

Khalid Mostafa Negm, M.sc.

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Biography

■ **Khalid M. Ezzat** is a Teaching Assistant at the Egyptian Military Academy and a Part-Time Teaching Assistant in the Cybersecurity program at the College of Computing and Information Technology, Arab Academy for Science, Technology and Maritime Transport (AASTMT), Egypt. He is currently pursuing his M.Sc. in Cyber Security at the Faculty of Engineering, Ain Shams University. He received his B.Sc. in Electronics and Communication Engineering from the Air Defence College, Alexandria University, in 2018. His research interests include wireless communication security, authentication protocols, physical layer security, IoT security, and post-quantum cryptography. His work focuses on developing secure and efficient authentication frameworks for emerging communication systems such as UAV networks and IoT environments.

He is currently pursuing his M.Sc. degree in Electronics and Communications Engineering at Ain Shams University, Cairo, Egypt, focusing on advanced cyber security techniques for wireless networks. His research interests include authentication protocols, physical layer security in wireless communications, lattice-based cryptography, and applying machine learning to enhance communication security and reliability.

Employment History

- 2021 – Present ■ **Teaching Assistant**, Egyptian Military Academy, Egypt. Supporting courses in electronics, communications, and cybersecurity. Assisting in laboratory sessions, grading assignments, and mentoring students.
- 2026–Present ■ **Part-Time Teaching Assistant**, Computer Science Department (Cybersecurity Program), Arab Academy for Science, Technology and Maritime Transport (AASTMT), Egypt. Assisting in teaching courses related to cybersecurity and computer science, supporting laboratory sessions, and mentoring undergraduate students.

Educationa

- 2022 – 2026 ■ **M.Sc. in Cyber Security**, Faculty of Engineering, Ain Shams University, Egypt
Thesis title: *Advanced Techniques for Secure Image Transmission*.
- 2013 – 2018 ■ **B.Sc. in Electronics and Communication Engineering**, Alexandria University, Alexandria, Egypt.

Professional Development/Certification

- 2022 ■ **Leaders Preparation Program**, Faculty of Business, Ain Shams University (Business and Statistical Research Center – BSRC), in collaboration with the Arab Center for Administrative Development and Strategic Studies, Cairo, Egypt, Aug.–Sep. 2022. Completed an intensive program focused on leadership development, administrative skills, strategic studies, and preparation for managerial roles.
- **ISO 9001:2015 & ISO 21001:2018 Foundation Training Course**, Near East Services (NES), Cairo, Egypt.

Professional Development/Certification (continued)

- 2024
 - **Training in Mechatronics and Robotics**, Festo Didactic, Air Defense College, Alexandria, Egypt. Hands-on training in industrial automation and mechatronic systems, including PLC programming using Siemens TIA Portal (V17), MPS[®] modular production systems, and robot programming with Robotino[®] and CIROS platforms.
 - **Certificate of Recognition – Modern Teaching Methods for Military Faculty (Air Defense Subject Matter Expert Exchange)**, Texas National Guard / Texas Military Forces, June 2024. Participated in a bilateral Subject Matter Expert Exchange with the Egyptian Air Defense Forces, focusing on advanced instructional strategies and modern pedagogical approaches. Recognized for contributions to improving educational quality and effective knowledge transfer in technical and military education.
 - **Mechanical Drive Systems Laboratory Training**, Festo Didactic, Alexandria, Egypt. Participated in hands-on training on mechanical drive systems and power transmission mechanisms, gaining practical experience with gear systems, belt drives, and coupling mechanisms. Analyzed system performance, efficiency, and mechanical load behavior in industrial applications, with exposure to electromechanical integration in automated systems.
 - **Technical Training Program in CNC Machining**, Smart Systems for Scientific and Lab Equipment.
 - **Technical Training Program in Vibration Analysis**, Smart Systems for Scientific and Lab Equipment.

Teaching Experience

- 2021–Present
 - **Teaching Assistant**, Egyptian Military Academy, Egypt. Assisted in teaching and delivering undergraduate courses in engineering and computer science, including: Wireless Communications, Wireless Network Security, Network Security, Robotics, Fundamentals of Physics, Calculus, Antenna Theory, Principles of Communication, Electric Circuits, Database Systems, and Data Structures.
- 2026–Present
 - **Part-Time Teaching Assistant**, Computer Science Department (Cybersecurity Program), Arab Academy for Science, Technology and Maritime Transport (AASTMT), Egypt. Assisted in teaching cybersecurity and computer science courses, supporting laboratory sessions and mentoring undergraduate students.

Research Publications

Journal Articles

- 1 **Khalid M. Ezzat**, M. El-Saba, and M. A. Shawky, “Secure and efficient uav authentication: Pesdap’s cross-layer puf–ecc framework for the internet of drones,” *Computer Networks*, 2026.
- 2 **Khalid M. Ezzat**, M. El-Saba, and M. A. Shawky, “Can cross-layer design bridge security and efficiency? toward robust authentication in healthcare information exchange,” *journal of network and computer applications*, 2025, Under review.

Conference Proceedings

- 1 S. Wagdy, **Khalid M. Ezzat**, S. Zarif, and M. A. Shawky, “Microsaccade-based biometric authentication: A secure and privacy-preserving cryptographic framework,” in *Proceedings of the 2025 International Telecommunications Conference (ITC-Egypt)*, 2025, pp. 897–905.
- 2 M. A. Shawky et al., “Efficient cross-layer handover authentication for secure communication in vanets,” in *Proceedings of the 2024 IEEE International Symposium on Antennas and Propagation and the INC/USNC-URSI Radio Science Meeting (AP-S/INC-USNC-URSI)*, 2024, pp. 683–684.

- 3 A. A. Ramadan and **Khalid M. Ezzat**, “Spoken digit recognition using machine and deep learning-based approaches,” in *Proceedings of the 2023 International Telecommunications Conference (ITC-Egypt)*, Egypt, 2023, pp. 592–596.

Academic and Professional Service

2022	Member, Measurement and Evaluation Center, Air Defense College, Egypt.
2023–Present	Academic Affairs Coordinator, Engineering Educational Programs (Communication, Computer Science, and Mechatronics), Air Defense College, Egypt.
	Supervisor, Educational Process Follow-up, Air Defense College, Egypt.
2024–Present	Coordinator, Graduate Projects, Air Defense College, Egypt.
2023–Present	Academic Affairs Coordinator, Engineering Educational Programs (Communication, Computer Science, and Mechatronics), Air Defense College, Egypt.
2023	Logistics and Organization Committee Member, International Telecommunications Conference (ITC-Egypt).
2024	Registration Committee Lead, International Telecommunications Conference (ITC-Egypt).
2025	Project Poster Co-Chair and Registration Coordinator, International Innovation Competition, ITC-Egypt.

Research Interest

Wireless Communication Systems	Design, analysis, and optimization of secure wireless networks.
Cryptography and Lattice Based	Implementation and study of post quantum secure algorithms.
Internet of Things (IoT) Security	Protecting IoT devices and networks from cyber threats.
Authentication and Key Agreement	Development of secure and efficient authentication schemes.
Cyber Security and Privacy	Research on secure communication, data protection, and privacy-preserving techniques.

Skills

Languages	Arabic (Native), English (Advanced)
Coding	Java, Python, MatLab, $\text{\LaTeX}$, ...
Misc.	Academic research and scholarly writing, peer-reviewed publishing, and $\text{\LaTeX}$ document preparation.

References

Available on Request