

# **Curriculum Vitae**

Qusay Salem

## **Contact information**

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Electrical Engineering Department  
Princess Sumaya University for Technology  
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## **Educations**

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- 2015 - 2020, Doctor of Engineering in Electrical Power and Energy Systems, University of Ulm, Germany.

*Dissertation Title: "A Transformerless H-Bridge Inverter as a Bidirectional Power Flow Controller in a Microgrid Based P/V Droop Control"*

- 2011 – 2013, Master of Science in Electrical Power Engineering, Yarmouk University.

*Thesis Title: "Impact of Integration of FACTS Devices on Wind Farm Connected to Medium Voltage Grid Under Healthy and Faulty Conditions"*

- 2004 – 2009, Bachelor of Electrical Engineering - Power and Control, Mutah University.

## **Academic and Professional Experiences**

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- 09/2020 – present, Assistant Professor in the Department of Electrical Engineering at Princess Sumaya University for Technology (PSUT).

Major Tasks: Conducting Teaching, Supervision and Research (Details are coming soon).

- 2015 – 2020, PhD Research Scholar at Institute of Energy Conversion and Storage, Ulm University, Germany.

Major Tasks:

- Modeling and control of DC/AC single and three phase power converters for microgrid applications in low-voltage distribution network.
- Development of power flow algorithms including optimization tools for power management purposes in low voltage microgrid systems.
- Development of protection schemes to perform islanding and resynchronization process in case of short circuit events (intentional and unintentional).
- Supervisor of Bachelor and Master Theses within the Institute of Energy Conversion and Energy Storage at University of Ulm.
- 10/2011 – 12/2012, Teacher and Research Assistant at Hijjawi Faculty for Engineering Technology at Yarmouk University, Jordan.

#### Major Tasks:

- Supervisor of Electrical Circuits Lab.
- Preparing assignments and papers in renewable energy integration with power networks.
- 04.2010 – 10.2010, Substations Maintenance and Testing Engineer (Engineers Association Training) at National Electric Power Company (NEPCO), Jordan.
- Making of switching operations in power substations for the sake of maintenance and testing of various power substations components.

#### Skills

- Experienced in Windows 7, 10, MS Office applications Word, Excel, and Powerpoint.
- Very Good Knowledge in Modeling, Design and Programming using Matlab/Simulink.
- Experienced with testing and verification of Simulink models with Real Time Simulators.
- Basic Knowledge in LabVIEW, PSPICE, C, and C++.
- Well organized during work, accurate of meeting deadlines, highly cooperative and effective team worker.

#### Research Interests

- Microgrids operation and control.
- Decentralized power control.
- Stability and security of utility grid connected to distributed and renewable energy sources.
- Modeling and control of power converters.
- Advanced transmission and distribution systems.
- FACTS devices applications.
- Applications of power electronics in Power Systems.

#### List of Publications

##### Peer-reviewed Journals:

1. **Qusay Salem;** Khaled Alzaareer; Salman Harasis, “Operation Mode Transition of a Low-Voltage Single Phase Microgrid based on Synchronization Controller”, *International Journal on Electrical Engineering and Informatics*, Vol. 13, No. 3, pp. 554-565, 2021.
2. Salman Harasis; Karar Mahmoud; Saher Albatran; Khaled Alzaareer; **Qusay Salem**, “Dynamic Performance Evaluation of Inverter Feeding a Weak Grid Considering Variable System Parameters”, *IEEE Access*, Vol. 9, pp. 126104-126116, 2021.
3. **Qusay Salem;** Khaled Alzaareer, “Detailed analysis of grid connected and islanded operation modes based on P/U and Q/f droop characteristics”, *International Journal of Power Electronics and Drive System*, Vol. 12, No. 2, pp. 772-782, 2021.

