

*Aiman Albatayneh, Ph.D.*  
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**Dr. Albatayneh** is currently working in Jordan as an associate professor at the German Jordanian University (GJU). He completed his BSc. and Ph.D. in Australia. He is passionate about utilizing energy fields, so he studied renewable energy engineering at the UNSW and conducted Ph.D. studies focusing on energy efficiency and low-energy buildings (minimizing cooling and heating energy consumption) at the University of Newcastle in Australia. His research interests and experience are interdisciplinary, and he utilizes modeling and an experimental approach.

Dr. Albatayneh worked as a national consultant for providing technical assistance to upscaling energy efficiency programs in the Arab region – of Jordan. ESCWA is implementing a UN Development Account Project on “Upscaling Energy Efficiency in the residential and services sectors in the Arab Region.” The project’s objective is to substantially enhance ESCWA member countries’ capacity to improve and optimize energy efficiency in the building sector and upscale energy efficiency programs in the existing residential and non-residential building stock. Also, he is currently running some funded projects such as; Advice and support of bilateral Energy partnerships with developing and Emerging countries -Jordan” funded by the GIZ; and Climate Change Resilient Cities “CLIC” funded by the DAAD.

The core of his research focuses on the emerging field of low-energy solutions design, renewable energy systems, energy efficiency, heating and cooling, environmental studies, economics, and management. During his career at the German Jordanian University, he has conducted research with fellow students and research collaborators from Europe and Australia. He has published more than 80 research papers, an updated list of which can be found on [Google Scholar](#) and [ResearchGate](#).

# Dr. Aiman ALBATAYNEH

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**NATIONALITY** Jordanian/ Australian

## PROFESSIONAL MEMBERSHIPS

- **Engineers Australia** (No.3343703)  
Professional Mechanical Engineer.  
Professional Electrical Engineer/ Renewable Energy.  
Professional Civil Engineer.
- **Jordan Engineers Association and Arab Engineers Association**  
Mechanical Engineer/ Thermal Machines (No.3/9979).

## EDUCATION

2013- 2016 **Ph.D. in Engineering**  
The University of Newcastle (UON), Australia

2010- 2013 **B.Sc. in Renewable Energy Engineering- Honours**  
The University of New South Wales (UNSW), Australia

2006 – 2008 **Diploma of Business Management**  
Lloyds International College Sydney, Australia.

1996 – 2004 **Master's Degree and B.Sc in Mechanical Engineering**  
Jordan

## TRAINING

- 2009-2015
- **Laboratory Safety**, The University of Newcastle Australia (UON)
  - **Health and Safety Risk Assessments** (UON)
  - **Skillmax Program**, Course for Overseas Professionals
  - **Effective Spoken Skills for the Workplace and Learning Strategies for workplace Training**
  - **Language and Culture of Employment in Australia**  
NSW Government -Department of Education and Training. Australia.

## LANGUAGES

- English: Excellent Reading, Writing, and Speaking.
- Arabic: Excellent Reading, Writing, and Speaking.

## TEACHING EXPERIENCE

Teaching graduate and undergraduate students different courses, I was involved in teaching the following classes;

- Energy Efficiency
- Low Carbon Buildings
- Engineering Economy
- Wind Energy
- Applied Mathematics

## RESEARCH EXPERIENCE

- Head of a research team with The University of Newcastle in Australia to improve the thermal performance of residential buildings.
- Researching in renewable energy with a focus on energy efficiency, low-carbon buildings, biomass, and wind energy.
- Advised and co-advised many graduate and undergraduate students on their final-year projects and theses. Supervising postgrad theses;

## FUNDED PROJECTS

- German Energy Academy in Jordan is funded by the GIZ with around \$150K.
- Advice and support of bilateral Energy partnership with developing and Emerging countries -Jordan” funded by the GIZ with \$140K.
- Energy Innovation platform funded by the GIZ with \$120K.
- Climate Change Resilient Cities “CLIC” funded by the DAAD with \$60K.
- Study the thermal performance characterizations for typical residential buildings in Jordan for different climate zones funded by GJU with a \$60K research grant.

