

Dr. A. M. Gaouda

I. PERSONAL DATA

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Faculty of Engineering, United Arab Emirates University
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Fields of Interest and Specializations:

- Smart Grids and Self-Healing in Future Distribution Systems.
- Monitoring, Diagnosis and Energy Saving.
- Integration Renewable Energy Sources with Conventional Power Systems.
- Digital Signal Processing (DSP) Applications in Industrial and Utility Systems.
- Power Systems Design, Modeling, Simulation, Analysis, and Studies.
- Engineering Education and Interactive Learning.

II. ACADEMIC HISTORY

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|------------|---|
| April 2001 | • Ph.D. Electrical and Computer Engineering,
University of Waterloo, Canada |
| Dec. 1990 | • MSc. in Electrical Engineering, (High Honors)
University of Garyounis, Libya |
| April 1982 | • BSc. in Electrical Engineering, (High Honors)
University of Garyounis, Libya |

III. WORK EXPERIENCE

- Sep. 2014 to present: Full Professor, Electrical Engineering Department, Faculty Of Engineering, UAE University, Al Ain, United Arab Emirates.
- Sep. 2009 to Sep. 2014: Associate Professor, Electrical Engineering Department, Faculty Of Engineering, UAE University, Al Ain, United Arab Emirates.
- Sep. 2010 to Sep. 2011: Chairman of Electrical Engineering Department, Faculty Of Engineering, UAE University, Al Ain, United Arab Emirates.
- Sep. 2002 to 2009: Assistant Professor, Electrical Engineering Department, Faculty Of Engineering, UAE University, Al Ain, United Arab Emirates.
- Summers of 2010, 2008 and 2007: Visiting Scholar, Electrical and Computer Engineering, University of Waterloo, Canada.
- Jan. 2001 to Jan 2002: Instructor and Research Assistant, Electrical and Computer Engineering, University of Waterloo, Canada.
- Sep. 1997 – Dec. 2000: Teaching Assistant at University of Waterloo, Waterloo, Canada.
- Jan. 1991 to Aug. 1995: Instructor, Electrical Engineering Department, University of Garyounis, Libya.
- Jan. 1987 to Jan 1993: Senior Electrical Engineer, Executive Office of 7000 Housing Units Project and Benghazi's Benina International Airport.
- Jan 1983 to Jan 1987: Electrical Site Engineer, Executive Office of 7000 Housing Units Project and Benghazi's Benina International Airport.
- June 1986 to June 1995: Electrical Consultant Engineer, OUZO Engineering Consulting Office, Benghazi, Libya – Part time.
- April 1989 to June 1995: General Electricity Company, Benghazi – Downtown distribution system assessments, developing residential buildings national standard and preparing educational material for GEC-Benghazi, Team Member – Part time.

IV. RESEARCH

The importance of my research is presented in terms of the number of citations of some of my publications as presented on Google Scholar Citations which provides a simple way to keep track of citations to my articles. My papers have been cited 1137 times where my current h-index is 12 and i10-index is 12.

