



Omar R. Ibrahim Mohamed, Assistant Professor, Electrical Engineering Department , King Abdullah II School of Engineering, Princess Sumaya University for Technology, P. O. BOX: 1438,11941 Al-Jubaiha, Amman-Jordan.

Marital Status: Married and has three daughters.

Date of Birth: 15-09-1982.

Nationality: Libyan

Mobile: 00962798839649

Emails: o.mohamed@psut.edu.jo ; omar.elobidy@gmail.com

EDUCATION

Ph.D. in Electrical Engineering, University of Birmingham, England 2012

PhD Dissertation: “Study of Energy Efficient Supercritical Coal-Fired Power Plant Dynamic Responses and Control Strategies”

M.Sc. with Honors (AGPA: 3.56) in Electrical Engineering, University of Benghazi, (previous name Garyounis University) Benghazi, Libya. 2008

M.Sc. Thesis: “Applications of Artificial Neural Networks in Optimal Dispatch of Generation”

B.Sc. with Honors (AGPA: 3.35) in Electrical Engineering, University of Benghazi 2005

B. Sc. Project: “ Power Loss Minimization in Power System”

RESEARCH INTEREST

- Power System Control and Stability.
- Power System Planning.
- Modeling, Identification and Control of Generation Systems and Electrical Machines

WORKING EXPERIENCE (TEACHING AND SUPERVISION)

- 1- Sept/2015-Present, Assistant Professor – Princess Sumaya University for Technology, King Abdullah II Faculty of Engineering, Department of Electrical Engineering , Power & Energy Program-Amman - Jordan. (ABET Accredited)**

Undergraduate Courses Taught:

Electric Circuits (1)
Power system economics
Power system planning, operation, and control
Electric Machines (1)
Electric Machines (2)
Power system design
Special Topics in Energy Engineering / Energy Efficiency and Auditing

Postgraduate Courses Taught:

Advanced Power System Protection
Power System Control and Stability

Labs Supervised:

Electric Machines Laboratory
Power System Analysis Laboratory

Supervised many undergraduate graduation projects and three master theses

- 2- Jan/2013-July/2015,Lecturer–
Department of Electrical Engineering, University of
Benghazi·Benghazi, Libya.**

Courses taught

Circuit Theory I.
Electrical Machines I
Power System Analysis II
Power Generation
Linear System Theory”

Labs Supervised:

Electromechanical Energy Conversions laboratory.
Control Systems laboratory. Feedback Instruments based lab.

- 3- Sep/2010-Jan/2012,Teacher Assistant During PhD Studies, University of
Birmingham, England, UK**

Teaching: Electrical Energy Systems
Lab Supervision: Power Electronics Applications (MATLAB/SIMULINK based
Virtual Lab).

- 4- **Jan/2006 – 2008, Electrical Engineer at the General Electric Company of Libya (GECOL):** Working as a supervisor engineer for a group of technicians for conducting a periodical tests of protective relays in distribution system switchgear. This period I was also a TA and M.Sc. student at the University of Garyounis.

PUBLICATIONS

The publications are below can be also found on the following link of Google Scholar link:

<https://scholar.google.com/citations?user=54LoUB0AAAAJ&hl=en>

A book chapter:

1- **Omar Mohamed**, Jihong Wang, Bushra Al-Duri, Shen Gue, Jianlin Wei, Junfu Lv, Qirui Gao” Mathematical Modelling of Coal fired power plant and model Parameter Identification using Genetic Algorithms”. A book chapter in the edited book, Chapter 1 “Electrical Engineering and Applied Computing”. *Springer*,2011. Pp. 1-13.

International Journals:

1- **Omar Mohamed**, Ashraf Khalil, Jihong Wang “Modeling and Control of Supercritical and Ultra-Supercritical Power Plants: A Review” *Energies*, vol. 13, no. 11, p. 2935, 2020. **(Indexed in Scopus SJR: Q1/ Science Citation Index Expanded Web of Science (Calrivate Analytics))**.

2- Rona Qatamin, **Omar Mohamed**, Wejdan Abu Elhajja “Prediction of Power Output of Wind Turbines Using System Identification Techniques” International Review on Modelling and Simulation (IREMOS), *Praise Worthy Prize*, vol. 13, no. 1, 2020. **(Indexed in Scopus SJR: Q2)**.

3- **Omar Mohamed** and Ashraf Khalil, “Progress in Modeling and Control of Gas Turbine Power Generation Systems: A Survey,” *Energies*, vol. 13, no. 9, p. 2358,2020. **(Indexed in Scopus SJR: Q1/ Science Citation Index Expanded Web of Science (Calrivate Analytics))**.

4- **Omar Mohamed** and Muhi Zater “Comparative Study between Three Modeling Approaches for a Gas- Turbine Power Generation System” *Arabian Journal for Science and Engineering*, *Springer*, **45**, 1803–1820 (2020). **(Indexed in Scopus SJR: Q2 / Science Citation Index Expanded (SciSearch))**.

