

**Prof. Munzer S.Y. Ebaid**  
**Professor Munzer. S. Y Ebaid**

**B.Eng., Mechanical Engineering (England-UK)**  
**M.E., PhD, Mech. Eng. (England-UK)**  
**Retired Brigadier General**  
**Citation (893), hindex (14), i-10 index (16)**



**GENERAL**

<b>Martial status:</b>	Married with two children
<b>Date of Birth:</b>	15, Jan., 1959
<b>Current Position:</b> (2024 – till now)	Dean of Faculty of Engineering and Technology Philadelphia University
<b>2023-2024</b>	Dean of Faculty of Architecture and Design Philadelphia University
<b>2010-2022</b>	Director of Academic Staff Affairs Philadelphia University
<b>Permanent Address:</b>	<b>P. O. Box 950674</b> <b>11195, Amman, Jordan</b> <b>Phone Number (Res.): +962-65687365</b> <b>Mobile: +962-(0)79-6013220</b> <b>Email Address:</b> mebaid2@philadelphia.edu.jo dr_ebaid59@yahoo.com.

**EDUCATION**

<b>December, 2002</b>	PhD in Mechanical Engineering (Gas turbines), Faculty of Aerospace Engineering, University of Hertfordshire, Hatfield, <u>England-UK</u> .
<b>November, 1999</b>	MPhil degree, Faculty of Aerospace Engineering, Mechanical Engineering Department, <u>University of Hertfordshire, Hatfield, England-UK</u> .
<b>June, 1982</b>	Bachelor's degree/B. Eng. in Mechanical Engineering, University of Sheffield, Sheffield, <u>England-UK</u> .

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June, 1979

Advanced GCE A-levels

Pure maths, Physics and Chemistry

Abingdon College of further education, Oxfordshire,  
Oxford, England- UK.

June, 1976

**The General Secondary Education** Certificate Examination  
Muawiya bin Abi Sufyan Secondary School, Zarqa, Jordan,  
Aggregate grade: 91.5%

## ACADEMIC PROFILE

March, 2017

**Professor of Mechanical Engineering,**  
Faculty of Engineering and Technology, Philadelphia  
University

2013-2017

**Associate Professor of Mechanical Engineering,**  
Faculty of Engineering and Technology, Philadelphia  
University

2009-2013

**Assistant Professor of Mechanical Engineering,**  
Faculty of Engineering and Technology, Philadelphia  
University

## RESEARCH INTERESTS

- Nanofluid Engineering Technology.
- Renewable Energy
- Fuel Cell Technology
- Automotive Engineering.
- Thermo-fluids Engineering Applications

## MERITS

- Second Class First Division Honour degree in Mech. Eng. - **University of Sheffield- England**, second distinguished graduate out of 50 students of the engineering class.
- Best Final year under graduate project in Mech. Eng., - **University of Sheffield- England**,
- First Class, Grade-A (95%), engine and control panel course-**FAA Academy - USA**.
- The distinguished graduate (First Class)-(93%), Officer basic course. **Amman-Jordan**.
- The distinguished graduate (First Class)-(92%), University graduate officer course. **Amman-Jordan**.
- Best Student list, average 91.5% in the Jordanian General Secondary certificate. **Zarqa-Jordan**.

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## SCHOLARSHIPS

**Awarded Full Academic Scholarship to pursue the B.Sc. degree in Mechanical Engineering, (01/10/1977-01/06/1982) at University of Sheffield-England as a result of high school academic performance.**

- **Awarded Full Scholarship** to pursue a Master degree by research in Mechanical and Aerospace Engineering (01/09/1997-01/09/99) at University of Hertfordshire-England -UK.
- **Awarded Full Scholarship** to pursue the PhD degree in Mechanical and Aerospace Engineering (01/09/1999-01/09/2002) at University of Hertfordshire- England-UK.

## PROFESSIONAL ACADEMIC & INDUSTRIAL EXPERIENCE

**Sep 2010 - 2023**

**Director of Academic Staff Affairs/Philadelphia University.**

**Oct. 2021 - present**

**Head of water, Environment and Energy Sector Committee.**

Scientific Research Support Fund and Innovation (SRSF)/Ministry of higher Education and Scientific Research.

**Oct. 2018 – Oct. 2020**

**Head of innovation and entrepreneurship and Innovation Sector Committee.**

Scientific Research Support Fund and Innovation (SRSF)/Ministry of higher Education and Scientific Research.

**Oct. 2019 – Sep. 2020 of Scientific Research Committee.**

Member of Scientific Research Support Fund and Innovation (SRSF)/Ministry of higher Education and Scientific Research.

**Sep 2019 – Sep. 2020**

**Member of Applied Research Funding Projects Committee.**

Collaboration project between both organizations: King Abdullah II Design & Development Bureau (KADDB) and King Abdullah Fund for Development (KAFD).

**Sep 2014– Sep 2015**

**Director of Innovation Center/Technology Business Incubator/Philadelphia University**

**2013 – 2015**

**Manager of Formula Car Student SAE Project/Philadelphia University.**

*Formula Student (or Formula SAE (F-SAE)) is a worldwide university competition, organized by the Society of Automotive Engineers (SAE), which encourages university teams to design, build, and compete with a Formula-style race car.*

**.Jan 2009 – Jan 2011**

**Advisor /Jordan Atomic Energy Commission.**

**Jan 2007 - Aug 2008**

**Concurrent Assignment as Manager of Intellectual property Unit (IPR)/King Abdullah II**

**Design and Development Bureau, KADDB.**

**Key Responsibilities:**

Performed IP audits of KADDB and JV companies wholly/partially owned by KADDB and submitting relevant reports. Devised/executed awareness campaign and training programs

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on IP rights for staff. Scrutinized standard agreements/contracts to ensure effective IP rights handling and coverage.