A. JOURNAL PUBLICATIONS (Last 5 Years)

- [1] A.M. Gaouda, A.M. Abdrabou and Abdulrahman Dahir, "Developing Educational Smart Grid Laboratory for the UAEU," International Journal of Online Engineering (iJOE), Vol 10, No.2, 2014.
- [2] Farag Sallabi, A. M. Gaouda, A. H. El-Hag and M.M.A. Salama, "Evaluation of ZigBee Wireless Sensor Networks Under High Power Disturbances," IEEE Transactions on Power Delivery, Vol.29, No.1, pp. 13-20, Feb, 2014.
- [3] Atef Abdrabou and A. M. Gaouda, "Uninterrupted Wireless Data Transfer for Smart Grids in the Presence of High Power Transients", IEEE Systems Journal, pp. 1-11, June, 2013.
- [4] A.M. Gaouda, A.M. Abdrabou, O.A .Abuzeid and Farag K. Omar "Modeling Nonconductive Coating Based on EIS and WMR Tools," Frontiers in Aerospace Engineering (FAE), Vol.2, Iss.2, PP.98-105, May 2013.
- [5] Khaled Shuaib, Liren Zhang, Ahmed Gaouda, and Mohammad Abdul-Hafez, "PEV Charging Service Model for Smart Grid," Energies 2012, Special Issue on Smart Grid and the Future Electrical Network, November, 2012.
- [6] Nabil Bastaki, A. M. Gaouda, A. H. El-Hag and S. H. Jayaram "Condition Monitoring of Pulsed Electric Field Food Processing Systems," The Journal of the British Institute of Non-Destructive Testing, in Insight - Non-Destructive Testing and Condition Monitoring, Volume 54, No. 1, January 2012.
- [7] A.M. Gaouda, A.M. Abdrabou, O.A .Abuzeid and Farag K. Omar "Integrating EIS and Wavelet Multi-resolution Analysis; Part 1: Enhancing Monitoring of Nonconductive Coatings," Applied Mechanics and Materials, Volume 110, Pages 1065-1071, January 2012.
- [8] Farag Omar and A.M. Gaouda, "Dynamic Wavelet-Based Tool for Gearbox Diagnosis," Mechanical Systems and Signal Processing, Volume 26, Pages 190–204, January 2012.
- [9] A.M. Gaouda, and M. M. A. Salama "DSP Wavelet-Based Tool for Monitoring Transformers Inrush Currents and Internal Faults," IEEE Transaction on Power Delivery 2010, Vol.25, No.3, pp. 1258-1267, July, 2010.
- [10] Farag Omar and A.M. Gaouda, "Gear Tooth Diagnosis using Wavelet Multi-Resolution Analysis Enhanced by Kaiser's Windowing," Transactions of the Institute of Measurement and Control, August, 2010.
- [11] A.M. Gaouda, A. H. El-Hag, S. H. Jayaram, "Detection of Discharge Activities During Food Processing by Pulsed Electric Field," IEEE Transactions on Industrial Applications, Vol.46, No.1, pp. 16-22, Jan-Feb, 2010.

B. CONFERENCE PUBLICATIONS (Last 5 Years)

- [1] O. I. Adam, Mohamed Shaaban, Khalid M. Nor, A. M. Gaouda, "Distributed Generation for Distribution Network Voltage Enhancement and Energy Loss Reduction," The 2014 IEEE ISGT Asia Conference, May 20 – 23, 2014, Kuala Lumpur, Malaysia.
- [2] Khaled Shuaib, Farag Sallabi, Mohammad Abdul-Hafez, A. M. Gaouda, "Mathematical Modeling of a PEV Service Admission Control (PEVSAC) Scheme in Smart Grid," The 2014 IEEE ISGT Asia Conference, May 20 – 23, 2014, Kuala Lumpur, Malaysia.
- [3] H. El-Hag, A.M. Gaouda, S. H. Jayaram and Saeed Ul-Haq, "Detecting Turn Insulation Failures in Motor Coils Using Ground Current Signals," Accepted at the IEEE First International Conference on Condition Assessment Techniques in Electrical Systems (IEEE CATCON2013), 6 -8 December 2013, Kolkata, India.
- [4] A. M. Gaouda, Khaled Shuaib, Mohammed Abdel-Hafez, Nasser Aljuhaishi, Mahmoud Alahmad and Hamid Sharif "Conserving Energy in UAE Buildings: Demand Side Management and Methods for Experiencing Energy," Accepted at the 7th IEEE GCC Conference and Exhibition (IEEE-GCC2013), 17-20 November 2013, Doha, Qatar.
- [5] A. M. Gaouda, "Adaptive Partial Discharge Monitoring System For Future Smart Grids," Accepted at the 39th Annual Conference of the IEEE Industrial Electronics Society, (IECON 2013) 10th -13th of November 2013, Austria Center, Vienna, Austria.
- [6] A. M. Gaouda, A.M. Abdrabou and Abdulrahman Dahir, "Developing Educational Smart Grid Laboratory, Part 1: Upgrading Stage," The IEEE International Conference on Teaching, Assessment, and Learning for Engineering (TALE2013), 26-29 August 2013, Bali, Indonesia.

