

CURRICULUM VITA

Dr. AHMAD S. AL-ADSANI

Shuwaikh 70654, Kuwait 42325
E-mail: asy.aladsani@paaet.edu.kw
Phone: +965-99646499

Department of Electrical Engineering Technology
College of Technological Studies
Public Authority for Applied Education & Training

CURRENT POSITION **Associate Professor**, Electrical Engineering Technology Department, College of Technological Studies (CTS), Public Authority for Applied Education & Training (PAAET), Kuwait.



EDUCATION AND BACKGROUND

Dr. Ahmad S. Al-Adsani received the degree of B.Sc. (Hons.) in Electrical Power Engineering from Gannon University, Pennsylvania, USA, in 1996, and received the degree of M.S. in Electrical Power Engineering from South Dakota School of Mines and Technology, USA, in 2001. During the period 1997 to 1999 he served as an electrical engineer instructor in the Telecommunication and Navigation Institute at PAAET, Kuwait, before joining the Electrical Engineering Technology Department as assistant lecturer in the CTS at PAAET from 2001 to 2007. He also served as the Deputy head of the Electrical Engineering Technology Department, CTS, and the Head of the Electrical Unit, College of Basic Education at PAAET, from 2003 to 2007. In 2011, he received the degree of Ph.D. for research on Hybrid Permanent-Magnet Machines for Electric Vehicle Applications, from the University of Manchester, U.K.. Dr. Al-Adsani was an Assistant Professor from 2011 to 2021, and he is currently an Associate Professor with the CTS, PAAET. His research interests include electro-magnetic powertrains for electric and hybrid-electric vehicles, design and control of multiphase electric and hybrid electric machine systems for industrial and renewable energy applications. Dr. Al-Adsani is a member of the IEEE and Kuwait Engineering Society.

PROJECTS AND THESIS TITLES

Bachelor Senior Design Project (1996): " SPEED DETECTOR DEVICE "

M.S. Thesis (2001): "STABILITY AND CONTROL OF POWER TRANSFER
BETWEEN ASYNCHRONOUS GRIDS BY
A SIMPLE ELECTROMECHANICAL MEANS"

Ph.D. Thesis (2011): "HYBRID PERMENANT MAGNET MACHINES FOR
ELECTRIC VEHICLES "

**TEACHING AND
OTHER
EXPERIENCE**

Telecommunication and Navigation Institute, PAAET, Kuwait, (7/1997-7/1999)

Electrical Engineer Instructor

- Taught basic electrical engineering courses for undergraduate students.
- Participate in a workshop concerned with "Entrepreneur in the Small Business Incubators", in two Asian countries (Malaysia and Indonesia), May 1998.

South Dakota School of Mines and Technology, USA, (5/2000-5/2001)

Laboratory Engineer and TA

- Worked with professors in assorted assignments.
- Responsible for preparing electrical machine labs and assisting undergraduate students throughout the experimental work.

College of Technological Studies, PAAET, Kuwait, (9/2001-6/2007)

Lecturer

- Taught several electrical engineering courses and laboratories for undergraduate students.
- Worked with professors in assorted assignments and committees.

University of Manchester, U.K., (10/2007-6/2011)

Ph.D. Student and TA

- Taught and prepared electrical machines laboratory for undergraduate students.
- Worked with professors in assorted assignments.
- Aided in establishing a Hybrid Permanent Magnet Machines Fabrication.