**Oct 2006 – Aug 2008**

**Director of Applied Research of Innovative Technology Projects/King Abdullah II Design and Development Bureau, KADDB.**

**Key Responsibilities:**

- Steering applied engineering programs and technology projects adeptly to position KADDB competitively as an internationally renowned R&D organization.
- Researching/ recommending applicable technical logistics for proposed project science/ technology options, creating detailed costing and feasibility reports for Submittal to the Board Of Directors (BOD).
- Planning and laying out the entire organizational structure along with development plans, following up on the same while building an effective leadership pipeline and robust succession.
- Identifying/recruiting a core team of professionals and stimulating progress through Continuous training programs in line with Jordanian Defence and industry.

**Jan 2003 - Oct 2006**

**Manager of Applied Research Department - Engineering Group/King Abdullah II Design and Development Bureau, KADDB.**

**Key Responsibilities:**

- Streamlined operations devised policies and standardized procedures in accordance with Government policies for maximum contribution of science/technology for wealth creation in Jordan and the country's national economic performance.
- Encouraged innovation through grant assistance to young engineers to enable them to develop their concepts and prototypes through the KADDB laboratory in conjunction with the University faculty.
- Facilitated penetration in the global defence market by establishing joint venture partnerships with key players in the industry, forging close relations with academia.
- Coordinated with HR department for recruitment of appropriate personnel to develop a strong motivated team with positive attitude, assessed/encouraged their professional development through regular training programs, trained new recruits on department operations.
- Represented the organization at reputable conferences/seminars in the fields of Applied Science and Technology

**Concurrent Assignments:**

**2004 – 2008**

**Program Manager of Innovative & Technology Projects Scheme**

*It is a joint program between King Abdullah II Fund for Development (KAFD) and King Abdullah II Design & Development Bureau (KADDB) for final year undergraduate projects in engineering, Applied science and IT.*

**Key Responsibilities**

- Selectively recommended/applied a wide range of macro economic/finance tools to chart regional economic development curves and restructured resource allocation in

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view of changing demands.

- Tapped global corporate entities in Jordan to ensure continuity of existent projects and effective implementation of program objectives across Jordan.
- Provided suitable environment to support the distinct/creative university students and developed/elevated standards of higher education in tandem.
- Established selection criteria for projects, piloted the technical committee to analyze, assess and approve projects supported by the fund. Promoted viable projects to be adopted as investment projects.
- Recruited competent personnel organized training and conducted periodic performance reviews to maintain a motivated team and attain high service levels.

**2006 – 2008**

### **Program Manager of Industrial Applied Engineering Scheme**

*A joint program between KAFD & KADDB for funding industrial applied research for post graduate students, academic faculty members and private sector.*

**2007 – 2008**

### **Vice President of the Council of Prince Faisal Information Technology Centre**

*A joint collaboration between KADDB & Yarmouk University*

**Jan 95 - Dec 98**

### **Head of Mechanical, Electrical & Electronics Main Workshops/Special Communication Commission - Jordan**

#### **Key Responsibilities:**

- Piloted a team of 100 engineers and technical personnel to achieve/surpass company performance standards.
- Planned, controlled, monitored and managed assigned project resources to best meet project objectives and adhere to project scope, time, cost and quality constraints.
- Assisted in preparation of service maintenance/construction budget requests utilizing systematic, standardized procedures in addition to annual procurement plans for the main workshops.
- Effectuated periodical preventive/corrective maintenance checks and follow-ups of entire workshop equipments.

**Jan 94 - Dec 94**

### **Head of Computer Unit**

#### **Key Responsibilities:**

Lead a workforce of 20 engineers for seamless functioning of activities leading to optimal growth chart of the organization, devised database systems for communication microwave sites, personals and test equipment, contrived computer training courses/programs for new recruits.

**Jan 89 - Dec 93**

### **Head of Electro-mechanical Workshop**

#### **Key Responsibilities:**

- Executed key activities like automotive vehicles, overhauling/rebuilding of diesel/petrol alternators, repairs and maintenance of AC voltage stabilizers and other equipment, approved order quantities of maintenance and service

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equipment.

- Oversaw construction/ installation/enhancements of earthing systems/obstruction Lights/grounding electrical systems for microwave sites/towers.

**Jan 86 - Dec 88**

**Chief of Maintenance**

**Key Responsibilities:**

Specified, selected, installed and managed maintenance/inspection of electro-mechanical equipment at 75 microwave sites. Set up work control systems to ensure standards of performance, quality, cost and safety are met.

**Jan 82 - Dec 85**

**Field Maintenance Engineer**

**Key Responsibilities:**

Maintained all machinery through preventive maintenance, troubleshooting, testing and repairing of electro-mechanical equipment at 75 microwave sites, monitored installation of new electro-mechanical equipment, in line with company policies/procedures.

## **PHILADELPHIA UNIVERSITY COMMITTEES**

Committee	Membership/Role	Date
• Primary Disciplinary Board.	Head	2021-2022
• International Projects Committee.	Member	2020-2021
• Liaison Officer for his Royal Highness Prince Hasan Bin Talal for Innovation Excellence.	Head	2020-2021
• Development and Distance Learning Board.	Member	2018-2021
• Head	2018-till now	
• Faculty Quality Assurance Accreditation. Committee.	Head	2017-2019
• Provident Fund Committee.	Vice president	2015-2021
• Jordan Innovation Centre.	Member	2020-2021
• University Quality Assurance Accreditation Committee.	Member	2020-2021
• Scientific Research and Higher Studies Council.	Member	2011-2012
• Faculty Scientific Research Committee	Head	2020-2021
• Renewable Energy Committee (1.5 MW tender) Committee.	Member	2019-2020
• University Scholarship Committee.	Member	2010-2023
• University Budget Committee.	Member	2010-2023
• University Health Insurance committee.	Member	2010-2023
• University Year- book Committee.	Member	2010-2023
• University Graduation Committee	Member	2010-2023

