

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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❖ EDUCATION and CERTIFICATIONS:

- Sep. 2010 - June 9, 2013 : Tsinghua University – Beijing, China; PhD (English Program) in Electrical Engineering/Renewable Energy.
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:

- 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-EPP-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 - Renewable Energy Engineering Department.
- Sep. 2019– *present*: Head of Renewable Energy Engineering Department, Philadelphia University- Faculty of Engineering.
- Sep. 2022– *present*: Head of Renewable Energy Center- Philadelphia University.
- Sep. 2017– August 2022: Assistant Professor, Philadelphia University- Faculty of Engineering - Renewable Energy Engineering Department.
- Sep. 2016– Sep. 2017: Assistant Professor, Philadelphia University- Faculty of Engineering- Electrical Engineering Department.
- 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

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|-------------------------------|--|
| • Power Electronics course | • Wind energy systems course |
| • Electric Machines I course | • Design of wind energy systems course |
| • Electric Machines II course | • Photovoltaic energy systems course |
| • Electric circuits I course | • Engineering entrepreneurship course |
| • Electric circuits II course | • Fundamentals of engineering course |
| • Engineering skills course | • Graduation projects |

❖ VOLUNTEER WORK AND COMMITTEES:

1. Head of governance criteria inside faculty of engineering at Philadelphia University, Sep. 2021-present.
2. Member of Plan and Quality Committee inside faculty of engineering at Philadelphia University, 2019-present.
3. Member of quality assurance committee/fourth criterion (scientific research and creativity) inside faculty of engineering at Philadelphia University, 2020/2021.
4. Member of ABET committee/fifth criterion inside faculty of engineering at Philadelphia University, 2019/2020.
5. Specialist liaison officer/renewable energy field at the higher council for science and technology, 2018/2019.

6. Member of academic advisory committee inside engineering faculty at Philadelphia University, 2017/2018.
7. Member of renewable (wind, PV, and thermal) energy laboratories preparation committee, 2017/2018.

❖ TECHNICAL REVIEWS

- IEEE Transactions on Power Electronics.
- IET Renewable Power Generation.
- IET Power Electronics.

❖ 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

- 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) 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>
- 2) 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 H₂ 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>
- 3) Mokhtar Ali Amrani, H. A. Alrafai, Samar Y. Al-nami, **Firas Obeidat**, Fawaz Alwabhani, Mohammed A. Alhammadi, Ammar Qasem. Green synthesis of

- Size-Controlled copper oxide nanoparticles as catalysts for H₂ production from industrial waste aluminum. *International Journal of Energy Research-Wiley* 2022;1-13. <https://doi.org/10.1002/er.8118>
- 4) 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>
 - 5) **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>
 - 6) **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>
 - 7) **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>
 - 8) **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](https://www.idosi.org/wasj/wasj35(2)17/16.pdf)
 - 9) **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>
 - 10) **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:-
- 11) 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](https://doi.org/10.1109/IREC56325.2022.10001942)
 - 12) Ibrahim Rahoma and **Firas Obeidat**. Future Energy Mix Mapping for Jordan using Multi Criteria Decision Analysis. *12th International Renewable Engineering Conference – IREC2021*, 14-15 April 2021. DOI: [10.1109/IREC51415.2021.9427861](https://doi.org/10.1109/IREC51415.2021.9427861)
 - 13) **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](https://doi.org/10.1109/PVSC.2015.7356277)
 - 14) **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](https://doi.org/10.1109/PEDS.2013.6527145)
 - 15) **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](https://doi.org/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 Li Yongdong, Tsinghua University/China.
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Electrical Engineering Department, Tsinghua University, 100084 Beijing, China
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Chairman of Beijing Chapter of IEEE IA Society
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(liyud@tsinghua.edu.cn; liyud@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.
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- Doctor Roger Shuttleworth, The University of Manchester/UK.
Senior Lecturer, EECS MSc Course Director,
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(roger.shuttleworth@manchester.ac.uk)

❖ 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.