

Date: 30-9-2023

AYMAN ABDEL-KARIM
MOHAMMAD AGHA



Consultant in Electrical Power Engineering and Projects - Jordan Engineers Association - Professional Qualification and Accreditation Council (PQAC)

PERSONAL INFORMATION

Title: Faculty member
Academic Rank: Associate professor
Date & Place of Birth: 01-02-1961, Irbid- Jordan
Nationality: Jordanian
Address: Amman - Dahiat Al-Rasheed.
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ACADEMIC QUALIFICATIONS

Degree	Major	Duration (From-To)	University	Country
Ph.D	Electrical Power Systems and Control Networks	1982-1989	AGH - University of Science and Technology	Cracow – Poland
B.Sc. & MSc. (hons)	Electrical Power Engineering (Hons)	1994-1997	AGH - University of Science and Technology	Cracow – Poland

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TEACHING EXPERIENCE				
Duration	Rank	Institution	Department/Faculty	Country
2023	Associate professor	Amman Arab University	Engineering/ Renewable Energy Engineering Jordan	Amman - Jordan
2023	Associate professor (Part time lecturer)	Al Hussein Technical University	Department of Electrical Engineering	Amman - Jordan
2015-2023	Assistant professor/ Associate professor	Philadelphia University	Department of Electrical Engineering	Amman - Jordan
2014-2015	Assistant professor (Part time lecturer)	Philadelphia University	Department of Electrical Engineering	Amman - Jordan

OTHER EXPERIENCE				
Duration	Rank	Institution	Department/Faculty	Country
2011- Aug. 2013	Electrical Engineer	Jordan Phosphate Mines Co. (JPMC). Amman – Jordan	Business Deployment Department (Mega Projects)	Jordan – Amman
2011 - 2010	Electrical Consultant	Jordan Phosphate Mines Co. (JPMC).	Aqaba New Phosphate terminal	Jordan – Aqaba
2010 - 2004	Electrical Maintenance Engineer	Jordan Phosphate Mines Co. (JPMC).	Business Development Department	Jordan – Amman

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2004 -2000	Studies & Design Department Manager	alfanar co.,	alfanar for construction	Riyadh - KSA
1997- 2000	Electrical Project Engineer	Jordan Phosphate Mines Co. (JPMC).	Projects Department	Jordan – Amman
1997- 1989	Electrical Plant Engineer	Jordan Phosphate Mines Co. (JPMC)	Aqaba Industrial Chemical Complex- (JPMC) - Fertilizer Unite	Aqaba- Jordan

Teaching Courses

- Electrical Circuit (2).
- Electric Machine (1).
- Electric Machine (2).
- Electrical Installations.
- Electrical Transmission and Distribution Network Design.
- Entrepreneurship.
- Power System (1).
- Power System (2).
- Electrical Engineering for Non-Electrical Students.

Summary of Expertise

- Academic teaching.
- Renewable Energy “Solar”.
- Chemicals “Fertilizer” and Industrial.
- Maintenance & Preventive Maintenance.
- Electrical Substations (LV, MV & HV), Transformers, Transmission lines, Control & Protection etc.
- Power Plant (diesel & thermal).
- Business Development Management.
- Proposals/ Contracts Management.
- Consultancy Activities
- Projects and Market Analyses (forecasting, planning)
- Feasibility Studies (IRR, NPV, Payback period etc.).
- Projects’ Construction.
- Energy Economics (Electrical losses “Technical & Economical, Load flow, short circuit, compensation).
- Energy Saving & Energy Management.
- Research & Development.

PUBLICATIONS

JOURNALS				
Author/s (In Order)	Title	Journal	Vol./No.	Publication Date
Mohammed Baniyounis, Ayman Agha , Hudefah Al-kashashneh, Abdullah Al-Omoush	Economic Evaluation of Induction Motor Based on Motor's Nameplate Data and Initial Cost,	International Journal of Power Electronics and Drive System (IJPEDS),	Vol 13, No 3, pp. 1340~1351, ISSN: 2088-8694, DOI: 10.11591/ijpeds.v13.i3.pp1340-1351	September 2022
Ayman Agha, Hani Attar, Ashish Kr. Luhach	Optimized Economic Loading of Distribution Transformers Using Minimum Energy Loss Computing	Hindawi - Mathematical Problems in Engineering,	Article ID 8081212, ISSN 15635147 https://doi.org/10.1155/2021/808121	2021
Ayman Agha, Hani Attar, Audih Alfaoury, Mohammad R. Khosravi.	Maximizing Electrical Power Saving Using Capacitors Optimal Placement	Recent Advances in Electrical & Electronic Engineering	2020, vol. 13, iss.	Feb.2020
Ayman Agha	Economic Evaluation of Transformer Selection in Distribution Systems.	Jordan Journal of Electrical Engineering (JJEE)	Vol 4. No 2	June 2018
Ayman Agha	A New Approach for Load Loss Factor Estimation in	International Journal on Energy Conversion (IRECON)	Vol 5. No 5	Sept. 2017