## **NATIONAL ACADEMIC COMMITTEES**

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Committee	Membership/Role	Date
Water, Environment & Energy Committee.	Head	2021-till now
Innovation and entrepreneurship projects committee/ Scientific Research Support Fund and Innovation/Ministry of higher Education.	Head	2018-2020
Scientific Research Support fund (SRSF) Technical Committee, Ministry of higher Education.	Member	2019-2020
Faculty of School of Informatics and Computing Council Committee- German Jordan University.	Member	2008-2009
Faculty of Engineering Council Committee- Al-Balqa Applied University of Science & Technology	Member	2007-2008
Faculty of Engineering Council Committee- University of Jordan for Science & Technology.	Member	2006-2007
Scientific research and higher studies Committee- Hashemite University.	Member	2005-2007
Academic Entrepreneurship Centre of Excellence Scientific Council.	Member	2007-2008

### **GRANTS AWARDED**

Organization	Research Title	Grant Value	Date
Philadelphia University	Numerical analysis study of a fully developed flow and heat transfer in irregular annuli	1995 JD	Jan., 2012 Jan., 2013 <b>(Accomplished)</b>
Philadelphia University	Design, build and test a formula student car	40,000 JD	Jan., 2013 Sep., 2015 <b>(Accomplished)</b>
Philadelphia University	Cooling of Photovoltaic (PV) Panels Using Nanofluids	2480 JD	Jan., 2015 Jan., 2016 <b>(Accomplished)</b>
Philadelphia University	Design, Manufacture and Test a Tracked Ground Vehicle for Rugged Terrain Conditions (Deep snow, mud, sand and rocks)	9100 JD	Jan., 2016 Jan., 2017 <b>(Accomplished)</b>
Philadelphia University	Experimental Investigation of The Magnetic Field Effect on Heat		Jan., 2018 Jan., 2019

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Organization	Research Title	Grant Value	Date
	Transfer Enhancement of Fe <sub>3</sub> O <sub>4</sub> /water Nanofluids Through a Uniformly Heated Tube.		(Accomplished)
Philadelphia University	Design, Build and Test a Quad Bike for Desert Conditions	11000 JD	Jan., 2018 July., 2019 (Accomplished)
Philadelphia University	Design, Build and Test a Mobile PV Generator for Remote Locations	11000 JD	Nov., 2019 Sep., 2020 (Accomplished)
Newton Khaldi Fund	Cooling of PV Panels Using Nanofluids	70,000JD	March, 2020 April-2023 (Accomplished)
Newton Khaldi Fund	Exploring Economic and Environmental Impact: Cost Savings throughout the Life Cycle of Pre-installed Solar PV Panels employing Nanofluid and Water Cooling.	46,000JD	Feb, 2024

### **TEACHING EXPERIENCE**

- Fluid Mechanics.
- Thermodynamics.
- Heat transfer
- Renewable Energy.
- Energy Conversion
- Engineering Entrepreneur.
- Environmental Impact of Energy

### **THESES / DISSERTATION SUPERVISION & EXAMINATION**

- Co-supervisor, MSc research programme, "Performance Study of A Domestic Refrigerator Powered By Solar Energy Using R-134a and Liquid Petroleum Gas". Universy of Jordan.
- Design and Manufacturing of (PEM) Proton Exchange Membrane Fuel Cell", Hertfordshire University and Coventry University / England, 2004.
- Co-supervisor, PhD research programme, "Design and Manufacturing of (PEM) Proton Exchange Membrane Fuel Cell", Hertfordshire University and Coventry University / England, 2004.

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- Co-Second supervisor, PhD research programme, "Control Strategy or Polymer Electrolyte Membrane Fuel Cell Systems", Hertfordshire University and Coventry University / England, 2005.
- Co-supervisor, MSc research programme, "Modelling and control Design of a Pre-designed Radial Turbine Driving a High-Speed Generator ", Yarmouk University, 2006.
- Co-supervisor, MSc research programme, "Performance Study of a Domestic Refrigerator Powered by Solar Energy Using (R134-a) and LPG ", University of Jordan, 2013.

