

# Curriculum Vitae

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## Dr. Ziyad S. D. Almajali

Associate Professor – Electrical Engineering

Mutah University, Karak, Jordan

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### Professional Summary

Associate Professor with a Ph.D. from the University of Liverpool and over 10 years of academic and research experience in power systems, and control. Specialized in power system, HVDC fault classification, renewable integration, and AI applications in power systems. Experience in teaching, graduate supervision, curriculum development (ABET & JNQF), and research publication.

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### Education

**Ph.D. in Electrical & Electronics Engineering** – University of Liverpool, UK (Aug 2015)

**M.Sc. in Electrical and Computer Engineering** – New York Institute of Technology, Amman, Jordan (May 2004)

**B.Sc. in Electrical Engineering – Power** – Mutah University, Jordan (Jun 1997)

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### Academic Appointments & Employment History

**Associate Professor:** Mar 2023 – Present

**Assistant Professor:** Aug 2015 – Mar 2023

Department of Electrical Engineering, Mutah University – Karak, Jordan

- Delivered Outcome-based Education OBE-aligned undergraduate and graduate courses
- Supervised Master's theses in HVDC protection, power stability
- Developed ABET-aligned curriculum and led accreditation activities
- Integrated JNQF standards in course design and assessment
- Achieved consistently high teaching evaluations (Avg. 81.14%)

**Teaching Assistant (while pursuing Ph.D.):** Nov 2011 - Aug 2015

University of Liverpool, UK - Assisted faculty members with various teaching and administrative tasks. - Supervised examinations, including invigilation, verification of grading, and recording of marks. - Conducted laboratory sessions, performed experiments, and evaluated students' lab reports. - Served as a tutorial class assistant (tutorial sessions), supporting students in understanding course material. - Corrected homework assignments and provided feedback to students.

**Lecturer:** Sep 2004-Sep 2005

King Saud University – Sakaka, Al Jawf, Saudi Arabia Taught undergraduate courses in Computer engineering - Contributed to academic advising and curriculum support. - Participated in departmental and college-level academic activities.

**Electrical Engineering Lab Supervisor:** Apr 1998 – Oct 2011

Mutah University, Jordan

Provided guidance and assistance to students in lab experiments, troubleshooted technical issues, and collaborated with faculty to align lab exercises with the curriculum. Managed lab schedules, equipment, and resources, ensuring a safe environment. Maintained and calibrated equipment, managed supplies, and recommended upgrades based on educational needs.

**Electrical Engineer (Part-Time):** Oct 2010 – Oct 2011

Engineering Office – Mutah University

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## Leadership and Administrative Roles

**Head, Electrical Engineering Department**

*Mutah University, Jul 2017–Aug 2018, Oct 2023–Oct 2025*

Accountable for providing strategic leadership, supervising academic and administrative functions, ensuring resource efficiency, and promoting faculty development through research and effective teaching methods. Conduct regular performance evaluations, fostering a culture of continuous improvement.

## Assistant Director, Prince Faisal Center for Environmental and Energy Research

*Mutah University, Mar 2020 – Oct 2023*

Oversaw O&M of a 5MW PV solar plant and coordinated energy research projects

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## Editorial & Professional Service

### Editorial Secretary of a Scientific Journal, Sep 2022- Present

**Jordan Journal of energy**, Mutah University

- Coordinated communication between authors, reviewers, and editorial board.
  - Organized editorial board meetings and maintained records.
  - Assisted in managing the peer-review and publication process.
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## Research Projects

- **Optimal Operating Control of Electrical Water Heaters**
    - Role: Principal Investigator | Funded by Mutah University | 24 months | JD 4,500
  - **Wide Area Controller Design for Jordanian Power System (Hardware-in-the-Loop)**
    - Role: Research Team Member | Ministry of Higher Education | JD 74,860
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## Graduate Thesis Supervision (Extended)

Supervised and co-supervised over 18 Master's theses. Topics included:

- Stability Analysis of Microgrids with High Penetration of Renewable Energy Resources
  - Integration of Hybrid Renewable Energy System Using Multi-Level Inverter
  - HVDC Transmission Lines Fault Analysis and Protection Design
  - Wind Energy Forecasting Using Artificial Neural Networks
  - Cooling Systems Optimization for PV Modules
  - Load Forecasting-Based PV System Design
  - Detection and Classification of Power Quality Disturbances using Chromatic Monitoring
  - Dust Impact Evaluation on PV System Efficiency
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## Courses Taught (ABET & JNQF-Aligned)

