Rafat Aljarrah

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EDUCATION

- **PhD, Electrical and Electronic Engineering, The University of Manchester, UK, 2020**

Concentrations: Electrical Power System
Thesis: *Assessment of Fault Level in Power Systems with High Penetration of Non Synchronous Generation*
Thesis Advisor: Prof. Vladimir Terzija

- **MSc, Electrical Power Engineering, Yarmouk University, Jordan, 2015**

Concentrations: Electrical Power System
Dissertation: *Envelope Based Classification of Voltage Variations Using Artificial Neural Network*
Dissertation Advisor: Prof. Eyad A. Feilat

- **BSc, Electrical Power Engineering, Yarmouk University, Jordan, 2012**

EXPERIENCE

- **Assistant Professor, Electrical Engineering**

Institution: Princess Sumaya University for Technology (PSUT), Jordan
Period: July 2020-Present

- **Teaching Assistant, PhD Researcher**

Institution: The University of Manchester, UK
Period: April 2016- July 2020

- **Instructor**

Institution: American University of the Middle East (AUM), Kuwait
Period: Sep. 2015- Feb. 2016

- **Teaching and Research Assistant**

Institution: German Jordanian University (GJU), Jordan
Period: Sep. 2012- July 2015

Intrenship

- Institution: National Electric Power Company (NEPCO), Jordan
- Position: Power System Engineer
- Period: June 2012- December 2015

PUBLICATIONS

- **Published**

Al-Omary, M., **Aljarrah, R.,** Albatayneh, A. and Jaradat, M., 2021, March. A Composite Moving Average Algorithm for Predicting Energy in Solar Powered Wireless Sensor Nodes. In 2021 18th International Multi-Conference on Systems, Signals & Devices (SSD) (pp. 1047-1052). IEEE.

Aljarrah, Rafat, Hesamoddin Marzooghi, James Yu, and Vladimir Terzija. "Monitoring of fault level in future grid scenarios with high penetration of power electronics-based renewable generation." *IET Generation, Transmission & Distribution* (2020).

Aljarrah, Rafat, Hesamoddin Marzooghi, James Yu, and Vladimir Terzija. "Sensitivity analysis of transient short circuit current response to the penetration level of non-synchronous generation." *International Journal of Electrical Power & Energy Systems* 125 (2021): 106556.

R. Aljarrah, H. Marzooghi, J. Yu and V. Terzija, "Issues and Challenges of Steady-State Fault Calculation Methods in Power Systems with a High Penetration of Non-Synchronous Generation," *2019 IEEE Milan PowerTech*, Milan, Italy, 2019, pp. 1-6.

R. Aljarrah, H. Marzooghi, J. Yu and V. Terzija, "Modifying IEC60909 Standard to Consider Fault Contribution from Renewable Energy Resources Utilizing Fully-Rated Converters," *2019 9th International Conference on Power and Energy Systems*, Perth, Australia, 2019, pp. 1-6.

Feilat, E.A., **Aljarrah, R.R.** and Rifai, M.B., 2017. Detection and classification of voltage variations using combined envelope-neural network based approach. *Jordan Journal of Electrical Engineering. All rights reserved-Volume*, *3*(2), p.113.

PROFESSIONAL MEMBERSHIPS

- Institute of Electrical and Electronics Engineers (IEEE)
- IEEE PES Student Branch Chapter UoM
- Jordan Engineers Association

COURSES and CERTIFICATES

- **PG certificate in the following MSc Modules at The University of Manchester**

Smart Grids & Sustainable Electricity Systems
Analysis of Electrical Power and Energy Conversion Systems
Power System Operation and Economics
Solar Energy Technologies

- **Course Attendance Certificate in the Field of Electrical Power System, (200) Hours, NEPCO, Jordan. In These Subjects:**

Transmission lines simulator and voltage laboratory
Ac Motors Control & PLC
House wiring fundamentals
Transformer Operation, Testing &Maintenance
Specification of Transmission & Distribution Networks

RELEVANT SKILLS

- **Programming and Software**

Matlab, Digsilent (Powerfactory), LTspice , PSCAD, FEM, Tina, NI Multisim, Power Word , Circuit Maker, C++ , Visual basic,…etc.

- **Languages**

Fluent in English and Arabic (mother tongue)

RESEARCH INTEREST

- **Future Power Systems**
- **Fault Level Monitoring**
- **Renewable Energy**
- **Artificial Intelligence**
- **Power System Protection**