### **JOURNAL PUBLICATIONS:**

1. **Munzer S. Y. Ebaid**, Ayoub Ghrair, James Roscow, Feras Batarseh, Christopher Bowen. Exploring the Potential of PV panels Based on Metallic and Non-Metallic Nanofluids: An Experimental Study. *Advances in Mechanical Engineering*. Vol. 16(1), 2024. <https://doi.org/10.1177/16878132231220354>.
2. **Munzer S. Y. Ebaid**, Zin Alabdin Shahin, Mohammad Alshawabkeh. Numerical Analysis and Modelling of the Effectiveness of the Micro Wind Turbines Installed in an Electric Vehicle as a Range Extender". *SAE International Journal of Electrified Vehicles*. Vol. 13(2), 2023. **Scopus (Q2), IF: 1.19.** <http://dx.doi.org/10.4271/14-13-02-0010>.
3. **Munzer S. Y. Ebaid**, Zin Alabdin Shahin, Mohammad Alshawabkeh. "Feasibility Study of Micro-wind Turbine Installed on an Electric Vehicle as a Range Extender Using Real Time Analytical Simulation with Multi Driving Scenarios". *Advances in Mechanical Engineering*. Vol. 14(7), 2023. **Scopus (Q2), IF: 1.9.** <http://dx.doi.org/10.4271/14-13-02-0010>.
5. **Munzer S. Y. Ebaid**, Mamdoh Al-Busoul, Ayoub Ghrair. Performance Enhancement of Photovoltaic (PV) Panels Using Different Types of Nanofluids. *Heat Transfer research*, Wiely, Vol. 49(1), pp. 1-34, 2020. <http://dx.doi.org/10.1002/htj.21745>.
6. **Munzer S. Y. Ebaid**, Belal Shehadeh. "Design, Build, and Test a Hybrid Cooling System for Crash Helmet". *Experimental Techniques*. Vol.43(5) , pp. 613-633, 2019. **(Springer, IF: 0.806).** <http://dx.doi.org/10.1007/s40799-019-00319-x>.
7. **Munzer S. Y. Ebaid**, Ayoub ghrair, Mamdoh Al-Busoul. "Experimental investigation of cooling photovoltaic (PV) panels using (TiO<sub>2</sub>) nanofluid in water -polyethylene glycol mixture and (Al<sub>2</sub>O<sub>3</sub>) nanofluid in watercetyltrimethylammonium bromide mixture". **Energy Conversion and Management**. Vol. 155(1), pp. 324-343, 2018. **(Elsevier, IF: 5.589).**
8. **Munzer S. Y. Ebaid**, and Qusai Z. Al-hamdan. "New approach of gas turbine component matching for electrical power generation". **International Journal of Mechanical Engineering and Applications**, Vol. 5(4), pp. 214-222, 2017.
9. **Munzer S. Y. Ebaid**, and Qusai Z. Al-hamdan. "Design of a single stage centrifugal compressor". **American Journal of Aerospace Engineering** ,Vol. 4(2), April, 2017.
10. **Munzer S. Y. Ebaid**, Laith R. Batarseh "Eccentricity effect on heat transfer in an annular square filled with saturated porous medium", **Journal of Porous Media**, Vol. (20), pp., 2016. **(Elsevier, IF: 1.03).**
11. **Munzer S. Y. Ebaid**, J. M Al-Khishali, "Measurements of the laminar burning velocity for propane: Air mixtures", **Advances in Mechanical Engineering Journal**, Vol. 8(5), pp. 1-17, 2016. **(SAGE, IF: 0.827).**

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12. **Munzer S. Y. Ebaid**, A. Fahoum, "Design of fuel control system using fuzzy logic for a pre-designed radial gas turbine driving directly high speed permanent magnet alternator". **International Journal of Modelling and Simulation**, Vol. 36(4), pp. 141-161, 2016. **(Scopus)**.

13. **Munzer S. Y. Ebaid**, Shatha Amoral, Kutiaba J.M Al-khishali, "Design, build, and test a formula student racing car: An educational engineering exercise at Philadelphia University". **International Journal of Mechanical Engineering Education**, vol. 44(1), pp. 56-93, 2016. **(Scopus, ERA)**.

14. **Munzer S. Y. Ebaid**, Handri Ammari, "Modelling and analysis of unsteady-state thermal performance of a single-slope tilted solar still". **Renewables: Wind, Water, and solar Journal**, Vol. 2 (11), 2015.

15. **Munzer S. Y. Ebaid**, Mahmoud Hammad, Talal Alghamdi, "Thermo economic analysis of PV and hydrogen gas turbine hybrid power plant of 100 MW power output". **International Journal of Hydrogen Energy**, Vol. 40 (36), pp. 12120-12143, 2015. **(Elsevier, IF: 3.582)**.

16. Kutiaba J. M. Al-Khishali, **Munzer S. Y. Ebaid**, "Numerical and experimental investigations of shape and location of vortex generators on fluid flow and heat transfer in a constant heat-fluxed rectangular duct". **Advances in Mechanical Engineering Journal**, Vol. 7 (11), 2015. **(SAGE, IF: 0.827)**.

17. **Munzer S. Y. Ebaid**, Qusai Z. Al-hamdan, "Thermodynamic Analysis of Different Configurations of Combined Cycle Power Plants". **Mechanical Engineering Research**, Vol. 5(2), pp. 89-114, 2015.

18. Hammed. M., **Ebaid M. S. Y.**, "Comparative economic viability and environmental impact of PV, diesel and grid systems for large underground water pumping application (55 wells) in Jordan", **Renewables: Wind, Water, and Solar Journal**, Vol. 2 (12), 2015.

20. Hammed. M., **Ebaid M. S. Y.**, Halaseh G., and Erekat B., "The Use of a Photovoltaic Solar Electrical generator for Peak Load Shaving", **Jordan Journal of Mechanical and Industrial Engineering JJMIE**, Vol. 9 (1), pp. 45-59, Feb., 2015. **Scopus:(Q2)**.

21. **Ebaid M. S. Y.**, Haddad O. M., and Baterseh L., "Numerical Investigation of Laminar Flow in Irregular Annular Ducts", **Energy Conversion and Management**, Vol. 85(6), pp. 511–520, June, 2014. **(Elsevier, IF:7.181)**.

22. Hammed. M., **Ebaid M. S. Y.**, and Al-Hyari L., "Green Building Design Solution for a Kindergarten in Amman" **Energy and Buildings**, Vol. 75(2), pp. 780–795, Feb, 2014. **(Elsevier, IF: 4.067)**.

23. **Ebaid M. S. Y.**, Hammed. M., and Qandil. H., "A comprehensive study of photovoltaic power system application for the underground water well pumping at Disi area", **Australian Journal of Basic and Applied sciences**, vol. 7(8), pp. 791-805, 2013. **(ERA)**.

24. **Ebaid M. S. Y.**, Qandil. H, Hammad. M., "A Unified Approach for Designing a Photovoltaic Solar System for the Underground Water Pumping Well-34 at Disi Aquifer", **Energy Conversion and Management**, Vol. 75(7), pp. 780–795, July, 2013. **(Elsevier, IF: 7.181)**.

25. **Ebaid M. S. Y.**, and K. J.M. Al-Khishali, "The Effect of Multiple Conical Shockwaves at the Engine Intake on the Performance of a Single Mode Ram Jet", **I. Mech. E., Journal of Aerospace Engineering, Part G**, vol. 228(7), pp. 1183-1194, 2013. **(SAGE, 1.104)**.

