

CURRICULUM VITAE
Ali Asheibi, PhD



PERSONAL INFORMATION

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Google Scholar: h-index 12 i10-index 14

https://scholar.google.com.au/citations?hl=en&user=50OEX0UAAA&view_op=list_works

EDUCATION

- 2009 **PHD OF ELECTRICAL ENGINEERING**
University of Wollongong NSW Australia
Title: Discovery and Pattern Classification of Large Scale Harmonic Measurements using Data Mining
- 2006 **GRADUATE CERTIFICATE IN BUSINESS**
University of Wollongong NSW Australia
- 2001 **MASTER OF ELECTRICAL & ELECTRONICS ENGINEERING**
University of Benghazi Libya
Title: Lightning Protection for the Libyan 66Kv Transmission System
- 1991 **BACHELOR OF ELECTRICAL & ELECTRONICS ENGINEERING**
University of Benghazi Libya

EMPLOYMENT HISTORY

I. Academic Experience

Oct 2022 – Current	ASSISTANT PROFESSOR College of Engineering A ‘Sharqiyah University, Ibra, Sultanate of Oman
Apr 2019 – Sep 2022	SENIOR LECTURER School of Electrical, Computer and Telecommunications Engineering, University of Wollongong (UOW), Wollongong, NSW Australia
Sep 2018 – Mar 2019	VISITING RESEARCH FELLOW School of Electrical Engineering and Telecommunications University of New South Wales (UNSW), Sydney, NSW Australia
Oct 2014 – Sep 2018	ASSISTANT PROFESSOR Faculty of Engineering, University of Benghazi (UOB), Benghazi Libya
Sep 2009 – Oct 2014	LECTURER Faculty of Engineering, University of Benghazi (UOB), Benghazi, Libya
Jul 2003 – Aug 2009	TUTOR & LAB DEMONSTRATOR (PhD CANDIDATE) University of Wollongong, Wollongong NSW Australia School of Electrical, Computer and Telecommunications Engineering.

Duties and Responsibilities:

- Prepare and deliver lectures to undergraduate and graduate students.
- Prepare course materials such as syllabuses, homework assignments and handouts.
- Plan, evaluate and revise curriculums, course materials and methods of instruction.
- Assist students to focus on problem solving strategies to find the best solution.
- Ensure students reach their full potential using innovative teaching methods.
- Supervise students at lab works and introduce them with different software related course applications.
- Provide feedback on students’ assignments and reports.
- Supervise undergraduate and graduate students in their internship and research work.
- Conduct research in the field of electrical engineering and publish findings in journals, book chapters, electronic media, and conferences.
- Act as an academic adviser to students in selecting courses and research projects.
- Serve on academic and administrative committees to assist in the learning and teaching program at the academic institutions.
- Write grant proposals to procure external research funding.

II. Industrial Experience

Jun 1996 – May 2001 **Head of Projects Department**

General Electric Company of Libya –Distribution Networks, Benghazi

Duties and Responsibilities:

- Supervise engineers to follow up execution of distribution systems projects with third party contractors until 100% completion of the projects.
- Ensure the projects are carried out according to the international standards to prevent personnel injuries and maintain equipment's protection and safety.
- Alleviate and solve any problems projects might face during execution stages.
- Communicate and meet with managers to introduce suggestions for future projects which improve the distribution network's reliability and performance.
- Write technical reports to managers for each project till completion by the contractors.

Jan 1994 – Jun 1996 **Head of the Bureau of Planning**

General Electric Company of Libya –Distribution Networks, Benghazi

Duties and Responsibilities:

- Meet with engineering staff to plan new or enhanced distribution system projects to improve safety and reliability of the electrical distribution systems.
- Perform field inspection with technical staff to observe and alleviate any potential obstacles.
- Collect all required information and data to justify for the new planned projects.
- Use of computer-aided design (CAD) and engineering to draw schematic diagram of the planned projects.
- Calculate the planning factors and compare their values with reference indices.
- Write cost/ benefit reports for the planned projects to managers and receive comments.

