Dr. Azhaar Abdulhassan Shalal

Lecturer, Head of the Department of Computer Engineering, College of Engineering, University of Shatrah

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PROFESSIONAL SUMMARY

Academic researcher and university lecturer in computer engineering, artificial intelligence, machine learning and digital signal processing. She has experience in university teaching, scientific research, academic administration and professional training. Her research covers artificial intelligence applications in engineering, machine learning-based optimization, intelligent wireless communication systems, antenna design and digital signal processing.

She has published 24 research papers indexed in Scopus, including 4 in Q1-ranked journals, and has taken part in Arab and international scientific conferences. She is an accredited trainer in teaching methods and a trainer for the IQ Learn educational platform.

EDUCATION

2024	Ph.D., University of Kufa, Iraq (30 June 2024)
2019	M.Sc., University of Thi-Qar, Iraq
2010	B.Sc. in Computer Science, College of Science, University of Thi-Qar, Iraq

ACADEMIC AND ADMINISTRATIVE EXPERIENCE

2026 – present	Head of the Department of Computer Engineering, University of Shatrah
2025 – 2026	Head of the Department of Biomedical Engineering, University of Shatrah
2024	Department Rapporteur, Department of Computer Engineering, University of Shatrah
2021	Department Rapporteur, Department of Computer Engineering, Al-Ma'ali College
2020	Head of the Studies Division
2012 – 2016	Head of the Computer Division
2010 – 2011	External Lecturer, College of Computer Science

RESEARCH INTERESTS

- Artificial intelligence and machine learning; deep learning and predictive modelling.
- Digital signal processing and biomedical signal processing.
- Intelligent antenna design and optimization; MIMO antenna systems.
- 5G and wireless communication technologies.
- Intelligent engineering systems and metaheuristic optimization algorithms.

TECHNICAL SKILLS

- Programming: MATLAB, Python and C.
- Scientific computing and numerical simulation; engineering simulation and optimization.
- Machine learning and predictive modelling; digital signal processing and frequency-domain analysis.

- LaTeX for scientific writing.

SELECTED PUBLICATIONS

1. Improve design antenna by using machine learning and material. *Central Asian Journal of Mathematical Theory and Computer Sciences*, 2025. doi:10.51699/cajmtcs.v6i2.744
2. Optimizing dual-slot antenna performance for 6G frequencies using digital transformation and machine learning. *International Conference on Cyber Resilience (ICCR)*, 2025. doi:10.1109/ICCR67387.2025.11291837
3. Improve the design of the antenna by using polynomial regression. *Lecture Notes in Networks and Systems*, Springer, 2024. doi:10.1007/978-981-97-3588-4_5
4. Machine learning with a MIMO antenna for wireless communication systems. *Al-Salam Journal for Engineering and Technology*, 2024. doi:10.55145/ajest.2024.03.01.006

PROFESSIONAL TRAINING AND ACCREDITATION

- Accredited trainer in teaching methods.
- Trainer for the IQ Learn educational platform.
- Workshops and professional development programmes in higher education, digital learning environments and modern teaching methods.

CONFERENCES AND SCIENTIFIC ACTIVITIES

- IEEE international scientific conferences.
- Conferences of the United Arab Emirates University.
- Scientific conferences of Al-Farabi University, Diyala, Iraq.
- Other regional and international scientific events.

ACADEMIC ACTIVITIES

- Teaching undergraduate courses in computer engineering and related disciplines, and supervising graduation projects.
- Developing academic programmes and supporting the strategic plans of the department.
- Quality assurance and academic accreditation activities.
- Organizing and delivering scientific workshops, seminars and training courses, and promoting artificial intelligence research among students.