

Yasser O. Assolami, PhD.

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Links to Accounts :

- Google scholar: <https://scholar.google.ca/citations?user=j6MoxEIAAAAJ&hl=en>
- ResearchGate: <https://www.researchgate.net/profile/Yasser-Assolami>
- LinkedIn: <https://www.linkedin.com/in/yasser-assolami-phd-48b11112a/>

Research Interests :

- Mathematical models of electric vehicle demand.
- Distribution system operation and planning, power quality, and electricity market.
- Power system optimization, distributed energy resources and energy storage systems, demand side management, and smart grid.
- Physical-cyber-security on electrical energy infrastructure.
- Power distribution system assets operation and aging.

Education:

Ph.D. Electrical Engineering

Aug. 2016 - Oct. 2021

Department of Electrical and Computer Engineering

Energy and Power Research Group, University of Waterloo, Canada

Thesis: Impact of Residential Prosumer Ownership of Plug-in Electric Vehicles on Voltage Quality and Transformer Aging: Modeling, Assessment and Planning

M.Sc Electrical Engineering

May 2014 - May 2016

Department of Electrical and Computer Engineering

Smart Grid Research Group, Ontario Tech University, Canada

Thesis: Probabilistic Impact of Charging Plug-In Electric Vehicles on the Electric Energy Distribution Systems

B.Sc in Electrical Engineering (2nd Honor)

July 2004 – July 2009

Department of Electrical Engineering

Umm ALQura University, Saudi Arabia

Work Experience:

- Assistant Professor at **Taibah University**, college of engineering at Yanbu since November 2021.
- Planning Engineer for **Saudi Electricity Company** from October 2010 till March 2012.

- Researcher at **King Abdul-Aziz City for Science and Technology**, Riyadh, Saudi Arabia from August 2009 till October 2010.

Ongoing Projects:

- EV Deployment in Saudi Arabia: Modeling and Analysis.
- Energy Efficiency in Residential Building: Case Study of Saudi Arabia
- Physical-Cyber-Attacks on Automatic Generation Control (AGC) Systems: Modeling, Detection, and mitigation.
- Electricity Market for GCC Countries: Models and Challenges.

Publications:

Journals

- i. **Y. O. Assolami** and W. G. Morsi, "Impact of Second-Generation Plug-In Battery Electric Vehicles on the Aging of Distribution Transformers Considering TOU Prices," in *IEEE Transactions on Sustainable Energy*, vol. 6, no. 4, pp. 1606-1614, Oct. 2015, doi: 10.1109/TSTE.2015.2460014. **(IF: 8.8) (Published)**
- ii. **Y. O. Assolami**, A. Gaouda and R. El-Shatshat, "A New Framework for Plug-In Electric Vehicle Charging Models Supported by Solar Photovoltaic Energy Resources," in *IEEE Canadian Journal of Electrical and Computer Engineering*, vol. 44, no. 2, pp. 118-129, Spring 2021, doi: 10.1109/ICJECE.2020.3008689. **(IF:1.606) (Published)**
- iii. **Y. O. Assolami**, A. Gaouda and R. El-shatshat, "Impact on Voltage Quality and Transformer Aging of Residential Prosumer Ownership of Plug-In Electric Vehicles: Assessment and Solutions," in *IEEE Transactions on Transportation Electrification*, vol. 8, no. 1, pp. 492-509, March 2022, doi: 10.1109/TTE.2021.3089460. **(IF:7) (Published)**
- iv. Marcos Tostado-Véliz, Hany M. Hasanien, Rania A. Turkey, **Yasser O. Assolami**, David Vera, Francisco Jurado, Optimal home energy management including batteries and heterogenous uncertainties, in *Journal of Energy Storage*, Volume 60, 2023,106646, ISSN 2352-152X, doi.org/10.1016/j.est.2023.106646. **(IF: 8.907) (Published)**
- v. Aljohani, T. M., **Assolami, Y. O.**, Alrumayh, O., Mohamed, M. A., & Almutairi, A. (2025). Sustainable energy systems in a post-pandemic world: A taxonomy-based analysis of global energy-related markets responses and strategies following COVID-19. *Sustainability*, 17(5), 2307. **(IF: 3.3) (Published)**
- vi. Meziane, S., Ryad, T., **Assolami, Y. O.**, & Aljohani, T. M. (2025). A Hierarchical Two-Layer MPC-Supervised Strategy for Efficient Inverter-Based Small Microgrid Operation. *Sustainability*, 17(19), 8729. **(IF: 3.3) (Published)**
- vii. **Y. O. Assolami**, A. Gaouda and R. El-shatshat, " Planning Framework for BESS Sittings and Sizing in a Three-Phase Active Distribution System within PEV Charging

