

Ahmed Qabel Fahem

Lecturer | Department of Electronics and Communications Engineering

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ACADEMIC PROFILE

Ahmed Qabel Fahem is a Lecturer in the Department of Electronics and Communications Engineering, College of Engineering, Al-Muthanna University, Iraq. He received his Ph.D. in Electrical Engineering/Telecommunications from the University of Tabriz, Iran, where he was affiliated with the Wireless Laboratory (WiLab). His research focuses on UAV-assisted wireless communications, UAV base stations, 5G/6G networks, the Internet of Things (IoT), RIS/THz communications, wireless sensor networks, and metaheuristic and multi-objective optimization.

RESEARCH INTERESTS

UAV/UAV-BS communications; 5G and 6G wireless networks; IoT; reconfigurable intelligent surfaces (RIS); terahertz (THz) communications; wireless sensor networks (WSN); energy-efficient networking; network optimization; metaheuristic and multi-objective optimization.

EDUCATION

- **Ph.D. in Electrical Engineering/Telecommunications**, University of Tabriz, Iran | 2019-2026
Dissertation: Optimal Localization of UAVs in 5G-based IoT Networks in Order to Minimize Power Consumption and Maximize Network Coverage
- **M.Sc. in Electrical Engineering/Telecommunications**, Imam Reza International University, Iran | 2017-2019
- **B.Eng. in Telecommunications Technology**, Al-Furat Al-Awsat Technical University, Najaf, Iraq | 2009-2013

ACADEMIC EXPERIENCE

- **Lecturer**, Department of Electronics and Communications Engineering, College of Engineering, Al-Muthanna University, Iraq | 2023-Present
- **Part-time Lecturer**, Samawah Technical Institute, Department of Electrical Technology, Iraq | 2020-2022
- **Part-time Lecturer**, College of Nursing, Al-Muthanna University, Iraq | 2013-2014

PROFESSIONAL EXPERIENCE

- **Telecommunications Engineer**, Horizon Scope Telecom Company | 2021-2022
- **Telecommunications Engineer**, EarthLink Internet & Communications Services Company | 2014-2017
- **Engineer**, Al-Haidariya Power Station, Najaf, Iraq | 2014

PUBLICATIONS

- **Scopus-indexed journal articles**

- [1] H. A. Jihad, **A. Q. Fahem**, and J. M. Niya, "LoS/NLoS Identification in UAV-Assisted LoRa Networks via Chirp Correlation Features," *Electronics Letters*, vol. 62, e70648, 2026. DOI: [10.1049/el12.70648](https://doi.org/10.1049/el12.70648)
- [2] **A. Q. Fahem**, J. M. Niya, and M. Asadpour, "Trade-off-aware Optimisation of UAV Base Station Deployment in Smart IoT Environments Using Strength Pareto Evolutionary Algorithm," *IET Communications*, vol. 20, e70151, 2026. DOI: [10.1049/cmu2.70151](https://doi.org/10.1049/cmu2.70151)
- [3] **A. Q. Fahem**, H. A. Jihad, J. M. Niya, and M. Asadpour, "Smart Multi-Objective Unmanned Aerial Vehicles as Base Stations Placement in 6G Cellular Telecommunication Networks Using NSGA-II Optimisation Algorithm," *IET Networks*, vol. 14, no. 1, e70017, 2025. DOI: [10.1049/ntw2.70017](https://doi.org/10.1049/ntw2.70017)

[4] **A. Q. Fahem** and J. M. Niya, “Optimal DBS Placement in IoT Networks to Minimize Power Consumption Using Grasshopper Optimization Algorithm,” *IET Communications*, vol. 19, no. 1, e70059, 2025. DOI: [10.1049/cmu2.70059](https://doi.org/10.1049/cmu2.70059)

- **Scopus-indexed conference paper**

[5] **A. Q. Fahem**, H. A. Jihad, and M. A. Tinati, “Energy-Efficient Clustering in Wireless Sensor Networks Using Horse Herd Optimization Algorithm,” *2025 9th International Conference on Internet of Things and Applications (IoT), IEEE, Isfahan, Iran, 2025*. DOI: [10.1109/IoT69654.2025.11297631](https://doi.org/10.1109/IoT69654.2025.11297631)

- **Other journal publication**

[6] **A. Q. Fahem**, H. A. Jihad, and B. M. Al-Gburi, “A New Approach to Minimize Power Consumption in Underwater Wireless Sensor Networks,” *Venus: Jurnal Publikasi Rumpun Ilmu Teknik*, vol. 2, no. 5, pp. 94-104, 2024. DOI: [10.61132/venus.v2i5.536](https://doi.org/10.61132/venus.v2i5.536)

TECHNICAL SKILLS

- **Programming & Simulation:** MATLAB, Simulink, MATLAB App Designer, C/C++, Arduino IDE
- **Optimization & Research:** GOA, GWO/MOGWO, PSO, NSGA-II, SPEA2, HHOA
- **Engineering Tools:** Cisco Packet Tracer, AutoCAD
- **Productivity:** Microsoft Word, Excel, PowerPoint, Outlook

TRAINING & CERTIFICATIONS

- HCIA-5G Course
- Occupational Health and Safety (OSHA) Course, Iraqi Engineers Union
- AutoCAD Course, Iraqi Engineers Union
- English Language Course
- Persian Language Course

LANGUAGES

Arabic: Native | **English:** Good working proficiency | **Persian:** Good working proficiency

RESEARCH PROFILES

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| • ORCID: 0000-0002-7351-3005 | • Scopus Author ID: 60006810900 |
| • Google Scholar: Ahmed Qabel Fahem | • ResearchGate: Ahmed Qabel Fahem |