Jul 1992 – Jan 1994 **Head of Operation and Maintenance Bureau**

General Electric Company of Libya –Distribution Networks, Benghazi

Duties and Responsibilities:

- Lead and participate as a team member in capital and maintenance projects.
- Coordinate engineering activities with other city departments and outside agencies.
- Performs scheduled maintenance and preventative repairs on all electrical equipment in the distribution networks.
- Ensure safety, integrity, and effective operation of the electrical distribution systems.
- Preparing transmission/distribution long-range planning and resource planning studies.

PUBLICATIONS

I. Journal papers

- Sep 2023 Asma Alfergani, Ali Asheibi, Saied Alaesh, Awad Shamekh, Khalil, Ashraf, 2023. "Improving Power Sharing in Inverter Based Microgrid using Multi-objective Optimization" *Computers and Electrical Engineering* 110 (2023): 108902.
<https://doi.org/10.1016/j.compeleceng.2023.108902>
- Apr 2023 Khalil, Ashraf, Asma Alfergani, Farhat M. Shaltami, and Ali Asheibi. 2023. "Robust Stabilization of a Microgrid with Communication Delay and Uncertainties" *Computation* 11, no. 4: 75.
<https://doi.org/10.3390/computation11040075>
- Jan 2021 Ashraf Khalil, Ali Asheibi
"Delay-Dependent Stability and Delay Margin Computation of a Generator Excitation Control system with Time Delay", *International Journal of Electrical and Computer Engineering* 13, January 2021.
- Jan 2021 Ashraf Khalil, Ali Asheibi Ang Swee Peng,
"Stability Analysis and Delay Margin Computation of Parallel DC-DC Converters with Communication Delay", *International Journal of Power Electronics* 13(1), January 2021.
[DOI: 10.1504/IJPELEC.2021.10026326](https://doi.org/10.1504/IJPELEC.2021.10026326)
- Apr 2017 Khalil, A., Rajab, Z., Amhammed, M. , Asheibi A., The benefits of the transition from fossil fuel to solar energy in Libya: A street lighting system case study. *Appl. Sol. Energy* 53, 138–151 (2017).
<https://doi.org/10.3103/S0003701X17020086>
- Apr 2012 A. Asheibi, D. Stirling, D. Soetanto
"Exponential Method for Determining Optimum Number of Clusters in Harmonic Monitoring Data", *International Journal of Computer and Electrical Engineering*, April 2012, Vol.4, No.2, pp. 132-136.
[DOI: 10.7763/IJCEE.2012.V4.464](https://doi.org/10.7763/IJCEE.2012.V4.464)
- Jan 2009 A. Asheibi, D. Stirling and D. Sutanto, "Analyzing Harmonic Monitoring Data Using Supervised and Unsupervised Learning," in **IEEE Transactions** on Power Delivery, vol. 24, no. 1, pp. 293-301, Jan. 2009,
[DOI: 10.1109/TPWRD.2008.2002654](https://doi.org/10.1109/TPWRD.2008.2002654)

II. Book chapter

- Jan 2009 Ali Asheibi, David Stirling, Danny Sutanto and Duane Robinson (January 1st 2009). Clustering, Classification and Explanatory Rules from Harmonic Monitoring Data, Theory and Novel Applications of Machine Learning, Meng Joo Er and Yi Zhou, IntechOpen,
[DOI: 10.5772/6673](https://doi.org/10.5772/6673)

