Firas Abdullah Meteb Obeidat

❖ PERSONAL INFORMATION:

- Nationality : Jordanian
- Date of Birth : February 7, 1979
- Gender : male
- Place of birth : Jordan
- Marital status : Married
- Mobile : 00962-7-72557750
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- E- mail : fobeidat@philadelphia.edu.jo
  firasobeidat@gmail.com

❖ EDUCATION and CERTIFICATIONS:

- Sep. 2010 - June 9, 2013 : Tsinghua University – Beijing, China; **PhD (English Program) in Electrical Engineering**.
  *PhD Dissertation Title: '**Control of Medium Voltage Wind Turbine with 3L-NPC and Integration of Series DC Offshore Wind Farm into the Grid'*.
- Sep. 2009 – July 2010 : Beijing Language and culture University (BLCU) – Beijing, China, Diploma in Chinese Language as prerequisite to Complete the PhD Program.
- Sep. 2002 – Jan. 2006 : Jordan University of Science and Technology (JUST) – Irbid, Jordan, M.Sc, "**Master Degree in Electrical Engineering/ Control & Power Engineering**".
  *MSe Thesis title: '**Design of output Feedback Fuzzy Controller for Nonlinear Systems with Uncertainties**'.*
- Sep. 1997 – July 2001 : University of Mosul–Mosul, Iraq, "**Bachelor Degree in Electrical Engineering \ Power and Machine Engineering**", July 2001.
- 1996 - 1997: Al-Hussein Secondary School, Hubras – Irbid: General Secondary Education Certificate- Scientific Stream.

❖ RESEARCH INTERESTS:

- Machines control, Renewable (Wind & Photovoltaic) Energy systems, Multilevel Converters, Reliability of power electronic devices.

❖ HONORS and AWARDS:

- Renewable Energy Training Workshop, Erasmus+ Capacity building in the field of Higher education project "IREEDER" number "609971-EEP-1-2019-1-JO-EPPKA2-CBHE-JP", University of Patras- Greece, 22-26/11/2021.
- 2020 Fulbright Junior Faculty Development Program (The programs' duration is 10 weeks: from June 21 to August 30, 2021)- University of Florida.
- PhD scholarship, Jordanian Nuclear Energy Commission and Chinese Scholarship Council Award 2009-2013.
- Department's Award for ranking second among 34 students – University of Mosul.

❖ WORK EXPERIENCE:

- Sep. 2022– *present*: Associate Professor, Philadelphia University- Faculty of Engineering.
- Sep. 2019– *Sep. 2023*: Head of Renewable Energy Engineering Department, Philadelphia University- Faculty of Engineering.
- Sep. 2022– *Sep. 2023*: Head of Renewable Energy Center- Philadelphia University.
- Sep. 2016– August 2022: Assistant Professor, Philadelphia University- Faculty of Engineering.
- **July 2014 – July 2015: Research Associate, The University of Manchester- School of Electrical and Electronic Engineering.**
  Project Name: 'WISE-PV: Whole System Impacts and Socio-economics of wide scale PV integration'.
  WISE PV website: http://www.energy.manchester.ac.uk/research/solar/wise-pv-project/
- 15/2/2009 – 15/6/2009: Hijjawi Faculty for Engineering Technology - Yarmouk University (part time) - Irbid, Jordan. The Academic Supervisor for machines (transformers, DC and AC) laboratory.
- **February 2007 – October 2009 : Head of Cables and Big Customers Section/Irbid District Electricity Company – Irbid – Jordan.**
- **July 2003 – February 2007 : Irbid District Electricity Company \ Cables and Big Customers Section; " Design Engineer" – Irbid - Jordan.**
- July 2002 – July 2003 : Irbid District Electricity Company - Irbid : "Ministry of Public Works and Housing Program for Engineers Training".

