. Uluagac. *Distributed Connectivity Maintenance in Swarm of Drones During Post-Disaster Transportation Applications*, in **IEEE TITS**. [↗](#)

2020 **A. Kurt**, E. Erdin, M. Cebe, K. Akkaya, A. S. Uluagac. *LNBot: A Covert Hybrid Botnet on Bitcoin Lightning Network for Fun and Profit*, in **ESORICS**. [↗](#)

Languages

Turkish Native
English Proficient