5-**Omar Mohamed**, Jihong Wang, Ashraf Khalil and Marwan Limhabrsh “Predictive Control Strategy of a Gas Turbine for Improvement of Combined Cycle Power Plant Dynamic Performance”. Springerplus (2016) 5: 980. **(Indexed in Scopus SJR: Q1)**.

6- Fares S. El-Faouri, **Omar Mohamed**, and Wejdan Abu Elhaija “Comparison of Three – Phase Induction Motor Control Models Incorporating Mutual Flux Saturation Effect” International Journal on Energy Conversion (IRECON), *Praise Worthy Prize*, Vol.5, No.5 (2018), pp: 135-147. **(Indexed in Scopus SJR: Q2)**.

7-Mansour Abu Siam, **Omar Mohamed**, and Hassan Al-Nazer “Comparative Study between Genetic Algorithms and Iterative Optimization for Economic Dispatch of Practical Power System” International Review of Electrical Engineering (I.R.E.E.), *Praise Worthy Prize*, Vol. 18, No.2 (2018), pp: 128-136 **(Indexed in Scopus SJR: Q2)**.

8- Ahmad Basim and **Omar Mohamed** " Reduction of Fluctuation of Wind Turbines' Output Power by Modeling and Control" International Review of Electrical Engineering (I.R.E.E.), Vol. 14, N. 3 *Praise Worthy Prize*, 2019. **(Indexed in Scopus SJR: Q2)**.

9- Fares Elfaouri and **Omar Mohamed**, Wejdan Abu Elhaija " Model-Based Field-Oriented Control of a Three-Phase Induction Motor with Consideration of Rotor Resistance Inconstancy" International Review of Electrical Engineering (I.R.E.E.), Vol. 14, N. 3, pp: 173-181 *Praise Worthy Prize*, 2019. **(Indexed in Scopus SJR: Q2)**.

10- Mustafa Matar and **Omar Mohamed** "Fault Detection and Classification on a Transmission Line Using Discrete Wavelet Transform and Artificial Neural Networks" International Review of Electrical Engineering (I.R.E.E.), *Praise Worthy Prize* Vol.14, No.5 (2019), pp (349-357) **(Indexed in Scopus SJR: Q2)**.

11- Ashraf Khalil, Jihong Wang, **Omar Mohamed** “Robust Stabilization of Load Frequency Control System Under Networked Environment”. International Journal of Automation and Computing, vol.14, issue (1), 2016, pp:93-105. **(Indexed in Scopus SJR: Q2)**.

12- Ashraf Khalil, Asma Elferjani, Zakariya Rajab, **Omar Mohamed** “The Impact of the Time Delay on the Load Frequency Control System in Microgrid with Plug-in-Electric Vehicles” Sustainable Cities and Society, *Elsevier*, Vol. 35, 2017, pp:365-377 **(Indexed in Scopus SJR: Q1 / Science Citation Index Expanded (SciSearch))**.

13- **Omar Mohamed**, Jihong Wang, Bushra Al-Duri “Study of a Multivariable Coordinate Control for a Supercritical Power Plant”. International Journal of Energy Systems, *Scientific and Academic Publishing*. Vol.2 No. 4, August 2012.

International Conferences:

1- **Omar Mohamed**, Jihong Wang, Bushra Al-Duri, Junfu Lu, Qirui Gao “Predictive Control of Coal Mills for Improving Supercritical Power Generation Process Dynamic Responses”. Proceedings of the 51st **IEEE Conference on Decision and Control Dec 2012. Hawaii, USA . pp:1709-1714.**

2- **Omar Mohamed**, D. Younis, H. Abdelwahab, A. Anizi, and B. T. Elobidi "Comparative Study Between Subspace Method and Prediction Error Method for Identification of a Gas Turbine Power Plant" 6th international conference on Congress on Ultra Modern Telecommunication and Control System and Workshop, ICUMT, 2014, **IEEE Press**, pp:421-428.

3- **Omar Mohamed**, Jihong Wang, Ashraf Khalil and Marwan Limhabrsh “The Application of System Identification Via Canonical Variate Algorithm to North Benghazi Gas Turbine Power Generation System” *IEEE Jordan Conference on Applied Electrical Engineering and Computing, 2015*, pp:1-6.

4- Ashraf Khalil , **Omar Mohamed**, and Jihong Wang, “Networked Control of DC / DC Buck Converters” *IEEE Jordan Conference on Applied Electrical Engineering and Computing, 2015*, pp:1-6.