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	Electrical Distribution Networks			
Ayman Agha, Audih Alfaoury	A Dynamic Approach to Linear Statistical Electrical Energy Losses Analyses (Comparative Case Study)	World Scientific and Engineering Academy and Society (WSEAS)	16 Art. #32	2017
Ayman Agha	A New Algorithm for Reactive Power Compensation in Industrial Plant	Jordan Journal of Electrical Engineering (JJEE)	Vol 3. No 2	Sept. 2016
Ayman Agha, Audih Alfaoury	Long -Term Energy Losses Analyses for Jordanian Power System.	Power Systems and Smart Energies	IEEE Explore: 2016, Leipzig, Germany	May 2016
Ayman Agha	"VAR Planning for Radial Distribution System	GCC- Cigre Al-Khaleej Electricity Magazine	p22-29, Ninth issue	2001
Ayman Agha	Probabilistic Approach for Reactive Power Compensation	Dirasat, Engineering Sciences,	p265-271, Vol.26, No.2,	October 1999

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CONFERENCES

Author/s (In Order)	Title	Conference	Country	Date
Ayman Agha, Audih Alfaoury,	Commercial losses in Jordanian Electrical System	International Multi-Conference on Systems, Signals & Devices (SSD) - Conference on Power Systems & Smart Energies	Leipzig, Germany	2016 13th , March 2016
Ayman Agha, Amer Agha,	Supplying Energy for Green Village System	International Conference on Renewable Energy and its Future in the Arab World 2013 ,, (ICREFAW Conference 2013),	Petra University- Amman, Jordan	April 22-24, 2013,
Nabeel Tawalbeh, Ayman Agha,	Reducing the Power Factor Penalty of the Industrial Sector Due to Jordanian Tariff	(METH_01). The European Multidisciplinary Society for Modeling and Simulation Technology, (ESM07), 22-24	Malta	Oct. 2007
Ayman Agha, Nabeel Tawalbeh	Economic Discussion on Power Factor Penalties Tariff	7th Cigrre Regional Conference 2007, (JOA099)	(Amman – Jordan).	3-5 Sept 2007
Nabeel Tawalbeh, Ayman Agha, "" ,,	Statistical Approach for the Analyses of Energy System Losses in Jordan	MESM' 2005 7th Middle Eastern Simulation Multiconference, p27-32. 24-26th	Porto – Portugal	October 2005

BOOKS

Author/s (In Order)	Title	Publisher	Edition	Date
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MEMBERSHIPS OF SCIENTIFIC AND PROFESSIONAL SOCIETIES

- Membership of National Electrical Power Committees for:
 - Transmission Grid Code & Metering Code; Member of the Review Panel Committee (representing the large customers in Jordan), from July 2004 till Aug. 2013.
 - Connection Code Produced by NEPCO, From July 2005 till Aug. 2013.
- Member of the Classification Committee of Electrical Engineering division – Jordan Engineers Association, since May 2009 till date.
- Member of Jordan Engineers Association -Electrical division –, since 1989 till date.

UNIVERSITY COMMITTEES

1. Chairing the Laboratories and Projects Committee in the College of Engineering - Philadelphia University.
2. Member of the (ABET) Committee for the (Mission and Objectives) standard.
3. Member of the Preparatory Committee for the Twelfth Engineering Day - held at Philadelphia University on 4/26/2017.
4. Member of the Preparatory Committee for the Engineering Day - Philadelphia University (3/8/2018).
5. Participation in the Student Elections Committee.
6. Member of the Academic Guidance Committee of the Electrical Engineering Department.
7. Chairing the Review Committee for the Self-Assessment File of the College of Engineering - The Sixth Standard - (Student Services) ,2018.
8. Preparation of policies and procedures for the engineering graduation projects at the College of Engineering and Technology, 2020.
9. Preparation of a guide for writing the engineering report for the engineering graduation projects, 2020.
10. Member of the committee responsible for studying and developing the plan study to align it with the current requirements of the job market, 2021.