College of Technological Studies, PAAET, Kuwait, (12/2011-9/2021)

Assistant Professor

- Teaching several electrical engineering courses and laboratories for undergraduate students.
- Responsible for directing and helping students in the Electrical Unit in the College of Basic Education at PAAET.
- Provide students with information outside the classroom such as the future prospects on the subject, its importance, etc.
- Direct students on how to use the study material for positive results in potential work.
- Engage students/colleagues in related local conferences and meetings.
- Participate in a workshop by Eneritech for Training and Consulting Comp. that concerned with Renewable Energy and its Investment in Kuwait, Dec. 2013.
- Attend "Authoring and Publishing in Digital Age" course, March 2019.
- Attend training work in Electrical Engineering Technology department, by Festo Didactic Electric Power (FESTO), June 2019.
- Attend and successfully completed "Writing Program using World-Wide Instructional Design System (WIDS)" course, Feb. 2020.
- Attend and successfully completed "Microsoft Teams" training course, June-July 2020.
- Provide regular electrical consultations for Banta Furniture Company, Kuwait, 2019-2020.
- Write articles in Kuwait newspaper regarding general thoughts and current issues in technology and environmental concerns including electricity conservation, 2020.
- Participate in the Electrical Power and Energy Conference (EPEC 2020),

Edmonton, Alberta, Canada, Nov. 9-10, 2020.

- Participate in the 10th International Conference on Power Electronics, Machines and Drives (PEMD 2020), U.K., 15-17, Dec. 2020.

College of Technological Studies, PAAET, Kuwait, (10/2021-now)

Associate Professor

- Participate and awarded for publishing in highly ranked journals (Q1) at the Exhibition of Scientific Posters and Publications which was organized in Shuwaikh campus, PAAET, Dec. 2022.

FUNDED PROJECTS

- Ahmad S. Al-Adsani and Michel E. AlSharidah, “Comparison of Three and Nine Phase Brushless PM Drive System for Automotive Traction Applications”, PAAET, Project no. TS-14-04.
- Michel E. AlSharidah, Ahmad S. Al-Adsani and Nabil A. Ahmad, “Robust Predictive Control of Brushless Permanent Magnet Motor in Fuel Cell Powered Electric Vehicle”, PAAET, Project no. TS-19-14.

PUBLISHED BOOKS

- O. Beik and A. S. Al-Adsani, “DC Wind Generation Systems - Design, Analysis, and Multiphase Turbine Technology”, Springer International Publishing, ISBN: 978-3-030-39345-8, ISBN: 978-3-030-39346-5 (eBook), March 2020.
- A. S. Al-Adsani and O. Beik, “Multiphase Hybrid Electric Machines – Applications for Electrified Powertrains”, Springer International Publishing, ISBN: 978-3-030-80434-3, ISBN: 978-3-030-80435-0 (eBook), September 2021.

CONFERENCE PUBLICATIONS

- Al-Adsani A., Schofield N.: “Hybrid Permanent Magnet Generators for Electric Vehicle Applications”, IEEE International Electric Machines and Drives Conference (IEMDC'09), Miami, USA, pp. 1754-1761, 3-6 May 2009.
- Al-Adsani A. and Schofield N.: “Comparison of Three and Nine-Phase Hybrid Permanent Magnet Generator Designs”, The 35th Annual Conference of the IEEE Industrial Electronic Society (IECON 2009), Porto, Portugal, 3-5 Nov. 2009.
- Al-Adsani A., Jarushi A., Schofield N.: “Operation of a Hybrid PM Generator in a Series Hybrid Electric Vehicle”, The 3^{5th} Annual Conference of the IEEE Industrial Electronic Society (IECON 2009), Porto, Portugal, pp. 3898–3903, 3-5 Nov. 2009.
- A. Al-Adsani, A. M. Jarushi, N. Schofield.: “An ICE/HPM Generator Range Extender in a Series Hybrid Electric Vehicle”, 5th IET International Conference on Power Electronics, Machines and Drives (PEMD 2010), Brighton, UK, pp.1-6, 19-21 April 2010.
- N. Schofield, A. Al-Adsani.: “Operation of a Hybrid PM Generator in a Series Hybrid EV Power-Train”, The 7th IEEE Vehicular Power and Propulsion Conference (VPPC'11), Chicago, USA, pp. 1-6, 6-9 Sept. 2011.
- Xin Niu, N. Schofield, A. Al-Adsani.: “Comparison of 3- and 9-phase Brushless PM Drive Systems for Aerospace Actuation”, 6th IET International Conference on Power Electronics, Machines and Drives (PEMD 2012), Bristol, UK, pp.13, 27-29 March 2012.
- Beik O., Schofield N., Al-Adsani A.: “Variable Speed Brushless Hybrid Permanent Magnet Generator for Hybrid Electric Vehicles”. IEEE Transportation Electrification Conference and Expo. (ITEC 2014), Dearborn, MI, USA, pp. 1-6, 15-18 June 2014.