26. Obaid, Hani, **Ebaid, M. S. Y.**, "Energy Mix In Jordan - Current Situation and Future Trends" **Int. J. on Recent Trends in Engineering and Technology**, Vol. 6(1), Nov 2011.

27. **Ebaid M. S. Y.**, and Mohamad Y. Mustafa., "Design Methodolgy of a Proton Exchange Membrane (PEM) Modular Fuel Cell 100W Power Output", **Journal of Fuel Cell Science and Technology**, June, 2011. **Trans. ASME**.

28. **Ebaid M. S. Y.**, and Mohamad Y. Mustafa., "A hybrid power plant to reduce emission", **Jordan Journal of Mechanical and Industrial Engineering (JJMIE)**, Vol5, No.2, April, 2011. **(Scopus)**.

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29. Ebaid M. S. Y., Al-Hamdan Q. Z, "Optimization Techniques for Designing an Inward Flow Radial Turbine Rotor", **I. Mech. E, Journal of Power and Energy, Part A**, Vol. 218, pp 655-668, Dec., 2004. (**SAGE, IF: 0.939**).

30. Al-Hamdan Q. Z, Ebaid M. S. Y., "Modelling and Simulation of a Gas Turbine Engine for Power Generation", **Journal of Engineering for Gas Turbines and Power**, 2005. **Trans. ASME**.

31. Mohammed Khasawneh, Mohammad Malkawi, Ebaid M. S. Y., Saar, Hayajneh, Haytham EL-shyoukh, Hadeel Qasaimeh., "A Security Embedded Infrastructure for Tele-Traffic Speed Control", **Journal of Franklin Institute**, 346, pp.431- 448,2009. (**Elsevier, IF: 3.139**).

32. Ebaid M. S. Y., Bhinder F. S, Khdaire G. H., "A Unified Approach For Designing A Radial Flow Gas Turbine", **Journal of Turbomachinery**, Vol.125, pp598-606, July,2003. **Trans. ASME**.

33. Al-Hassen T. S., Patrick C. K., Bhinder F. S, Ebaid M. S. Y., "Modular Design of High-speed Permanent Magnet Axial Flux Generator", **on Magnetics**, Vol. 36, No. 5, Sept., 2000. **Trans. IEEE**.

## CONFERENCE PUBLICATIONS:

1. **Munzer S. Y. Ebaid.** "Off Grid Portable Solar PV System for emergency Conditions". SSD 2020: 17<sup>th</sup> Multi-conference on Systems, Signals and Devices. **IEEE**, March, 23-26, 2023. AlMahdyah, Tunis.
2. **Munzer S. Y. Ebaid**, Ayoub Ghrair, Feras Batarseh, James Rescow, Christopher Bowen. "Experimental Investigation of Cooling PV Panels Based on Calcium Carbonate, Ferromagnetite, Water, and Air (without cooling)". 11<sup>th</sup> International Conference on Renewable Energy and Research Applications (ICRERA). **IEEE**. Sep. 16-22, Istanbul-Turkey, 2023..
3. **Munzer S. Y. Ebaid**, Mamdoh Al-Busoul Ayoub ghrair, "Effect of magnetic field on heat transfer enhancement using Fe<sub>3</sub>O<sub>4</sub> nanofluids in a heated pipe". **16<sup>th</sup> International Multi-Conference on Systems, Signals & Devices, Conference on Sensors, Circuits & Instrumentation Systems**. Istanbul, Turkey, March 21 -24, 2019.
4. Ali Abul-Hawa, **Ebaid M.S.Y.**, Bhinder F. S, Clay, R., "Control Strategy or Polymer Electrolyte Membrane Fuel Cell Systems", **International Conference. Control 2006: Glasgow, Scotland. University of Strathclyde and University of Glasgow, I. Mech. E., IET and Institute of Measurement and Control**, 30th August - 1st Sep., 2006 - Glasgow, Scotland.
5. Mohammed Khasawneh, Mohammad Malkawi., Omar Al-Jarrah., Liath Barakat., **Ebaid M. S. Y.**, "A Biometric-Secure e -Voting System for Election Processes ", **Proceeding of the 5th International Symposium on Mechatronics and its Applications (ISMA08)**, Amman, Jordan, May 27-29, 2008.
6. Bhinder, F. S., **Ebaid M. S. Y.**, Mustafa, M. F., Clay, R., "Parametric Study of the Fuel Cell-Gas Turbine Combined Power Plant (GT2006 - 90607)", **Proceedings of Turbo Expo 2006: ASME Turbo Expo 2006 Power for Land, Sea & Air**, May 14-17,2006-Barcelona,Spain.

## TRAINING/SEMINARS/WORKSHOPS

### Trainings/Courses

April, 2008

- Patent Technology Transfer Programme- Global Intellectual Property Academy / United State Patent Office and

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Trademark Office Headquarters, Alexandria, Virginia, USA

(April 2008)

**October, 2007**

- Management by Objectives Course - Amman-Jordan (Oct., 2007)

**June, 2007**

- Effective Project Management, Amman - Jordan (Apr - Jun 2007)

**March, 2007**

- Leadership Excellence for Executives - Centre for Strategic Management, Amman-Jordan (Mar 2007)

**November, 2004**

- Mechanical Integrity of Gas Turbines Course - Cranfield University, School of Engineering, England (Nov - Dec 2004)

**August, 2004**

- The Raytheon Six Sigma Specialist Course - Raytheon Jordan Company, Jordan (Aug 2004)

**May, 2004**

- Negotiation Skills Training Course - AmidEast, Jordan (May 2004)

**April, 2004**

- Gas Turbine Design and Performance Course - Cranfield University, School of Engineering, England (Mar - Apr 2004)

**June, 1995**

- Basic Management Course - Jordan Telecommunication College, Jordan (May - Jun 1995)

**August, 1996**

- Computer Courses (MS-DOS, Spread sheets, MS office) - Jordan Telecommunication College, Jordan (Aug.-1996)

