PERSONAL

Name
Fares El-Faouri

Address
7, Abd Al-Ghani Abdallat St., Al-Jubaiha, Amman, Jordan
11941 Amman

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+962795067628

Email
faourifares@gmail.com

LANGUAGES

- **Arabic** ★★★★★
- **English** ★★★★★
- **Japanese** ★★
- **French** ★

FARES EL-FAOURI

Assistant professor in the department of Electrical and Electronics Engineering at Princess Sumaya University for Technology, Amman, Jordan.
Specialty: Electric Machines and Motors.

WORK EXPERIENCE

Oct 2024 - Present

Assistant Professor
Princess Sumaya University for Technology, Amman

Assistant professor in the department of Electrical and Electronics Engineering.
Teaching the courses:

- Power Systems Economics.
- Power Systems Analysis.
- Electric Circuits I.
- Electric Circuits II.
- Electric Machines I.
- Electric Machines II.

Oct 2023 - Dec 2023

Teaching Assistant (TA)
Tokyo Institute of Technology, Tokyo, Japan

Teaching Assistant at the Electrical and Electronic Engineering department of the course:
"Magnetic Levitation and Bearingless Motors".

Oct 2021 - Oct 2024

Research Assistant (RA)
Tokyo Institute of Technology, Tokyo, Japan

Conducting research in the projects of:

- Magnetostriction contribution to the vibration and acoustic noise of motors.
- Magnetostriction simulation in finite element analysis platforms and comparing it with experimental findings.

Jun 2018 - Feb 2020

Lecturer
Alzaytoonah University, Amman, Jordan

Lecturer of the courses:

- Overhead & Underground Transmission Systems.
- Power Systems Analysis.
- Electric Machines.
- Power Systems Protection.

Sep 2015 - Jun 2017

Research Assistant (RA)
Princess Sumaya University for Technology, Amman, Jordan

Research Assistant in the fields of:

- Smart grids.
- Demand side Management of the Grid.
- Nickel-Cadmium Batteries Lifetime Modelling.

Sep 2015 - Jun 2017

Teaching Assistant
Princess Sumaya University for Technology, Amman, Jordan

Teaching assistant for undergraduate courses at the Electrical Engineering department.

EDUCATION AND QUALIFICATIONS

Oct 2020 - Oct 2024

Ph.D. in Electrical Engineering - Electric Motors

Tokyo Institute of Technology, Tokyo, Japan

Ph.D. doctoral student under the supervision of Professor Akira Chiba, in Chiba laboratory, at the Electrical and Electronics Engineering department in the Graduate School of Engineering.
Ph.D. thesis : Vibration and Acoustic Noise Reduction of Switched Reluctance Motors by Current and Radial-Force Shaping.

Sep 2015 - Sep 2017

M.Sc. in Electrical Engineering - Electric Motors

Princess Sumaya University for Technology, Amman, Jordan

M.Sc. student under the supervision of Professor Wejdan Abu-Elhaija and co-supervision of Professor Omar Mohamed, at the Electrical Engineering department in the Graduate School of Engineering.
M.Sc. thesis : Mutual Flux Saturation Influence on Field-Oriented Control of Induction Motors.

Sep 2011 - Sep 2015

B.Sc. in Electrical Engineering - Electric Power and Energy

Princess Sumaya University for Technology, Amman, Jordan

Ranking the first place and highest score of the Electrical Power Engineering major.
Achieving the Outstanding Academic Achievement award.

Sep 2010 - Sep 2011

General Secondary Education Certificate Examination - Scientific Stream

Terra Sancta College, Amman, Jordan

Achieving 95.0 out of 100 in the overall score.