❖ TOUGHT COURSES

- Automatic Control Systems course
- Electric Machines I course
- Electric Machines II course
- Power Electronics course
- Electric circuits I course
- Electric circuits II course
- Engineering statistics course
- Wind energy systems course
- Design of wind energy systems course
- Photovoltaic energy systems course
- Engineering entrepreneurship course
- Engineering skills course
- Graduation projects
- Introduction to renewable energy course

❖ VOLUNTEER WORK AND COMMITTEES:

1. Scientific Committee member for International Renewable Energy, Gas & Oil, and Climate Change Conference, November 25-27, 2025 Tripoli-Libya. https://irego-conference.ly/committe.html
2. Head of Jordanian Accreditation Committee (رئيس لجنة الاعتماد الاردني) inside Renewable Energy Engineering Department, Sep. 2025-present.
3. Head of Placement of qualifications in the Jordanian National Qualifications Framework Committee (رئيس لجنة تسكيين المؤهلات في الاطار الوطني للمؤهلات) inside faculty of engineering at Philadelphia university, Sep. 2024-present.
4. Representative of faculty of engineering and technology at University council.
5. member of Placement of qualifications in the Jordanian National Qualifications Framework Committee (لجنة تسكيين المؤهلات في الاطار الوطني للمؤهلات) inside faculty of engineering at Philadelphia university, Sep. 2023-August 2024.

6. Head of governance criteria inside faculty of engineering at Philadelphia University, Sep. 2021-present.
7. Member of Plan and Quality Committee inside faculty of engineering at Philadelphia University, Sep. 2019- Sep. 2023.
8. Member of quality assurance committee/fourth criterion (scientific research and creativity) inside faculty of engineering at Philadelphia University, 2020/2021.
9. Member of ABET committee/fifth criterion inside faculty of engineering at Philadelphia University, 2019/2020.
10. Specialist liaison officer/renewable energy field at the higher council for science and technology, 2018/2019.
11. Member of academic advisory committee inside engineering faculty at Philadelphia University, 2017/2018.
12. Member of renewable (wind, PV, and thermal) energy laboratories preparation committee, 2017/2018.

❖ TECHNICAL REVIEWS

- A reviewer in several international Journals

❖ MAIN DUTIES

- *Duties in Academia*

- Teach different courses in electrical engineering and renewable energy engineering.
- Develop research objectives and proposals for own or joint research, with the assistance of a mentor if required.
- Conduct individual and collaborative research projects.
- Write up research work for publication.
- Continually update knowledge and understanding in field or specialism.
- Translate knowledge of advances in the subject area into research activity.
- Deal with routine communication using a range of media.
- Communicate complex information, orally, in writing and electronically.
- Communicate material of a specialist or highly technical nature.
- Liaise with colleagues.
- Build internal contacts and participate in internal networks for the exchange of information and to form relationships for future collaboration.
- Join external networks to share information and identify potential sources of funds.
- Manage own research and administrative activities with guidance if required.
- Work with colleagues on joint projects, as required.
- Collaborate with academic colleagues on areas of shared research interest.
- Attend and contribute to relevant meetings.
- Use initiative and creativity to identify areas for research.
- Use creativity to analyze and interpret research data and draw conclusions on the outcomes.
- Contribute to collaborative decision making with colleagues in areas of research.
- Use research resources, laboratories and workshops as appropriate.
- Plan and manage own research activity in collaboration with others.

- Balance with help the competing pressures of research and administrative demands and deadlines.

- *Duties in Industry*

  - Identifying customer requirements.
  - Using computer-assisted engineering and design software.
  - Attending and arranging meetings with colleagues who have different area of engineering.
  - Preparation of Electrical procedures for Design & installation.
  - Reading electrical design specifications and technical drawings.
  - Making sure all electrical engineering projects are fit for purpose.
  - Attending meetings, writing reports and giving presentations to managers and clients.
  - Analyzing contracts for electrical products, equipments and instruments.

❖ MAIN SKILLS AND COMPETENCIES

- *Skills and Competencies in Academia*

  - Supervising master's theses
  - Teach different courses in electrical engineering and renewable energy engineering.
  - Have experience in research methods and techniques to work within established research programs.
  - Excellent communication and interpersonal skills.
  - Excellent time management and organizational skills.
  - Ability to work independently and as part of a team.
  - Ability to present in both written and oral publications.
  - Ability to meet deadlines.
  - The ability to evaluate complex data.
  - Ability to contribute to broader management and administrative processes.
  - Ability to assess and organize resources.

- *Skills and Competencies in Industry*

  - Excellent customer facing and communication skills.
  - Experience/Qualification in the use of Design Software.
  - Strong decision-making skills and the ability to prioritize and plan effectively.
  - Methodical approach to all tasks.
  - Ability and also willingness to work in all weather conditions.
  - Ability to meet deadlines.
  - Excellent time management and organizational skills.

❖ PROJECTS

- Prof. Ali Badran (PI), Dr. **Firas Obeidat** (Co-I). Solar desalination with hot water heating and electricity generation using PV/T hybrid system, 18 months.