WORKSHOPS ATTENDED

1. The workshop for Launching the Industrial Innovation Program, which took place at the Oman Chamber of Commerce on October 24, 2017.
2. The Eighth Scientific Research Conference - Jordanian Society for Scientific Research - held at the University of Jordan on October 11, 2017.
3. Workshop on Grid-Connected Energy Storage Systems at the Jordanian Engineers Association on August 28, 2017.
4. The Second Professional Qualification and Accreditation Forum at the Jordanian Engineers Association, held at the Kempinski Hotel in Amman on November 23, 2016.
5. The Tenth Seminar on Technological Integration, organized by Quanser (Canada) and ENOVAS (Turkey), held at the Meridien Hotel in Amman on September 6, 2016.
6. Workshop on the Art and Science of Invention at the Jordanian Engineers Association on September 26, 2016.
7. Lecture on Energy Efficiency in Buildings by Dr. Ayoub Abu Dayya at Philadelphia University on March 21, 2017.
8. Participation in the "Workshop to Strengthen Scientific Collaboration with Jordanian Universities" organized by the National Electric Power Company at the Training Center in Al-Zarqa Al-Hashimiyah on April 16, 2018.
9. Participation in the Ninth Scientific Research Conference in Jordan organized by the Jordanian Association for Scientific Research, Innovation, and Creativity, held on November 9-11, 2019.
10. Attendance at most of the College of Engineering and Technology's activities held at Philadelphia University, such as the Engineering Graduates Forum and Scientific Engineering Days.

WORKSHOPS OFFERED

RESEARCH INTERESTS

interests include and are not limited to, power systems, power system efficiency, nonlinear systems, optimization theory, power system stability, electrical losses, and reactive power compensation.

LANGUAGES



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Arabic; Native proficiency. English; Professional working proficiency. Polish; Professional Studying proficiency.

OTHER COMMUNITY ACTIVITIES

- 1- *The 8th Jordanian International Electrical & Electronic Engineering Conference (JIEEEEC 2013) , April 16-18, 2013, Land Mark Hotel Amman , Jordan*
- 2- *International Conference on Renewable Energy and its Future in the Arab World 2013 ,, (ICREFAW Conference 2013), April 22-24, 2013, Petra University- Amman, Jordan.*
- 3- *Renewable Energy in Fertilizer Industries & Energy Auditing, Arab Fertilizer Association, Meriden Hotel, Amman Jordan, April 28-30, 2013.*
- 4- *5th Jordan AFAQ Economic Forum & Expo, le Royal Hotel Amman – Jordan, 7 th – 8th May, 2013.*
- 5- *JEBA & EU Delegation organizes Jordanian European Conference entitle “Rationalization of Energy Consumption Is First”., Meridian Hotel, 17&18/06/2013 Amman- Jordan.*

AWARDS RECEIVED

Honors Academics

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| 1994-1997 | - Scholarship (Doctoral Studies), AGH - University of Science and Technology (Cracow – Poland), International students’ program. |
| 1982-1989 | - Scholarship of the Ministry of Education -Jordan for (BSc /MSc degree). |
| 1989 | - Achievement of the MSc with honors degree. (distinguished diploma). |
| 1988-1989 | - Rector’s Reward of the University AGH - University of Science and Technology in the fourth and fifth years due to results of the studies, Cracow - Poland. |
| 1987 | - Dean Reward of the University of Bialystok in the third year due to the result of studies, Bialystok - Poland. |
| 2009 | - Certificate of Appreciation, Jordan Engineering Association, Jordan, 2009. |

دائرة الموارد البشرية
Human Resources Department

In Practices

- 2013 - Certificate of Consultant Engineer, Rank: Consultant in Electrical Power Engineering and Projects. Issued by: Jordan Engineers Association - Professional Qualification and Accreditation Council (PQAC)
- 2004 - alfanar Company Order (Riyadh, KSA) "Thanks and appreciation for loyalty and good efforts achieved for the company during the working period in alfanar".
- 1992 - Thanks, and appreciation letter from the Maintenance Director (Fertilizer unit – Aqaba) due to repairing and renewing the high voltage switchgear.
- 1991 - Thanks, and appreciation letter from the Plant Manager (Fertilizer unit – Aqaba) due to producing spare parts for the high voltage switchgear at a critical time.
- (2014- August 2023) During the Work at Philadelphia University.
- Shield of the Jordanian Engineers Association / Electrical Engineering Division for the efforts made in the service of the profession and fellow engineers during the 28th session (2018-2022).
 - Recognition Shield, Jordan Engineering Association, Jordan, 2018, (For the supervision of the winners (second place) of the electrical engineering projects in the annual competition organized by the Jordan Engineers Association (JEA) and recognizes outstanding graduation projects of engineering students in Jordan for the year 2017.
 - Appreciation Certificate, Jordan Engineering Association, Jordan, 2018.
 - Appreciation Certificate, Philadelphia University, Amman, 2018.

GRADUATE STUDENTS SUPERVISION

Student Name

Thesis Title

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Human Resources Department

Over the past eight years, there have typically been two to three groups each term, with each group consisting of two to four students.

REFERENCES

Prof. Munzer Ebaid
Chairman of Department of Architecture Engineering
Philadelphia University
mailto:mebaid2@philadelphia.edu.jo

Prof. Othman Alsmadi
Department of Electrical Engineering
The University of Jordan
mailto:othmanmk@ju.edu.jo