- [7] A. M. Gaouda, Farag Sallabi, A. H. El-Hag and M.M.A. Salama, "Zigbee Performance During Sever Interruptions in Electric Power Systems," The EPQU'11 International Conference, Lisbon 17-19 Oct, 2011.
- [8] AbdulMutalib Masaud-Wahaishia, and A.M. Gaouda, "Intelligent Monitoring and Control Architecture for Future Electrical Power Systems," The 2nd International Conference on Ambient Systems, Networks and Technologies. September 19-21, 2011, Niagara Falls, Ontario, Canada.
- [9] H. El-Hag, A.M. Gaouda and S. H. Jayaram, "A Novel Technique to Detect AC Machine Turn Insulation Failure Subjected to Steep Front Impulse Waveform," The International Conference on Power System Transient, Delft, The Netherlands, June 14-17, 2011.
- [10] A.M. Gaouda, A.M. Abdrabou, O.A .Abuzeidand and Farag K. Omar "Integrating EIS and Wavelet Multi-resolution Analysis; Part 1: Enhancing Monitoring of Nonconductive Coatings," The 2nd International Conference on Mechanical, Industrial, and Manufacturing Technologies (MIMT 2011), Singapore, 26 to 28 February 2011.
- [11] A.M. Gaouda, A.M. Abdrabou, O.A .Abuzeidand and Farag K. Omar "Integrating EIS and Wavelet Multi-resolution Analysis; Part 2: Modeling Nonconductive Coatings," The 2nd International Conference on Mechanical, Industrial, and Manufacturing Technologies (MIMT 2011), Singapore, 26 to 28 February 2011.
- [12] Mohammed Abdel-Hafez and A.M. Gaouda "A New Look at Classification of Transformer Normal and Abnormal Currents," The 15th IEEE Mediterranean Electrotechnical Conference, Malta, April 2010.

C. FUNDED PROJECTS

I have participated with my research teams in obtaining external and internal research grants of more than Five Million AED (5,331,495.45 AED) for eight projects that include externally funded (EF, QF, and UAEU-NRF), interdisciplinary and seed projects. All of these grants were obtained after Fall 2009. Two of the EF&UAEU funded projects (693,638.45 AED) are related to the development of the Power & Energy Systems educational and research Laboratory. The QF externally funded project (3,852,192.00 AED), which is related to Enabling Self-Healing for Smart Grid with Renewable Energy Resources, has been carried out in collaboration with the Kahrama Electric Utility in Qatar. The UAEU-NRF research grant (280,000.00) is related to Smart Electric Energy Campus (SEEC) for UAEU. The following are the list of research grants and awards:

1. PI - UAEU Qatar Foundation Grants, NPRP 6 -711-2-295 entitled "Enabling Self-Healing for Smart Grid with Renewable Energy Resources", has been awarded a grant under the 6th cycle of the National Priorities Research Program (NPRP), 2013–2015, **AED 3,852,192.00** (\$1.0 = AED 3.67).
2. PI - Emirates Foundation Grants, Develop Power & Energy Systems Educational and Research Laboratory, 2011–2012, **AED 500,000.00**.
3. PI - UAEU Grant to develop Power & Energy Systems Educational and Research Laboratory, 2012 –2013, **AED 73,138.45**.
4. PI - UAEU support, dismantle and moving the power system simulator from Al Jimi to Al Maqam Campus, Pesco Emirates Electrical Service & Contracting - LLC. 2012, **AED 45,500.00** (\$1.0 = AED 3.67).
5. PI - UAEU-NRF research grant competition, Smart Electric Energy Campus (SEEC) for the UAEU, 2012-2014, **AED 280,000.00**
6. Co-PI Emirates Foundation, An Agent-Based Architecture for Cooperative Distributed Power Systems, 2011-2013, **AED 150,000.00**
7. Co-PI UAEU/JCCP/JX-NRI, Internal Pipeline Corrosion Studies, stage 1: 2013 Project finding year, 2013-2014, **AED 281,300.00** (\$1.0 = AED 3.67).
8. PI - Gantouth Company, Donation for education and research, Distribution transformer for Education and Research, 1.0MVA, 11/0.4 kV, New Maqam Campus Power and Energy Systems Lab. 2010, **AED 75,000.00**
9. PI - Individual Research Grant, UAE University, Feature Extraction of High Impedance Faults in Al Ain Distribution System, 2010-2011, **AED 21,000.00**
10. PI -Individual Research Grant. UAE University, Wide-Area Monitoring of Al Ain Distribution System, 2006-2007, **AED 29,965.00**
11. PI -Individual Research Grant. UAE University, Assessment of Power Quality at AL-Ain 33/11/0.4 kV distribution system, Awarded Faculty Of Engineering Best Individual Research Award 2003/2004, **AED 23,400.00**