### **Power Systems & Machines**

Power Systems 1, Power Protection, High Voltage, Electrical Machines (Lab & Theory)

### **Control & Electronics**

Automatic Control, Machine Controllers Lab, Power Electronics (Industrial & Lab)

### **Smart Energy & Renewables**

Smart Grids, Renewable Energy Systems, Electrical Energy Management

### **Fundamentals**

Electric Circuits II, Illumination and Installation, General Electricity, Senior Design Projects (Capstone Supervision)

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## **Professional Development & Training Courses**

### **International & Technical Certifications**

- **ICDL – International Certification of Digital Literacy**  
*Issued by ICDL Foundation*
- **Data Science & Machine Learning – Certificate of Completion**  
*Issued by Mutah University*

### **Academic Promotion Training Program**

*Completed as part of promotion requirements to Associate Professor, include:-*

- **Academic Leadership** – 6 hours
- **Course Development for Outstanding Learning Experiences** – 6 hours
- **Scientific Research & Project Proposal Writing** – 6 hours
- **Modern Statistical Methods** – 6 hours
- **E-Learning Strategies & Platforms** – 9 hours

### **Professional Affiliations**

- **Jordan Engineers Association** (Since 1997)

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## Skills

- Technical: MATLAB, Simulink, LabVIEW
  - Instructional design aligned with ABET and JNQF standards
  - Instructional delivery using outcome-based education (OBE) frameworks
  - Instructional technology integration (Moodle, MS Teams, e-learning platforms)
  - Teaching and instructional development for undergraduate and graduate engineering courses
  - Instructional and assessment Languages: Arabic (Native), English (Fluent – Teaching & Writing)
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## Awards & Recognition

- **Best Ph.D. Poster Presentation**, University of Liverpool (2013)
  - **Ph.D. Scholarship**, Mutah University (2011)
  - **Top BSc Student**, Electrical Engineering – Mutah University (1997)
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## List of Publications

- Z. S. Almajali, "Optimizing Solar Car Performance: GPS-Enhanced Dual Axis Precision and Single-Axis Southward Orientation in Solar Tracking Solutions", International Journal of Engineering Trends and Technology , August 2025
- Z. S. Almajali, M. N. Bashabsheh, S. A. Alleimon, L. R. Btoosh, "Fault Classification in HVDC Systems: A Fuzzy Logic Classifier Approach", IEEE IC\_ASET 2024.
- Z. S. Almajali and S. A. Aldmour, "Global Positioning System Based Dual Axis Tracker for Solar Car," ICCEP 2023.
- Ali Alqatawneh, L. Al-Tarawneh, Z. S. Almajali, "Indexed-channel estimation..." IJECE, June 2023.
- Z. S. Almajali and S. A. Aldmour, "Single-Axis Solar Tracker for Solar Cars," JEEIT 2023.
- Z. S. Almajali, "HVDC Faults Classification by Lab Color Based Monitoring System," WSEAS, 2022.
- B. Malahmeh, K. M. Alawasa, Z. S. Almajali, "Virtual Inertia Emulation in Microgrids," IJRER 2022.
- A. Al-Dmour, H. D. Al-Majali, Z. Almajali, "GWO-Based CHB-MLI Modulation," IJETT 2021.
- Z. S. Almajali, "Transformer Inrush vs Fault Current via Chromatic Monitoring," WSEAS Power Systems 2021.

- Z. S. Almajali, “Monitoring Water Heater Energy Efficiency,” IJETT 2021.
- Z. S. Almajali, “Water Heater Discomfort Monitoring System,” IEEE JEEIT 2021.
- Z. S. Almajali et al., ‘Transmission Line Fault Diagnosis Using Chromatic Monitoring’, in Advanced Chromatic Monitoring, 2020.
- H. D. Al-Majali, B. H. Al-Majali, Z. S. Almajali, ‘Harmonics Reduction in HVDC Converters,’ WSEAS Systems and Control, 2020.
- S. Al-Juboori, S. Al-Dmour, Z. S. Almajali, ‘Smart Residential Energy Saving System’, Industry 4.0, 2019.
- Z. S. Almajali et al., ‘Asymmetrical Fault Classifier for Transmission Lines’, IET PEMD 2014.
- Z. S. Almajali et al., ‘Fault Locator for Parallel Transmission Lines’, JIEEEC 2013.