III. Conference papers

- Dec 2023 Shoroug Alweheshi, Zakariya Rajab, Ashraf Khalil, Ali Asheibi and Faisal Mohamed
" Viable Sustainable Development Solutions Through PV Solar Technology: A Case Study for Libyan Future Perspectives" The 14th International Renewable Energy Congress (IREC 2023) Sousse, Tunisia, 2023.
- May 2023 A. Asheibi, A. Khalil, Z. Rajab
"Predicting Power Quality Disturbance Events from Weather Conditions using Gaussian Mixture Model and Decision Tree" 10th International Conference on Electrical and Electronics Engineering (ICEEE), Istanbul, Turkey, May 2023.
<https://ieeexplore.ieee.org/document/10298732>
- Dec 2022 F. Elhassi, N. Omar, Z. Rajab, A. Asheibi, A. Khalil, A. Elbreki⁴, F. Mohamed
" Photovoltaic systems Design and Cost Effectiveness Assessment for the telecommunication sites " 13th International Renewable Energy Congress (IREC), Hammamet, Tunisia, 2022.
[10.1109/IREC56325.2022.10001977](https://doi.org/10.1109/IREC56325.2022.10001977)
- Dec 2022 Z. Rajab, A. Asheibi, M. Almakhtar A. Khalil, A. Elbreki, and F. Mohamed
" Examination of Low Voltage Grid- Connected PV Generation Under Different Penetration Levels," 13th International Renewable Energy Congress (IREC), Hammamet, Tunisia, 2022.
[10.1109/IREC56325.2022.10002140](https://doi.org/10.1109/IREC56325.2022.10002140)
- Oct 2020 Z. Rajab, A. Alfergani, A. Asheibi, A. Khalil and F. Mohamed, "Optimum Microgrid Planning and Operation for Improving Reliability and Power Quality: Review," 2020 11th International Renewable Energy Congress (IREC), Hammamet, Tunisia, 2020, pp. 1-6,
[DOI: 10.1109/IREC48820.2020.9310384](https://doi.org/10.1109/IREC48820.2020.9310384)
- Nov 2019 A. Asheibi and S. Shuaib, "A Case Study on Black Start Capability Assessment," 2019 International Conference on Electrical Engineering Research & Practice (ICEERP), SYDNEY, Australia, 2019, pp. 1-5,
[DOI: 10.1109/ICEERP49088.2019.8956978](https://doi.org/10.1109/ICEERP49088.2019.8956978)
- Nov 2019 A. Khalil and A. Asheibi, "An Exact Method for Computing the Delay Margin for Power System Using Sweeping Test," 2019 International Conference on Electrical Engineering Research & Practice (ICEERP), SYDNEY, Australia, 2019, pp.1-6, [DOI:10.1109/ICEERP49088.2019.8956977](https://doi.org/10.1109/ICEERP49088.2019.8956977)
- Nov 2019 A. Khalil and A. Asheibi, "Optimal Sizing of Stand-alone PV System Using Grey Wolf optimization," 2019 International Conference on Electrical Engineering Research & Practice (ICEERP), SYDNEY, Australia, 2019, pp. 1-6,
[DOI: 10.1109/ICEERP49088.2019.8956979](https://doi.org/10.1109/ICEERP49088.2019.8956979)