V. IV. PROFESSIONAL MEMBERSHIP

IEEE Member with society affiliations: Power and Energy Systems

VI. PEER REVIEWER

- IEEE Transaction on Power Delivery (IEEE-TPWRD)
- IET (IEE) Proceedings - Generation, Transmission and Distribution (IET-GTD)
- IEEE Transactions on Smart Grids (IEEE-SG)
- IEEE Transactions on Power Engineering Letters (IEEE-PESL)
- IEEE Transactions on Instrumentation & Measurement
- Elsevier – Electrical Power & Energy Systems
- Elsevier – Measurements
- ISRN Power Engineering, Hindawi Publishing.
- International Journal of Electrical Power and Energy Systems
- Other journals and International/Regional conferences.

VII. EDITORIAL/ADVISORY BOARDS OF ACADEMICALLY REFREED PUBLICATIONS

- College of Engineering - Editorial Committee - Emirates Journal for Engineering Research (2008-2010).
- Editorial Board Member, ISRN Power Engineering, 2012, International Scholarly Research Network-ISR Power Engineering, Hindawi Publishing.
- Guest Editor for the International Conference on Electrical and Computer Engineering (ICECE), 2013, Benghazi, Libya.
- Session Chair, The International Conference on Innovations in Information Technology (Innovations'13) held in UAEU, March 17-19, 2013.
- A member of the technical committee of the 3rd International Conference on Electric Power and Energy Conversion Systems, Istanbul, TURKEY, October 2-4, 2013.
- A Member of the organizing committee of the 2011 International Conference on Electric Power and Energy Conversion Systems (EPECS'11), November 10-12, 2011 at the American University of Sharjah, UAE.
- A Member of the organizing committee of the 2009 International Conference on Electric Power and Energy Conversion Systems (EPECS'09), Sharjah, UAE, November 10-12, 2009.
- Session Chair, International Conference on Electrical Power Quality and Utilization (IEEE-EPQU'11), Lisbon 17-19 Oct, 2011.
- Organizing a special session on Smart Grids at the Seventh International Conference on Innovations in Information Technology (Innovations'11), Abu Dhabi, UAE, April 25-27, 2011.
- Organizing a special session on IT Application in Electric Power Systems at the 4th International Conference on Innovations in Information Technology (Innovations'07) April, 2007.
- Track Chair in the 4th International Conference on Innovations in Information Technology (Innovations'07), Dubai, 2007.
- Session's Chair in the Second International Conference on Modeling, Simulation and Applied Optimization, Abu-Dhabi, March 2007 and IEEE Canadian Conference on Electrical and Computer Engineering. Niagara, Canada, May 2004.

VIII. INDUSTRIAL EXPERIENCE

- 1983-1993: Electrical Engineer Consultant, 7000 Housing Units Project, Benghazi.
 - 1986-1993: Head of Electrical Engineering Department, 7000 Housing Units Project, Benghazi.
 - 1983-1986: Electrical Site Engineer, 7000 Housing Units Project, Benghazi
- 1989-1992: Consultant Engineer, Consulting Engineering Office, Cold Store Building.
- 1989-1995: General Electric Company, Benghazi – Team Member – Part time