JOURNAL PUBLICATIONS

- **F. S. El-Faouri**, M. G. Batarseh, H. Jamal, A. Faza, and W. A. Elhaija, "Hybrid Inverters with Dual Switching Frequencies for Switched Reluctance Motors," in *IEEE Access*, awaiting review as of January 2026.
- M. G. Batarseh, Y. Samer Al-Jizawi,**F. S. El-Faouri** and L. Nidal Bulbul, "A Novel Unipolar Pulse-Width Modulation Scheme for Single-Phase H-Bridge Inverters With Balanced Switch Loss Distribution," in *IEEE Access*, vol. 13, pp. 163235-163245, 2025.
- **F. S. El-Faouri**, Y. Cai et al., "Torque Ripple Minimization in Switched Reluctance Motors With Acoustic Noise Mitigation by Current Waveform Shaping," in *IEEE Open Journal of Industry Applications*, vol. 6, pp. 403-414, 2025.
- Y. Cai, **F. S. EL-Faouri**, A. Chiba and S. Yoshizaki, "An Experimental Study on Phases of Vibrations Caused by Magnetostriction and Electromagnetic Force," in *IEEE Open Journal of Industry Applications*, vol. 6, pp. 316-324, 2025.
- **F. S. El-Faouri**, Y. Cai, K. Kiyota, N. Saikawa, A. Chiba and Y. Fujii, "Logistic-Function Shaping of Radial Force for Acoustic Noise Reduction in Switched Reluctance Motor," in *IEEE Transactions on Industry Applications,* vol. 61, no. 4, pp. 6357-6368, July-Aug. 2025.
- Y. Cai, **F. S. El-Faouri**, N. Saikawa, A. Chiba and S. Yoshizaki, "Magnetostriction Effect on Vibration and Acoustic Noise in Switched Reluctance Motor," in *IEEE Transactions on Industry Applications*, vol. 61, no. 2, pp. 2983-2995, March-April 2025.
- Y. Cai, **F. S. El-Faouri**, A. Chiba and S. Yoshizaki, "Magnetostriction Effect on Vibration and Acoustic Noise in Permanent Magnet Synchronous Motors," in *IEEE Open Journal of Industry Applications*, vol. 5, pp. 442-454, 2024.
- **F. S. El-Faouri**, Y. Cai and A. Chiba, "Refinement of Analytical Current Waveform for Acoustic Noise Reduction in Switched Reluctance Motor," in *IEEE Open Journal of Industry Applications*, vol. 5, pp. 325-337, 2024.
- Y. Cai, **F. S. El-Faouri**, N. Saikawa, A. Chiba and S. Yoshizaki, "Magnetostriction Vibration and Acoustic Noise in Motor Stator Cores," in *IEEE Transactions on Industry Applications*, vol. 60, no. 4, pp. 6066-6078, July-Aug. 2024.
- **F. S. El-Faouri**, Y. Cai, Y. Fujii and A. Chiba, "Mathematical Current Derivation for Acoustic Noise Reduction in Switched Reluctance Motors," in *IEEE Transactions on Industry Applications*, vol. 60, no. 1, pp. 388-399, Jan.-Feb. 2024.
- **F. S. El-Faouri**, M. Alzahlan, M. Batarseh, A. Mohammad, and M. Za'ter, "Modeling of a microgrid's power generation cost function in real-time operation for a highly fluctuating load", *Simulation Modelling Practice and Theory*, Volume 94, 2019, pp. 118-133.
- **F. S. El-Faouri**, O. Mohamed and W. A. Elhaija, "Model-Based Field-Oriented Control of a Three-Phase Induction Motor with Consideration of Rotor Resistance Variation", *International Review of Electrical Engineering (IREE)*, Volume 14, No. 3, 2019.
- **F. S. El-Faouri**, O. Mohamed and W. A. Elhaija, "Comparison of Three-Phase Induction Motor Control Models Incorporating Mutual Flux Saturation Effect", *International Journal on Energy Conversion (IRECON)*, Volume 5, No. 5, 2017.