- Mar 2018 A. Asheibi *et al.*, "Stability analysis of PV-based DC microgrid with communication delay," *2018 9th International Renewable Energy Congress (IREC)*, Hammamet, 2018, pp. 1-6,
[DOI: 10.1109/IREC.2018.8362556](https://doi.org/10.1109/IREC.2018.8362556)
- Oct 2017 A. Alfergani, A. Khalil, Z. Rajab, M. Zuheir, A. Asheibi and S. Khan, "Maximum allowable delay bound estimation using Lambert W function," *2017 IEEE Jordan Conference on Applied Electrical Engineering and Computing Technologies (AEECT)*, Aqaba, 2017, pp. 1-6,
[DOI: 10.1109/AEECT.2017.8257755](https://doi.org/10.1109/AEECT.2017.8257755)
- Oct 2017 A. Alfergani *et al.*, "Control of master-slave microgrid based on CAN bus," *2017 IEEE Jordan Conference on Applied Electrical Engineering and Computing Technologies (AEECT)*, Aqaba, 2017, pp. 1-6,
[DOI: 10.1109/AEECT.2017.8257775](https://doi.org/10.1109/AEECT.2017.8257775)
- Mar 2017 Z. Rajab, A. Khalil, M. Amhamed and A. Asheibi, "Economic feasibility of solar powered street lighting system in Libya," *2017 IEEE International Renewable Energy Congress (IREC)*, Amman, 2017, pp. 1-6,
[DOI: 10.1109/IREC.2017.7926027](https://doi.org/10.1109/IREC.2017.7926027)
- Sep 2016 A. Ashiebi, A. Khalil and J. Wang, "Networked control of parallel DC/DC converters over CAN bus," *2016 IEEE International Conference on Power System Technology (POWERCON)*, Wollongong, NSW, 2016, pp. 1-6,
[DOI: 10.1109/POWERCON.2016.7753955](https://doi.org/10.1109/POWERCON.2016.7753955)
- Sep 2016 A. Khalil, A. Asheibi and J. Wang, "Stability of parallel DC/DC converters with time varying delay," *2016 IEEE International Conference on Power System Technology (POWERCON)*, Wollongong, NSW, 2016, pp. 1-6,
[DOI: 10.1109/POWERCON.2016.7753954](https://doi.org/10.1109/POWERCON.2016.7753954)
- Mar 2016 A. Khalil, K. A. Alfaitori and A. Asheibi, "Modeling and control of PV/Wind Microgrid," *2016 7th International Renewable Energy Congress (IREC)*, Hammamet, 2016, pp. 1-6,
[DOI: 10.1109/IREC.2016.7478916](https://doi.org/10.1109/IREC.2016.7478916)
- Mar 2016 A. Khalil, Z. Rajab, and A. Asheibi "The Economic Feasibility of Photovoltaic Systems for Electricity Production in Libya" *2016 7th International Renewable Energy Congress (IREC)*, Hammamet, Tunisia
[Microsoft Word - paper1.doc \(uob.edu.ly\)](https://uob.edu.ly/paper1.doc)
- Mar 2016 A. Khalil, Z. Rajab, and A. Asheibi "Modeling, Simulation, Analysis and Control of Standalone PV System" *2016 7th International Renewable Energy Congress (IREC)*, Hammamet, Tunisia
 [\(15\) \(PDF\) Modeling, Simulation, Analysis and Control of Stand-alone PV System \(researchgate.net\)](https://www.researchgate.net/publication/315111115)
- Nov 2015 K. Alfaitori, A. Khalil and A. Asheibi "Distributed Control of Photovoltaic-Based Microgrid" *November 2015 Conference: The 4th International Conference on Renewable Energy Research and Applications (IEEE)*, Palermo, Italy

- [\(15\) \(PDF\) Distributed Control of Photovoltaic-Based Microgrid \(researchgate.net\)](#)
- Nov 2015 A. Khalil, A. Asheibi "The Chances and Challenges for Renewable Energy in Libya" November 2015 Conference: The 4th International Conference on Renewable Energy Research and Applications (IEEE), Palermo, Italy
[\(15\) \(PDF\) The Chances and Challenges for Renewable Energy in Libya \(researchgate.net\)](#)
- Sep 2015 A. Asheibi and S. Shuaib, "Generation system reliability evaluation based on convolution algorithm and data modeling," 2015 Australasian Universities Power Engineering Conference (AUPEC), Wollongong, NSW, 2015, pp. 1-5, [DOI: 10.1109/AUPEC.2015.7324849](#)
- Jul 2013 A. Ashiebi, A. Khalil "The Renewable Energy in Libya: Present Difficulties and Remedies" July 2013, Conference: In the Proceedings of the World Congress on Renewable Energy, Australia
[\(15\) \(PDF\) The Renewable Energy in Libya: Present Difficulties and Remedies \(researchgate.net\)](#)
- Jan 2011 Ali Asheibi, David Stirling, and Danny Soetanto
"Exponential Method for Determining Optimum Number of Clusters in Harmonic Monitoring Data", International Conference on Electrical Energy and networks (ICEEN 2011), January 7-9, 2011, Mumbai, India.
[\(15\) \(PDF\) Exponential Method for Determining Optimum Number of Clusters in Harmonic Monitoring Data \(researchgate.net\)](#)
- Sep 2010 D. Sutanto, A. Asheibi and D. Stirling, "Clustering of harmonic monitoring data using data mining," Proceedings of 14th International Conference on Harmonics and Quality of Power - ICHQP 2010, Bergamo, 2010, pp. 1-6, [DOI: 10.1109/ICHQP.2010.5625321](#)
- Aug 2010 A. Asheibi, "Pattern classification of harmonic monitoring data using data mining," 2010 International Conference on Electronics and Information Engineering, Kyoto, 2010, pp. V1-100-V1-104, [DOI: 10.1109/ICEIE.2010.5559847](#)
- Dec 2008 A. Asheibi, D. Stirling and D. Sutanto, "Classification and explanatory rules of harmonic data," 2008 Australasian Universities Power Engineering Conference, Sydney, NSW, 2008, pp. 1-5. 14-17 December 2008 Sydney Australia, Paper 259.
[EID: 2-s2.0-67649661783](#)
- Sep 2008 A. Asheibi, D. Stirling and D. Sutanto, "Determination of the optimal number of clusters in harmonic data classification," 2008 13th International Conference on Harmonics and Quality of Power, Wollongong, NSW, Australia, 2008, pp. 1-6, [DOI: 10.1109/ICHQP.2008.4668773](#)
- Nov 2006 Ali Asheibi, David Stirling, and Danny Soetanto. 2006. Analyzing harmonic monitoring data using data mining. In Proceedings of the fifth