5- **Omar Mohamed**, Jihong Wang, Bushra Al-Duri“ Predictive Control Strategy for a Supercritical Power Plant and Study of Influences Coal Mills Control on its Dynamic Responses”. **UKACC International Conference on Control 2012 Cardiff, UK, 3-5 September 2012, pp. 918-923.**

6- Fares El-Faouri, **Omar Mohamed**, Wejdan S. Abu- Elhaija “D-Q model and control of a three-phase induction motor considering mutual flux saturation effect.” 2017 10th Jordanian International Electrical and Electronic Engineering Conference (JIEEEEC), pp: 1-6.

7- **Omar Mohamed**, Jihong Wang, Shen Guo, Bushra Al-Duri, Jianlin Wei “Modeling Study of Supercritical Power Plant and Parameter Identification Using Genetic Algorithms”. Proceedings of the World Congress on Engineering 2010 Vol II WCE 2010, June 30 - July 2, 2010, London, U.K. pp: 973-978.

8- **Omar Mohamed**, Jihong Wang, Bushra Al-Duri “Study of a Multivariable Coordinate Control for a Supercritical Power Plant”. Proceedings of the 17th International Conference on Automation and Computing. (ICAC) Huddersfield. UK. Sep. 2011. pp. 69-74.

9- **Omar Mohamed**, Jihong Wang, Bushra Al-Duri, and Shen Guo “Modeling Study of a Nonlinear Power Plant Supercritical Boiler-Turbine-Generator System and Identification of Unknown Parameters”. Proceedings of the 16th International

Conference on Automation & Computing, Birmingham, 11 September 2010. pp147-152.

10- Ashraf Khalil, Asma Elferjani, Zakariya Rajab, **Omar Mohamed** "Delay-Dependent Stability of LFC in Microgrid with Plug-in-Electric Vehicles". The 8 th International Renewable Energy Congress, IREC 2017, pp: 1-6.

11- **Omar Mohamed** and Jihong Wang "Generalized Predictive Control Strategy for Supercritical Power Plant" Proceedings of the 1st International Conference on Electrical and Computer Engineering ICECE , March 2013 Benghazi, Libya. pp: 1-6.

12- **Omar Mohamed** and Abdelhafid Elfaituri" Application of Artificial Neural Networks in Optimal Dispatch of Generation" . Proceedings of the 15th International Conference on Automation and Computing, Sep. 2009, (ICAC) Luton, United Kingdom,

13- Julie Matarweh, Reziq Mustaklem, Anas Saleem, and **Omar Mohamed** " The Application of Discrete Wavelet Transform for Classification of Power Transmission System Faults" Proceedings of IEEE JEEIT 2019, Amman, Jordan, pp:1-6.

AWARDS	YEAR
- Distinguished Teacher Award at King Abdullah II School of Engineering, Princess Sumaya University for Technology (PSUT), Amman-Jordan.	2019
- Best Poster Presentation Award in Energy Graduate School Event 2011, University of Loughborough	2011

RECENT PROFESSIONAL ACTIVITIES (CONFERENCES SESSIONS CHAIRMANSHIP AND REVIEWS OF SCIENTIFIC MANUSCRIPT)

- 1- Session Chair at Imperial College London in the World Congress on Engineering (WCE) 2010
 - 2- Session Chair for JEEIT 2019 conference, Amman Jordan.
 - 3- Peer Reviewer for IEEE conference.
 - 4- Peer Reviewer for the following journals:
 - IEEE Transactions on Energy Conversion.
 - Arabian Journal of Science and Engineering.
 - International Journal for Control, Automation and Systems.
 - Jordan Journal of Electrical Engineering (2016-2017).
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LANGUAGES

- Arabic-native language
 - English – speak fluently and read/write with high proficiency.
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MEMBERSHIPS

- International Association of Engineers IAENG membership.
- IEEE membership (PES).

COMPUTER SKILLS

- Broad Experience in programming with MATLAB and simulation via MATLAB/SIMULINK NEPLAN Package, PowerWorld Simulator and PSCAD Package which is around 8 year experience.

REFERENCES

- 1- Prof. Mohamed Elmusrati , University of Vassa , Head of the Communications and Systems Engineering Group, Faculty of Technology, Finland
Email: mohammed.elmusrati@uva.fi
- 2- Prof. Wejdan S. Abu-Elhaija
DSc., PhD, BSc. SMIEEE, FHEA
Princess Sumaya University for Technology
Amman-Jordan
Email: elhaija@psut.edu.jo
Phone: +96265359949
Fax: +96267295534
- 3- Prof. Jihong Wang, School of Engineering, University of Warwick, Coventry, CV4 7AL, UK.
Email: jihong.wang@warwick.ac.uk
Phone: +44 (0)24 765 23780, Fax: +44 (0)24 76 418922.
- 4- Dr. Ashraf Khalil
Assistant Professor,
Electrical and Electronics Engineering, Faculty of Engineering
Universiti Teknologi Brunei
Email: ashraf.sulayman@utb.edu.bn