❖ PUBLICATIONS

✓ *Journals*:-

1) Wasseem Al-Rousan, Rafat Aljarrah, Mazaher Karimi, **Firas Obeidat**, Qusay Salem. Impact of Loads and Photovoltaic Uncertainties on the Cascaded Failur e of Future Power Systems. *IEEE Access* (Q1 journal). https://doi.org/10.1109/access.2025.3537720
2) Amrani Mokhtar Ali, Yara Haddad, **Firas Obeidat**, Ahmad M. Habush, Mohammad K. Zakarneh, and Mohammad A. Ali. "Driving Forward: A Decade of Electric Vehicles Progress and Challenges in Jordan." JJMIE 81, no. 3 (2024). https://doi.org/10.59038/jjmie/180309
3) Yara Haddad; Ibrahim Rahoma; **Firas Obeidat**; Mokhtar Ali Amrani; Mohammad Abdunnabi. Operational Parameters Optimization of Linear Fresnel Reflector Concentrated Solar Plant Supplying Heat for Industrial Processes. Renewable Energy Focus Journal, July 2024. https://doi.org/10.1016/j.ref.2024.100602
4) Mohammad Al-Odat, Mohammed Al-Hasan, **Firas Obeidat**, Ali J Chamkha. Optimization of ON-grid hybrid PV/wind system for a cement factory in Kuwait using HOMER pro software. International Journal of Low-Carbon Technologies, Volume 19, 2024, Pages 120–126. https://doi.org/10.1093/ijlct/ctad117
5) Ghaeb, J.; Salah, S.; Obeidat, F. Intelligent Control for Voltage Regulation in the Distribution Network Equipped with PV Farm. Energies 2023, 16, 360. https://doi.org/10.3390/en16010360
6) Mokhtar Ali Amrani, Yara Haddad, **Firas Obeidat**, Atef M. Ghaleb, Sobhi Mejjaouli, Ibrahim Rahoma, Mansour S. A. Galil, Mutahar Shameeri, Ahmed A. Alsofi and Amin Saif. Productive and Sustainable H_2 Production from Waste Aluminum Using Copper Oxides-Based Graphene Nanocatalysts: A Techno-Economic Analysis. Sustainability (MDPI). 17 November 2022. https://doi.org/10.3390/su142215256
7) Mokhtar Ali Amrani, H. A. Alrafai, Samar Y. Al-nami, **Firas Obeidat**, Fawaz Alwahbani, Mohammed A. Alhammadi, Ammar Qasem. Green synthesis of Size-Controlled copper oxide nanoparticles as catalysts for H_2 production from industrial waste aluminum. International Journal of Energy Research-Wiley 2022;1-13. https://doi.org/10.1002/er.8118
8) Ali A. Badran, **Firas A. Obeidat**. Solar Hot Water Heating and Electricity Generation Using PV/T Hybrid System. Journal of Ecological Engineering 2022; 23(5):226–236. DOI: https://doi.org/10.12911/22998993/146783
9) **Firas Obeidat** and Ibrahim Rahoma. One Year Real Data Rooftop PV System Performance Analysis of a University Academic Campus. *International Journal on Energy Conversion (I.R.E.CON.), Vol. 9, N. 4*, July 2021. https://doi.org/10.15866/irecon.v9i4.20232
10) **Firas Obeidat**. A Comprehensive Review of Future Photovoltaic Systems. Solar Energy Journal-Elsevier 163C (2018) pp. 545-551. https://doi.org/10.1016/j.solener.2018.01.050
11) **Firas Obeidat**. PV Micro Inverter Reliability Prediction Based on RIAC. Water & Energy International journal, volume 60/RNI, No.11, February 2018.

https://indianjournals.com/ijor.aspx?target=ijor:wei&volume=60r&issue=11&article=007

12) **Firas Obeidat** and Roger Shuttleworth. PV Inverters Reliability Prediction. World Applied Sciences Journal (WASJ-idosi) 35 (2): 275-287, 2017. https://www.idosi.org/wasj/wasj35(2)17/16.pdf
13) **Firas Obeidat**, Xu Lie, and Li Yongdong. Grid-Connected Multilevel Topology for HVDC Offshore Wind Farm Based on MFT. Power Electronics Technology Journal, Xian, china, June 2013. https://www.cnki.com.cn/Article/CJFDTotal-DLDZ201306013.htm
14) **Firas Obeidat**, Xu Lie, and Li Yongdong. Grid-Connected Multilevel Topology for HVDC Offshore Wind Farm. Electric machines and Control, Harbin, China. Feb 2013. https://studylib.net/doc/18520382/