**March, 1995**

- Tower Design and Construction Training Course - Eve Group plc Transmission Division, England (Feb - Mar 1995)

**October, 1993**

- Advanced AutoCAD (Customization Programming) - The Jordanian Center for Engineering Training, Jordan (Oct - Nov 1993)

**September, 1993**

- Design of Water Networks - The Jordanian Center for Engineering Training, Jordan (Sep - Oct 1993)

**August, 1993**

- Computer Aided Design & Drafting, AutoCAD version 10 - The Jordanian Center for Engineering Training, Jordan (Aug - Sep 1993)

**June, 1993**

- Practical Examples/ The Design of Mechanical Installation Course - The Jordanian Center for Engineering Training, Jordan (Jun - Jul 1993)

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<b>December, 1991</b>	<ul style="list-style-type: none"><li>• The Design of Heating and Air-Conditioning Course, The Jordanian Center for Engineering Training, Jordan (Dec 1990 - Jan 1991)</li></ul>
<b>March, 1989</b>	<ul style="list-style-type: none"><li>• 3208 Diesel Generator Sets Course- Jordan Tractor &amp; Equipment Co., Jordan (Mar 1989)</li></ul>
<b>November, 1987</b>	<ul style="list-style-type: none"><li>• Operation &amp; Maintenance of Boilers &amp; Burners Course - University of Jordan, Jordan (Nov 87)</li></ul>
<b>October, 1986</b>	<ul style="list-style-type: none"><li>• Officer Basic Course, First class distinguish officer - Jordan Military School, Jordan (Oct 86 - Jan 87)</li></ul>
<b>November, 1985</b>	<ul style="list-style-type: none"><li>• Operation &amp; Maintenance of Generating Sets Course - Hawker Siddeley Power Plants Ltd, England (Nov - Dec 85)</li></ul>
<b>November, 1985</b>	<ul style="list-style-type: none"><li>• The Familiarization of HR2 Diesel Engines Course - R.A Lister &amp; Company LTD, England (Nov - 85)</li></ul>
<b>February, 1985</b>	<ul style="list-style-type: none"><li>• Engines &amp; Control Panels Course - Federal Aviation Academy, USA (Feb - Mar 85)</li></ul>
<b>February, 1983</b>	<ul style="list-style-type: none"><li>• University Graduate Officer Course First class distinguish officer - Jordan Military School, Jordan (Feb - Jun 83)</li></ul>

## Seminars/Workshops

<b>November, 2019</b>	<ul style="list-style-type: none"><li>• Jordan- European union Higher Education, Regional Cooperation Day, , organized by the National Erasmus+ office-Jordan, 4/11/2019, Al-al Bayt University.</li></ul>
<b>July, 2019</b>	<ul style="list-style-type: none"><li>• The Information Day on Cooperative Technical Higher Education in Jordan "Labour Market Oriented Vocational Education, higher Education and Training" (MOVE-HET). Organized by Minister of Education, Higher Education and Scientific Research And in Partnership and Cooperation with GIZ, Amman-Jordan.</li></ul>
<b>October, 2019</b>	<ul style="list-style-type: none"><li>• The next Society workshop (2), iPark, Royal Scientific Society, 20/10/2019, Amman-Jordan</li></ul>
<b>October, 2019</b>	<ul style="list-style-type: none"><li>• Transforming Systems through Partnership Programme . the 3<sup>rd</sup> call for proposals kickoff event 2019/2020, 14/10/2019, Amman-Jordan</li></ul>

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<b>July, 2019</b>	The next Society workshop (1), iPark, Royal scientific Society, 16 - 17/7/2019, Amman-Jordan.
<b>February, 2018</b>	<ul style="list-style-type: none"><li>• GPS: Applications, Vulnerabilities, and Solution, The Higher Council for Science and Technology, 12-13, Feb., 2018.</li></ul>
<b>September, 2016</b>	<ul style="list-style-type: none"><li>• Leadership and management skills course, Philadelphia University, 6, Sep., 2016.</li></ul>
<b>September, 2016</b>	<ul style="list-style-type: none"><li>• Technology Integration (TI) 10th Seminar on hands-on demonstrations on educational trainers and boards in different domains, RF &amp; Communication in Industry, Amman-Jordan, Sep., 2016</li></ul>
<b>July, 2016</b>	<ul style="list-style-type: none"><li>• Latest Development in nano-technology, The Higher Council for Science and Technology and University of Jerash, Jordan, July, 2016</li></ul>
<b>January, 2015</b>	<ul style="list-style-type: none"><li>• MED-SOLAR Project workshop, National Center for Research and Development, The Higher Council for Science and Technology, Jordan, Jan., 2015</li></ul>
<b>November, 2011</b>	<ul style="list-style-type: none"><li>• EnerMENA Implementation workshop on CSP Technology, Water, energy and Environment centre, Jordan University of Jordan, Nov, 2011</li></ul>
<b>July, 2011</b>	<ul style="list-style-type: none"><li>• Competing Globally In Higher Education: Training on QA and Accreditation, Columbia University Middle East Research Centre, Jordan, July, 2011.</li></ul>
<b>June, 2011</b>	<ul style="list-style-type: none"><li>• Future Energy in Jordan. Center for Strategic Studies, University of Jordan, June, 2011.</li></ul>
<b>March, 2011</b>	<ul style="list-style-type: none"><li>• Discussion on research and Higher education, The Columbia University Middle East Research Centre, Jordan, March, 2011.</li></ul>
<b>October, 2011</b>	<ul style="list-style-type: none"><li>• Oil and Gas Piping Supervisory Programme and the launch of the Solar Energy Technology Programme. Al-Balqa Applied University, Oct. 2011</li></ul>
<b>October, 2010</b>	<ul style="list-style-type: none"><li>• Renewable Energy and its Prospective Usage. Yarmouk University, Hijawi College for Engineering Technology, Oct. 2010</li></ul>
<b>May, 2010</b>	<ul style="list-style-type: none"><li>• Technology Integration seminar (TI 8<sup>th</sup> Educational seminar, Jordan, May, 2010.</li></ul>