CONFERENCE PUBLICATIONS

- **F. S. El-Faouri**, Y. Cai, A. Chiba and Y. Fujii, "Acoustic Noise Reduction and Radial-Force Sum Flattening of Switched Reluctance Motors by Analytical Force Shaping," 2023 *IEEE Energy Conversion Congress and Exposition* (ECCE), Nashville, TN, USA, 2023, pp. 4446-4450.
- Y. Cai, **F. S. El-Faouri**, N. Saikawa, A. Chiba and S. Yoshizaki, "Magnetostriction Effect on Vibration in Switched Reluctance Motors," 2023 *IEEE Energy Conversion Congress and Exposition*(ECCE), Nashville, TN, USA, 2023, pp. 4434-4441.
- J. Xiang, Y. Cai, **F. S. El-Faouri** and A. Chiba, "Radial Force Control in Switched Reluctance Motors Using Strain Gauges," 2023 *IEEE Energy Conversion Congress and Exposition*(ECCE), Nashville, TN, USA, 2023, pp. 5163-5169.
- **F. S. El-Faouri**, Y. Cai, A. Chiba and Y. Fujii, "Analytical Radial-Force Sum Flattening of Switched Reluctance Motors Considering Current RMS," *2023 IEEE International Electric Machines & Drives Conference (IEMDC)*, San Francisco, CA, USA, 2023, pp. 1-5.
- Y. Cai, **F. S. El-Faouri**, A. Chiba, Y. Fujii and K. Kiyota, "Electromagnetic Force Estimation by Using Strain Gauges in Permanent Magnet Motors," *2023 IEEE International Electric Machines & Drives Conference (IEMDC)*, San Francisco, CA, USA, 2023, pp. 1-6.
- **F. S. El-Faouri**, Y. Cai, Y. Fujii and A. Chiba, "Mathematical Derivation of Current Reference for Radial-Force Sum Flattening in Switched Reluctance Motors," *2022 IEEE Energy Conversion Congress and Exposition (ECCE)*, Detroit, MI, USA, 2022, pp. 1-6.
- Y. Cai, **F. S. El-Faouri**, N. Saikawa and A. Chiba, "Measurement of Vibration and Acoustic Noise Generated by Magnetostriction in Three Stator Cores Made of High Silicon Steel, Amorphous Iron, and Conventional Silicon Steel," *2022 IEEE Energy Conversion Congress and Exposition (ECCE)*, Detroit, MI, USA, 2022, pp. 1-7.
- M. W. Alzahlan, **F. S. El-Faouri**, M. G. Batarseh, A. Mohammad and M. E. Za'ter, "Particle Swarm Optimization of a Microgrid's Cost Function Involving Distributed Generation and Highly Fluctuating Load," *2019 IEEE Jordan International Joint Conference on Electrical Engineering and Information Technology (JEEIT)*, Amman, Jordan, 2019, pp. 319-324.
- **F. S. El-Faouri**, O. Mohamed and W. A. Elhaija, "D-Q model and control of a three-phase induction motor considering mutual flux saturation effect," *2017 10th Jordanian International Electrical and Electronics Engineering Conference (JIEEEC)*, Amman, Jordan, 2017, pp. 1-6.
- **F. S. El-Faouri**, M. Sharaiha, D. Bargouth and A. Faza, "A smart street lighting system using solar energy," *2016 IEEE PES Innovative Smart Grid Technologies Conference Europe (ISGT-Europe)*, Ljubljana, Slovenia, 2016, pp. 1-6.

SKILLS

- Ansys Workbench FEA software ★★★★★
- Ansys-Maxwell Electromagnetic FEA software ★★★★★
- Ansys-Mechanical FEA software ★★★★★
- PSIM simulation software ★★★★★
- MATLAB software and environment ★★★★☆
- PE-Expert4 inverter drive system ★★★★★
- O-Solution ds-5000 measurement system ★★★★★
- Microsoft Word, Excel, and PowerPoint ★★★★★
- Wolfram Mathematica software ★★★★☆

HOBBIES AND INTERESTS

- Teaching.
- Calisthenics.
- Gaming.

REFERENCES

References available on request.