✓ *Conferences*:-

15) Yara Haddad; Ibrahim Rahoma; **Firas Obeidat**; Mokhtar Ali Amrani; Mohammad Abdunnabi. Modelling of a Solar Heating System for Industrial Processes using Linear Fresnel Reflectors. 2022 13th International Renewable Energy Congress (IREC). 13-15 December 2022, Hammamet, Tunisia. DOI: 10.1109/IREC56325.2022.10001942
16) Ibrahim Rahoma and **Firas Obeidat**. Future Energy Mix Mapping for Jordan using Multi Criteria Decision Analysis. *12th International Renewable Engineering Conference – IREC*2021, 14-15 April 2021. DOI: 10.1109/IREC51415.2021.9427861
17) **Firas Obeidat** and Roger Shuttleworth. Reliability Prediction of PV Inverters Based on MIL-217F N2. 42nd IEEE Photovoltaic Specialists Conference (42nd IEEE PVSC), New Orleans, USA, June 14-19, 2015. (*this paper nominated for the best poster award at 'Modules, Manufacturing, Systems and Applications (I)' session*) DOI: 10.1109/PVSC.2015.7356277
18) **Firas Obeidat**, Xu Lie, and Li Yongdong. Simulation of Grid Connected HVDC Offshore Wind Farm Topologies. The 10th IEEE International Conference on Power Electronics and Drive Systems (PEDS2013), Kitakyushu, Japan, 22-25 April 2013. DOI: 10.1109/PEDS.2013.6527145
19) **Firas Obeidat**, Li Yongdong, and Xu Lie. The Application of Three Level NPC Converter for Wind Power Generator. 2012 IEEE 7th International Power Electronics and Motion Control Conference - ECCE Asia, Harbin, China, June 2-5, 2012. DOI: 10.1109/IPEMC.2012.6259072

❖ CONFERENCES:

- 42nd IEEE Photovoltaic Specialists Conference (42nd IEEE PVSC), New Orleans, USA, June 14-19, 2015.
- 10th IEEE International Conference on Power Electronics and Drive Systems (PEDS2013), Kitakyushu, Japan, 22-25 April 2013: poster presentation and attending several sessions.
- 2012 IEEE 7th International Power Electronics and Motion Control Conference - ECCE Asia, Harbin, China, June 2-5, 2012: poster presentation and attending several sessions.

❖ REVIEWING MASTER THESIS

- Hanady Amjad Kreashan, Enhancing Filtering Capability and the Dynamic Performance of Moving Average Filter Phase Locked Loop Under Distorted

Grid Conditions. Jordan University of Science and Technology, 2-2-2022, (External examiner).

❖ REFERENCES

- Professor Tarek Tutunji
  Dean, School of Engineering Technology at Al Hussein Technical University (HTU), Jordan
  Email: tarek.tutunji@htu.edu.jo
  Mobile: 00962-777464516

- Professor Li Yongdong, Tsinghua University/China.
  Prof. of Power Electronics and Machine Control Laboratory
  Electrical Engineering Department, Tsinghua University, 100084 Beijing, China
  Vice-Chairman of China Power Electronics Society
  Chairman of Beijing Chapter of IEEE IA Society
  Tel: 008610-62772450, Mobile: 008613901333427
  (liyd@tsinghua.edu.cn; liyd@mail.tsinghua.edu.cn)

- Professor Prasad Enjeti, Texas A&M University/USA.
  TI Jack Kilby Chair Professor,
  Professor of Power Electronics & Power Quality
  Department of Electrical & Computer Engineering, Texas A&M University
  Zachry Engineering Center, Room 216K, College Station, Texas - 77845-3128.
  Tel: (: 001-979.845.7466, Mobile: 0019792048573
  (enjeti@tamu.edu; enjeti@ece.tamu.edu)

❖ COMPUTER LANGUAGES & PROGRAMS

- Matlab, Mathcad, C language, and AutoCAD.

❖ PERSONAL SKILLS

- Reading.
- Exploring Internet.
- Hiking.

❖ PROFESSIONAL MEMBERSHIPS:

- 2001 – Present: Member of Jordan Engineers Association.

❖ LANGUAGES:

- Arabic language (Mother Tongue).
- Excellent in English Language.
- Good in Chinese Language.