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<b>January, 2010</b>	<ul style="list-style-type: none"><li>• Workshop for the preparation for the scientific and technological national policy for the years (2011-2015), Jordan, (Jan 10).</li></ul>
<b>November, 2008</b>	<ul style="list-style-type: none"><li>• Technology Development in the World and the challenges facing MENA Region, Talal Abu-Ghazaleh College of Business (Nov 08).</li></ul>
<b>March, 2008</b>	<ul style="list-style-type: none"><li>• A Regional round table on Brand Valuation &amp; its Methods - Talal Abu-Ghazaleh College of Business (Mar 08)</li></ul>
<b>February, 2008</b>	<ul style="list-style-type: none"><li>• The First German - Jordanian Workshop on Energy, Oil Shale &amp; Fluid Mechanics - Jordan University (Feb 08)</li></ul>
<b>December, 2007</b>	<ul style="list-style-type: none"><li>• Bio-medical Engineering &amp; Informatics - Yarmouk University (Dec 07)</li></ul>
<b>November, 2006</b>	<ul style="list-style-type: none"><li>• Jordanian Industry Competency based Evaluation &amp; needs Assessment in Automation &amp; Mfg - Jordan German University (Nov 06)</li></ul>
<b>December, 2005</b>	<ul style="list-style-type: none"><li>• Partnership Between Vocational Training Directorate, Private Sector &amp; Civil Societies - Amman-Jordan (Dec 05)</li></ul>
<b>October, 2004</b>	<ul style="list-style-type: none"><li>• Scientific Day for Auto-tronics Engineering - Jordan Engineering Association &amp; Al-Balqa Applied University (Oct 04)</li></ul>
<b>December, 2004</b>	<ul style="list-style-type: none"><li>• Creative Management - British Council - Jordan (Dec 04)</li></ul>
<b>July, 1994</b>	<ul style="list-style-type: none"><li>• Energy &amp; Control Engineering Systems - Ministry of Energy &amp; Mineral Resources &amp; Arab Scientist of Technology Abroad - Jordan (July 94)</li></ul>
<b>September, 1993</b>	<ul style="list-style-type: none"><li>• Heat Shrink Technology - Rpel Engineering Company - Jordan (Sep 93)</li></ul>
<b>March, 1989</b>	<ul style="list-style-type: none"><li>• 3208 Diesel Generator Sets Course - Jordan Tractor &amp; Equipment Co. LTD - Caterpillar, Jordan (Mar 89)</li></ul>
<b>October, 1989</b>	<ul style="list-style-type: none"><li>• Electric Power Generator 1.1 Liters - Jordan Tractor &amp; Equipment Co. LTD - Caterpillar, Jordan (Oct 89)</li></ul>
<b>March, 1989</b>	<ul style="list-style-type: none"><li>• Solar &amp; Wind Power Systems - Royal Automobile Club, Jordan (Mar 89)</li></ul>
<b>November, 1987</b>	<ul style="list-style-type: none"><li>• Operation &amp; Maintenance of Boilers &amp; Burners Course - University of Jordan, Jordan (Nov 87)</li></ul>

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<b>October, 1987</b>	<ul style="list-style-type: none"><li>• Solar &amp; Wind Energy &amp; its Applications - Royal Scientific Society, Jordan Oct 87)</li></ul>
<b>February, 1986</b>	<ul style="list-style-type: none"><li>• Principles of Mechanical Refrigeration - Household Appliances Manufacturing Co. Ltd. Jordan (Feb 86)</li></ul>
<b>November, 1985</b>	<ul style="list-style-type: none"><li>• The Familiarisation of HR2 Diesel Engines Course - R.A Lister &amp; Company LTD, England (Nov 85)</li></ul>

### Conferences Attended

<b>December, 2015</b>	<ul style="list-style-type: none"><li>• 2<sup>nd</sup> International Investment Forum for Renewable Energy &amp; Energy Efficiency for Mena (IIFREEE2015, Amman-Jordan, 15-17 December, 2015.</li></ul>
<b>April, 2014</b>	<ul style="list-style-type: none"><li>• 1<sup>st</sup> International Investment Forum for Renewable Energy &amp; Energy Efficiency for Mena (IIFREEE2014, Amman-Jordan, 14--17 April, 2014.</li></ul>
<b>September, 2010</b>	<ul style="list-style-type: none"><li>• The 7<sup>th</sup> International Mechanical Engineering Conference, Jordan, (Sep, 27-29, 2010).</li></ul>
<b>September, 2010</b>	<ul style="list-style-type: none"><li>• Global Green Techies Forum &amp; Exhibition, Jordan, (Sep 20-22, 2010).</li></ul>
<b>March, 2010</b>	<ul style="list-style-type: none"><li>• 1<sup>st</sup> International Nuclear &amp; Renewable Energy Conference, Jordan, (March 10).</li></ul>
<b>February, 2010</b>	<ul style="list-style-type: none"><li>• Regional Conference for renewable Energies, Jordan, (Feb 10).</li></ul>
<b>August, 2008</b>	<ul style="list-style-type: none"><li>• The 4<sup>th</sup> Annual Conference on Technology Commercialization (Technology Transfer: R&amp;D and IP Commercialization, Policies, and Investments) - Le Meridian Hotel, Amman-Jordan (Aug 08).</li></ul>
<b>August, 2008</b>	<ul style="list-style-type: none"><li>• The 9th International Middle Eastern Multi-conference on Simulation &amp; Modelling - Philadelphia University, Jordan (Aug 08)</li></ul>
<b>November, 2007</b>	<ul style="list-style-type: none"><li>• The 3rd Conference on Technology Commercialization - Princess Sumaya Science for Technology (Nov 07)</li></ul>
<b>October, 2007</b>	<ul style="list-style-type: none"><li>• 13th Annual Science Week. Science Technology Parks-Building a Knowledge Based Economy - Royal Cultural Centre - Jordan &amp; Princess Sumaya Science for Technology (Oct 07)</li></ul>