- Demand," submitted July 2023, to IEEE Transactions on Transportation Electrification. (Under Review).
- viii. **Assolami, Y. O.** Residential Energy Management Systems: A Comprehensive Review and Case Study. Engineering Science and Technology, an International Journal, (Under Review)

Conferences

- i. **Y. O. Assolami** and W. G. Morsi, "Mitigating the impact of Charging second generation plug-in battery electric vehicles on distribution transformer's insulation life using TOU prices," *2015 IEEE Electrical Power and Energy Conference (EPEC)*, 2015, pp. 32-35, doi: 10.1109/EPEC.2015.7379923. **(Published)**
- ii. **Y. O. Assolami** and W. Morsi, "Impact of second-generation plug-in battery electric vehicles on the aging of distribution transformers considering TOU prices," *2016 IEEE Power and Energy Society General Meeting (PESGM)*, 2016, pp. 1-1, doi: 10.1109/PESGM.2016.7741182. **(Published)**
- iii. **Y. O. Assolami**, A. Gaouda and R. El-Shatshat, "Impact of Spatial-Temporal Driver's Behaviours on PEV Charging Demand," *2019 IEEE Electrical Power and Energy Conference (EPEC)*, 2019, pp. 1-6, doi: 10.1109/EPEC47565.2019.9074812. **(Published)**
- iv. Abdulrhman Alshareef, **Yasser O Assolami**, Rakibuzzaman Shah, N Mithulananthan and Syed Islam, " Plug-in Electric Vehicles (PEVs) Grid Impact on Short-Term Voltage Stability in Renewable Rich Grids," presented at 32nd Australasian Universities Power Engineering Conference (AUPEC2022). **(Published)**

Teaching:

- **Teaching Assistance Duties at the University of Waterloo**

Power Systems and Components (ECE 361): **Fall 2017** and **Winter 2018** terms (Undergraduate)

Actuators and Power Electronics (MTE 320): **Spring 2019** term (Undergraduate)

Electromechanical Energy Conversion (ECE 260): **Fall 2019** term (Undergraduate)

Distribution System Engineering (ECE 668): **Winter 2020** term (Graduate)

Power Electronics and Motor Drives (MTE 420): **Fall 2020 term** (Undergraduate)

Power Systems and Smart Grids (ECE 360): **Winter 2021 term** (Undergraduate)

- **Teaching Duties at Taibah University**

Power System Protection (EE 465): **2022 (Jan-June), 2023 (Jan-March)**

Electrical Machines I (EE 260): **2022 (Jan-June) and 2023 (April-June)**

Electromechanical Devices (EE 403): **2022 (Jan-June), 2022 (Sep-Nov), 2023 (Aug-Now)**

Fundamental of Electrical Engineering (EE 203): **2022 (Jan-June)**

Capstone I (EE 491): **2022 (Sep-Nov) and 2023 (Aug-Now)**

Capstone II (EE 492): **2022 (Jan-June)**

Power System Analysis I (EE 363): **2022 (Sep-Nov) and 2023 (Aug-Now)**

Language:

Arabic: Native or mother tongue.

English: Full Professional.

Skills:

- Strong background power system modeling, analysis, and planning.
- Professional user with LATEX, MATLAB, PYTHON, and OPENDSS software
- Beginner user with PSS/E, CYME POWER ENGINEERING, GAMS software

References:

1. Prof. Ramadan El-Shatshat (PhD Supervisor)

Director, Electric Power Engineering Program

Electrical & Computer Engineering

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2. Prof. Kankar Bhattacharya (PhD Committee Member)

Professor, ECE Department Chair, and University Research Chair

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