

Dr. Zohaib Hassan

Contact Information

Assistant Professor, Electrical and Computer Engineering
Air University, Islamabad
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Educational Details

Degree	Field	Year	Marks/CGPA	Institution
Matriculation	Science	2002	704/850	Army public School and College
Intermediate	Pre-Engineering	2004	821/1100	Cadet College Hassan Abdal
BS	Electronics Engineering	2009	3.57/4.0	IIUI
MS	Electrical Engineering	2013	3.39/4.0	Air University, Islamabad
Ph.D.	Electrical Engineering	2022	3.45/4.0	Air University, Islamabad

Teaching Experience

Assistant Professor (Electrical and Computer Engineering)

Air University, Islamabad

Feb 2025 -- present

- Taught undergraduate courses including:
 - Linear Integrated Circuit Design, Digital Electronics, Electronic Circuit Design, Electric Circuit Analysis, Digital Logic Design

Lab Engineer (Electrical and Computer Engineering)

Air University, Islamabad

2015 -- 2025

- Taught Undergrad Lab courses
 - Electrical Circuit Analysis, Microcontroller, Network Circuit Analysis, Signals and Systems, Digital Communication, Linear Integrated Circuit Design

Lab Engineer (Computer Science Department)

Air University, Islamabad

2009 -- 2015

- Taught Undergrad Lab courses
 - C++, OOP, DLD, Assembly Language, Computer Networks

Supervised 03 BS **Final Year Projects**

Academic Projects

- **Ph.D. Thesis:** Charging Station Locale Optimization and Path Planning for Drone Fleets in Disaster Response
- **MS Thesis:** Simulation of Solar Reflective Dish with Stirling Engine for CSP Systems
- **BS Final Year Project:** Wireless Mobile Charger for Simultaneous Device Charging

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Publications

- Z. Hassan, "Simulation of the solar reflective dish of the concentrated solar power system," 2014 *International Conference on Energy Systems and Policies (ICESP)*, Islamabad, Pakistan, 2014, pp. 1-6, doi: 10.1109/ICESP.2014.7346978.
- Zohaib Hassan, Syed Irtiza Ali Shah, Ahsan Sarwar Rana, "Charging Station Distribution Optimization Using Drone Fleet in a Disaster", *Journal of Robotics*, vol. 2022, Article ID 7329346, 13 pages, 2022. <https://doi.org/10.1155/2022/7329346>
- Hassan, Zohaib & Shah, Syed & Rana, Ahsan. (2022). Charging Stations Distribution Optimization using Drones Fleet for Disaster Prone Areas. *International Journal of Innovations in Science and Technology*. 4. 103-121. 10.33411/IJIST/2022040509.
- Zohaib Hassan, Syed Irtiza Ali Shah " A Review of the Charging Stations Locale Optimization techniques and Drone Path Planning ", *Journal of Robotics* (Under Review)

Trainings

- **PCEPT** (Professional Competency Enhancement Program for Teachers), Air University, Islamabad. 7th April to 7th June 2014
- **IPD** (Institute of Professional Development), Indigenous On-Campus Training Under Modern University Governance Program, 27th April to 30th April 2015
- **CCNA** (Cisco Certified Network Associate), CORVIT Institute of Networking, 10th Mar to 10th June 2009
- **CCNP** (Cisco Certified Network Professional), CISCOM Institute of Networking, 10th Sep to 10th Dec 2011

Workshops

- **Video Editing** with Adobe Premier Pro, 15-17 Aug, 2023 at Air University, Islamabad
- **3D Character Animation**, 21-23 Aug, 2023 at Air University, Islamabad.
- **AI for Everyone**, 28-30 August, 2023 at Air University, Islamabad.
- **Use of Generative AI Tools in teaching and learning**

Research Area

- Swarm Robotics and Multi-Agent Systems
- Charging Infrastructure Optimization for Drones
- Nature-Inspired Optimization Techniques (e.g., PSO, ACO)
- AI Integration in Disaster Management Systems

Administrative duties

- Chief Coordinator Sports and Cultural Activities , Air University, Islamabad
- Convener Technical Laboratories , ECE Dept.
- Member, OBE Committee
- Member, Curriculum Review Committee