Australasian conference on Data mining and analytics - Volume 61 (AusDM '06). Australian Computer Society, Inc., AUS, 63–68.
[EID: 2-s2.0-84870574338](#)

- May 2006 A. Asheibi, D. Stirling and D. Robinson, "Identification of Load Power Quality Characteristics using Data Mining," 2006 Canadian Conference on Electrical and Computer Engineering, Ottawa, Ont., 2006, pp. 157-162,
[DOI: 10.1109/CCECE.2006.277720](#)
- Sep 2004 Ali Asheibi, D. Stirling, S. Perera, D. Robinson
 "Power quality data analysis using unsupervised data mining",
 Australasian Universities Power Engineering Conference AUPEC 2004,
 Brisbane, Australia, Paper 187.
<https://ro.uow.edu.au/infopapers/1214/>

EXTERNAL FUNDING

Approval of my application for attracting research funding was signed on 1st April 2012 by National Association for Scientific Research (NASR) Tripoli, Libya. The aim of the project was to improve the reliability of the Libyan transmission network by extracting ideal operational rules during normal and critical states of the 220 kV Libyan Transmission Network in Eastern area. This project was carried out in collaboration with the General Electric Company of Libya (GECOL) with the grant application details below:

Grant Provider	National Association for Scientific Research (NASR) Tripoli, Libya
Body	General Electric Company of Libya (GECOL).
Grant Amount	LD 122,000 (~ AUD \$ 100,000)
Title of the project	Application of Data Mining Techniques for Security Assessment of 220 kV Libyan Transmission Network in Eastern Area
Date of starting	5 April 2012
Date of completion	30 March 2014

SKILLS

- Strong analytical and problem-solving skills
- Ability to work collaboratively as a team member
- Excellent verbal and written communication skills
- Fluently speaking, writing and reading in English, Arabic and Italian
- Experience in transforming big data into actionable insight and information

RESEARCH INTERESTS

- Power Quality analysis of distribution networks
- Reliability of Power Generation,
- Power Electronics (DC/DC) Converters,
- Renewable Energy,
- Microgrid Control

AWARDS AND HONORS

2014 Fulbright Scholarship, J. William Fulbright Foreign Scholarship, and the bureau of educational and cultural affairs of the united states department of state, Washington, USA. 29 Jun - 6 Sep 2014. Hosted by: Case Western Reserve University, Cleveland, OH

PhD scholarship Award (2003), University of Wollongong, NSW Australia 2003-2009

INVITED TALK

- “*Smart Grids Technologies and Future Electricity Distribution Grids*” Invited Lecture at International Renewable Energies Exhibition LiboReEx, Misrata, Libya, 13 Nov 2022.
- “*Discovery and pattern classification of large-scale harmonic measurements using data mining*” Invited Lecture at Case Western Reserve University (CWRU) Chemical Engineering Department, Cleveland, OH, USA, 25 Aug 2014.