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<b>May, 2007</b>	• The Third International Conference in Thermal Engineering. theory & Application, Jordan (May 07)
<b>September, 2006</b>	• Recent Trends in Oil Shale Research & Applications, Jordan (Sep 06)
<b>August, 2006</b>	• International Conference Control, 2006, Glasgow - Scotland (Aug 06)
<b>June, 2006</b>	• The XVII International Society for Professional Innovation Management (ISPIM) Conference, Greece (Jun 06)
<b>March, 2006</b>	• International Medical Informatics and Biomedical Engineering Symposium (IMIBE'06) - Jordan (Mar 06)
<b>November, 2005</b>	• The Second Conference on Scientific Research in Jordan-Jordan University - Jordan (Nov 05)
<b>September, 2005</b>	• 11th Annual Science Week. Revitalization of the National Innovation system: Towards Enhancing the Competitiveness of Jordanian Economy - Royal Cultural Centre - Jordan (Sep 05)
<b>September, 2005</b>	• Middle East Gas Conference - Jordan (Sep 05)
<b>December, 2004</b>	• The ICT Innovative Partnership Symposium - Yarmouk University - Jordan (Dec 04)
<b>September, 2004</b>	• 10th Annual Science Week. The Role of Advanced Materials in Jordanian Economy - Royal Cultural Centre - Jordan (Sep 04)
<b>March, 2004</b>	• The Fifth International Conference on Computational Aspects & their Applications in Electrical Eng. - Philadelphia University, Jordan (Mar 04)
<b>August, 1994</b>	• Second Annual Science Week. National S&T Policy & Role of Defence Resources in Development -(Aug 94)
<b>October, 1993</b>	• Electrical Power & Energy Systems - University of Jordan (Oct 93).

## SKILLS

## Prof. Munzer S.Y. Ebaid

Skill	Skill Level	Years of Experience
Applied Engineering, Technical Management, Implementation.	Expert	More than 5 years
Technical Project Management, Creating Database Systems for Communication Microwave Sites	Expert	More than 10 years
Installation & Maintenance of Electro-Mechanical Equipment, Technical Evaluation of Defence Projects	Expert	More than 10 years
Project Costing & Budgeting, Evaluation, Implementation & Monitoring of Technology Projects	Expert	More than 10 years
Recruitment, Training & Motivation, Performance Appraisals, Communication, Negotiation, Innovation & Problem Solving	Expert	More than 10 years
Strong Leadership, Team Building, Creative Problem Solving, Analytical Thinking & Communication Skills	Expert	More than 10 years

### **ACTIVITIES**

Activity	Membership/Role	Date
Project manager of design, manufacturing and testing of a mobile PV generator	Project manager	Oct, 2019
Project manager of design, manufacturing and testing a quad bike for desert conditions.	Project manager	Oct, 2018
Project manager of design, manufacturing and testing a tracked ground vehicle (TGV) for rugged terrain.	Project manager	Oct, 2016
Project manager of formula student car	Project manager	Oct, 2014
Renewable Energy Center (Philadelphia University)	Council Member	January, 2012
Jordan Renewable Energy Society, (JERS)	Vice president	January 2012 till now
Jordan Renewable Energy Society, (JERS)	Board Member	January, 2010- January 2012
Renewable Energy Center, Philadelphia University	Board Member	Feb, 2012

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Innovative Alliance for Green Energy into Mediterranean Basin Project. IN-ENERGY MED ALLIANCE.	Project Member	March, 2012
Solar energy integration and management in rural areas. (Cross border cooperation with the European neighbourhood and partnership instrument (ENPI) Mediterranean sea basin joint operational programme.	Project Member	August, 2011
Arab Renewable Energy Congress and Exhibition Programme Committee.	Member	April, 2011
Reinforcing Cooperation of Jordan Universities with EU in the Field of Renewable Energy. (INCO Proposal).	Project Member	Jan., 2011
Consultancy Services for Recommendation of Cost-Effective Renewable Energy Generation Projects in Iraq in Collaboration with UNDP.	consultant	March, 2011
Technical Training Committee for the Preparation of Diploma in Renewable Energy.	Member	March, 2011
Joint Collaboration Programme Between Philadelphia University and Narvik University, Norway in the Field of Renewable Energy.	Main Coordinator	May, 2009
Arab Renewable Energy Commission, (AREC)	Member	January 2009
Jordan Renewable Energy Society, (JERS)	Member	January 2007- January 2010
Made in Jordan Competition Advisory Committee, Queen Rania Centre for Entrepreneurship.	Member	January 2006
Screening Committee of the Queen Rania National Entrepreneurship Competition	Member	January 2005- January 2007
Industry Advisory Board. Jordan - German University.	Member	September 2001
Chief Deputy of Judging Committee Members of First Lego League, Robotics Competition – Jordan.	Member	September 2000
American Society of Mechanical Engineers- ASME	Member	Jan. 2000
Society of Automotive Engineering-SAE	Member	September 1998

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Jordan Engineer Association.	Member	September 1982
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### REFERENCES

1. **Prof. Wajih Owais:** Currently serving as Chair of the Education Committee in the Senate. Former Minister of Higher Education and former President of University of Science & Technology
2. **Prof. Marwan Kamal:** Former Minister of Agriculture; Former President of Yarmouk university and Philadelphia university, and former president of Association of Arab Universities
3. **Prof. Abdullah Ababnah:** Director of National Centre for Human Resources Development. Former Vice president of Al-Hussein Bin Talal University

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