4. Salman Harasis; Ahmad Y Omishat; **Qusay Salem**; Khaled Alzaareer; Al-Motasem Aldaoudeyeh; Mamdouh L Alghaythi, "Flexible Operation of Hybrid Distributed Energy System Based on Reliability Redundancy", *International Journal of Renewable Energy Research*, Vol. 11, No. 2, pp. 638-646, 2021.
5. **Qusay Salem**; Khaled Alzaareer, "Fault Ride-Through Capability with Mutual Inductance in Low Voltage Single-Phase Microgrid", *IETE Journal of Research, Taylor and Francis*, DOI: [10.1080/03772063.2020.1800524](https://doi.org/10.1080/03772063.2020.1800524), Aug 2020.
6. Khaled Alzaareer; Ziad Claude El-bayeh; **Qusay Salem**, "Grid-Connected PV Systems: Impact Evaluation & Optimal Allocation and Sizing for Losses Minimization and Voltage Improvement (Jordanian Case Study)", *Journal of Electrical and Electronics Engineering*, Vol. 12, No. 2, 2019.
7. **Qusay Salem**; Libo Liu ; Jian Xie, "Dual Operation Mode of a Transformerless H-Bridge Inverter in Low-Voltage Microgrid", *IEEE Transactions on Industry Applications*, Vol. 55, No. 5, pp. 5289-5299, 2019.
8. **Qusay Salem**; Jian Xie, "Decentralized power control management with series transformerless H-bridge inverter in low-voltage smart microgrid based P/V droop control", *International Journal of Electrical Power & Energy Systems, Elsevier*, Vol. 99, pp. 500-515, 2018.
9. **Qusay Salem**; Jian Xie, "A Novel Line Current Control Strategy to Control the Real Power Flow at PCC using H-bridge Inverter", *International Journal of Power Electronics and Drive Systems*, Vol. 9, No. 2, pp. 602-609, 2018.
10. **Qusay Salem**; Jian Xie, "Transition from grid-connected to islanded drooped microgrid based on islanding detection scheme", *International Journal of Power and Energy Systems, ACTA Press*, Vol. 36, pp. 112-118, 2016.
11. **Qusay Salem**, Ibrahim Altawil, "Stability Study of Grid Connected to Multiple Speed Wind Farms with and without FACTS Integration", *International Journal of Electronics and Electrical Engineering*, Vol. 2, No. 3, 2014.
12. **Qusay Salem**, Ibrahim Altawil, "Transient Stability Enhancement of Wind Farm Connected to Grid Supported with FACTS Devices", *International Journal of Electrical Energy*, Vol. 2, No. 2, 2014.
13. **Qusay Salem**, "Overall Control Strategy of Grid Connected to Wind Farm Using FACTS", *Bonfring International Journal of Power Systems and Integrated Circuits*, Vol. 4, No. 1, 2014.

#### IEEE Conferences:

14. Libo Liu; Boyang Li; Gunther Götting; Yusheng Xiang; **Qusay Salem**; Muhammad Hamid, Jian Xie, "Loss Minimization of Traction Systems in Battery Electric Vehicles Using Variable DC-link Voltage Technique--Experimental Study", *The 22<sup>nd</sup> European Conference on Power Electronics and Applications*, Lyon, Sep. 2020.
15. **Qusay Salem**, Libo Liu and Jian Xie, "Islanding and resynchronization process of a grid-connected microgrid with series transformerless H-bridge inverter installed at PCC", *2018 IEEE International Conference on Environment and Electrical Engineering and 2018 IEEE Industrial and Commercial Power Systems Europe (EEEIC / I&CPS Europe)*, Palermo, June. 2018.
16. **Qusay Salem**, Octavio Munoz and Jian Xie, "An overall power flow algorithm to control the active power transfer at PCC in LV-distribution network", *2018 IEEE International Conference on Industrial Technology (ICIT)*, Lyon, Feb. 2018.
17. **Qusay Salem**; Jian Xie, "Active power control using an alternative series connection scheme between the utility grid and Microgrid", *2016 IEEE 16th International Conference on Environment and Electrical Engineering (EEEIC)*, Florence, June. 2016.

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**Reviewer For:**

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- IEEE Transactions on Industrial Electronics
- IEEE Access
- International Transactions on Electrical Energy System – Wiley
- International Journal of Emerging Electric Power Systems – De Gruyter
- IETE Journal of Research – Taylor and Francis

**Awards**

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- Award of DAAD PhD scholarship from Deutscher Akademischer Austausch Dienst.
- Awards to attend three IEEE International Conferences from University of Ulm.

**Languages**

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- Arabic:       Mother Tongue
- English:       Very good
- German:       Very good

**Referees**

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*Upon Request*