- Beik O. and A. S. Al-Adsani.: “Proposed Wind Turbine Limited- and High-Speed Operation”, IEEE Electric Power and Energy Conference (EPEC 2020), Online Conference, Edmonton, AB, Canada, pp. 1-6, 9-10 Nov. 2020.
- Beik O. and A. S. Al-Adsani.: “Wind Turbine Productivity and Wind Energy Assessment: An Ontario Case Study”, IEEE Electric Power and Energy Conference (EPEC 2020), Online Conference, Edmonton, AB, Canada, pp. 1-6, 9-10 Nov. 2020.
- A. S. Al-Adsani, O. Beik.: “Efficiency and Operational Envelop of a Hybrid PM Machine System for HEVs”, 10th IET International Conference on Power Electronics, Machines and Drives (PEMD 2020), Online Conference, UK, pp.1-6, 15-17 Dec. 2020.

**JOURNAL
PUBLICATIONS**

- A. S. Al-Adsani and O. Beik, “Design of a Multiphase Hybrid Permanent Magnet Generator for Series Hybrid EV”, IEEE Transactions on Energy Conversion, vol. 33, no. 3, pp. 1499-1507, Sept. 2018.
- A. S. Al-Adsani and O. Beik, “Characterization of a Hybrid PM Generator Using a 32-Phase Brushless Excitation Scheme”, IEEE Transactions on Energy Conversion, vol. 34, no. 3, pp. 1391-1400, Sept. 2019.
- A. S. Al-Adsani, A. Jarushi, O. Beik, “ICE/HPM Generator Range Extender for a Series Hybrid EV Powertrain”, IET Electrical Systems in Transportation, vol. 10, no. 1, pp. 96-104, March 2020.
- O. Beik and A. S. Al-Adsani, “Parallel Nine-Phase Generator Control in a Medium Voltage DC Wind System”, IEEE Transactions on Industrial Electronics, vol. 67, no. 10, pp. 8112-8122, Oct. 2020.
- O. Beik and A. S. Al-Adsani, “Wind Turbine Multiphase Operational Trajectory in an All-DC Wind Generation System”, IET Renewable Power Generation, vol. 14, no. 15, pp. 2916-2923, Nov. 2020.
- A. S. Al-Adsani, M. E. AlSharidah, O. Beik, “BLDC Motor Drives: A Single Hall Sensor Method and a 160° Commutation Strategy”, IEEE Transactions on Energy Conversion, vol. 36, no. 3, pp. 2025-2035, Sept. 2021.
- O. Beik and A. S. Al-Adsani, “Active and Passive Control of a Dual Rotor Wind Turbine Generator for DC Grids”, IEEE Access, vol. 9, pp. 1987-1995, 2021.
- O. Beik and A. S. Al-Adsani, “A Wind Turbine Generator Design and Optimization for DC Collector Grids”, IEEE Journal of Emerging Topics in Power Electronics, vol. 10, no. 1, pp. 484-493, Feb. 2022.

**PROFESSIONAL
SERVICE**

Reviewer for:

- IEEE and IET Transactions in Several Electrical Fields

LANGUAGES

- Arabic.
- English.

**COMPUTER
SKILLS**

- | | |
|----------------------|-----------------------------|
| • Matlab & Simulink. | • 2-D Finite Element Method |
| • Powersim (PSIM) | Magnetics (FEMM) |
| • Pspice. | • AutoCAD. |
| • Labview | • Motor-CAD. |