MEMBERSHIPS

Association	Position
Engineers Australia	Professional Engineer
Clean Energy Council (CEC) - Australia	Photovoltaic Accredited Designer
Libyan committee for Electro-technical standards	Chairman (2012 – 2014)
Institute of Electrical and Electronics Engineers (IEEE)	Member (No 92451204)
International Association of Computer Science and Information Technology (IACSIT)	Member (No 80337824)

ADDITIONAL TRAINING

2022 **Design Grid-Connected PV Systems Course**
 Global Sustainable Energy Solutions (GSES)
 Sydney, NSW Australia
 Units completed:

- **UEERE0022:** Solve basic problems in photovoltaic energy apparatus and systems
- **UEERE0011:** Design grid-connected photovoltaic power supply systems
- **UEERE0016:** Install, configure, and commission LV grid-connected photovoltaic power systems

2022 **Solar Awareness for Tradespeople**
Global Sustainable Energy Solutions (GSES)
Sydney, NSW Australia

Topics covered:

- Understands how to safely work on sites where PV systems are present
- Evaluates safety issues and safely addresses sites including PV systems
- Identifies solar components and their functionality
- Distinguishes signs and labels in solar systems

2022 **SMART GRIDS: Future Intelligent Electricity Distribution Grids**
Malaviya National Institute of Technology Jaipur
Program of Ministry of Education, India

Topics covered:

- Introduction to Smart Grids
- Smart grid Technologies and Monitoring
- Power Electronics and Substation Automation
- Distributed Automation and Distribution Generation

2015 **XGSLab Earthing Design and EMFI Studies**
School of Computing Engineering and Mathematics.
University of Western Sydney (UWS) Kingswood, NSW Australia

Topics covered:

- Soil resistivity measurement
- Step and Touch potential
- LFI and Split study
- Earthing Studies
- Cathodic protection
- Fault current distribution
- Lightning effects
- Electromagnetic interferences (EMFI) Studies
- Earthing grid resistance testing via FOP or CIT
- Earthing grid design verification

2015 **NEPLAN 5.5.5 Applications**
School of Computing Engineering and Mathematic.
University of Western Sydney (UWS) NSW Australia

Topics covered:

- Overview + Graphical Tutorial
- Graphical Exercise 1 & 2
- Load Flow + Load Flow with Profiles + Exercises
- Short Circuit + Selectivity + Exercises

- Motor Starting + Exercises
- Harmonics
- Investment + Reliability Analysis
- Case Studies

2007 **Electrical safety: Personal Hazards Fire and Explosion Risks**
School of Electrical, Computer and Telecommunications Engineering,
University of Wollongong (UOW) NSW Australia

Topics covered:

- Benefits of electricity
- Hazards of electricity
- Case studies Relating to Electrical Hazards
- Electrical Safety Achieved via Grounding
- Electrical Safety: Australian Standards and Grounding
- International Standards and Electrical Safety in workplace
- Study of Arcing Faults
- Electrical Discharges and their ramifications
- Methods of Protection for Electrical Equipment

2006 **PSCAD V4 Applications**
School of Electrical, Computer and Telecommunications Engineering,
University of Wollongong (UOW) NSW Australia

Topics covered:

- Modelling power networks in PSCAD/EMTDC for Power Quality
- Faults and motor starting induced voltage sags and their impact on loads
- Simulation of Flickers due to an Arc Furnace Load
- Modelling and Application of variable speed drive
- Harmonics due to Variable Speed Drive
- Impact of Voltage Unbalance on Induction Motors

2003 **Advanced Quality of Electrical Supply**
School of Electrical, Computer and Telecommunications Engineering,
University of Wollongong (UOW) NSW Australia

Topics covered:

- Harmonics
- Voltage Sags
- Voltage Unbalance
- Voltage Fluctuation and Flickers
- Power Quality Monitoring
- Power Electronic Mitigation Techniques
- Power Quality Demonstrations

REFERENCES

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Position	Assistant Professor	Labs Manager	Assistant Professor
Relation	Research Collaborator Current Employer	Previous Employer	Research Collaborator
Organis- -ation	College of Engineering A'Sharqiyah University, Ibra, Sultanate of Oman	University of Wollongong (UOW) Wollongong, NSW Australia	DTU Engineering Technology Technical University of Denmark,