## CONSULTATIONS

- National consultant for technical assistance to upscaling energy efficiency programs in the Arab region – Jordan. ESCWA is implementing a UN Development Account Project on “Upscaling Energy Efficiency in the residential and services sectors in the Arab Region.” The project’s objective is to substantially enhance ESCWA member countries’ capacity to improve and optimize energy efficiency in the building sector and upscale energy efficiency programs in the existing residential and non-residential building stock.

## SELECTED PUBLICATIONS

- **Albatayneh A**, Albadaineh R, Juaidi A, Abdallah R, Zabalo A, Manzano-Agugliaro F. Enhancing the Energy Efficiency of Buildings by Shading with PV Panels in Semi-Arid Climate Zone. Sustainability. 2022 Jan;14(24):17040.
- **Albatayneh A**, Tarawneh R, Dawas A, Alnajjar M, Juaidi A, Abdallah R, Zapata-Sierra A, Manzano-Agugliaro F. The installation of residential photovoltaic systems: Impact of energy consumption behavior. Sustainable Energy Technologies and Assessments. 2022 Dec 1;54:102870.
- **Albatayneh A**. The Share of Energy Consumption by End Use in Electrical Residential Buildings in Jordan. Environmental and Climate Technologies. 2022 Jan;26(1):754-66.

- **Albatayneh A**, Juaidi A, Abdallah R, Peña-Fernández A, Manzano-Agugliaro F. Effect of the subsidised electrical energy tariff on the residential energy consumption in Jordan. *Energy Reports*. 2022 Nov 1;8:893-903.
- **Albatayneh A**, Hindiyeh M, AlAmawi R. Potential of renewable energy in water-energy-food nexus in Jordan. *Energy Nexus*. 2022 Sep 1;7:100140.
- **Albatayneh A**, Assaf MN, Albadaineh R, Juaidi A, Abdallah R, Zabalo A, Manzano-Agugliaro F. Reducing the Operating Energy of Buildings in Arid Climates through an Adaptive Approach. *Sustainability*. 2022 Oct 19;14(20):13504.
- **Albatayneh A**, Albadaineh R, Juaidi A, Abdallah R, Montoya MD, Manzano-Agugliaro F. Rooftop photovoltaic system as a shading device for uninsulated buildings. *Energy Reports*. 2022 Nov 1;8:4223-32.
- **Albatayneh A**. Potential of Using WVO for a Restaurant EV Charging Station. *Environmental and Climate Technologies*. 2022 Jan;26(1):392-405
- **Albatayneh A**, Juaidi A, Abdallah R, Peña-Fernández A, Manzano-Agugliaro F. Effect of the subsidised electrical energy tariff on the residential energy consumption in Jordan. *Energy Reports*. 2022 Nov 1;8:893-903.
- **Albatayneh A**. Optimisation of building envelope parameters in a semi-arid and warm Mediterranean climate zone. *Energy Reports*. 2021 Nov 1;7:2081-93.
- **Albatayneh A**, Juaidi A, Abdallah R, Manzano-Agugliaro F. Influence of the Advancement in the LED Lighting Technologies on the Optimum Windows-to-Wall Ratio of Jordanians Residential Buildings. *Energies*. 2021 Jan;14(17):5446.
- Muhaidat J, **Albatayneh A**, Assaf MN, Juaidi A, Abdallah R, Manzano-Agugliaro F. The Significance of Occupants' Interaction with Their Environment on Reducing Cooling Loads and Dermatological Distresses in East Mediterranean Climates. *International Journal of Environmental Research and Public Health*. 2021 Jan;18(16):8870.
- **Albatayneh A**, Atieh H, Jaradat M, Al-Omary M, Zaquot M, Juaidi A, Abdallah R, Manzano-Agugliaro F. The Impact of Modern Artificial Lighting on the Optimum Window-to-Wall Ratio of Residential Buildings in Jordan. *Applied Sciences*. 2021 Jan;11(13):5888.
- **Albatayneh A**. Sensitivity analysis optimisation of building envelope parameters in a sub-humid Mediterranean climate zone. *Energy Exploration & Exploitation*. 2021 May 26:01445987211020432.
- **Albatayneh A**, Tayara T, Jaradat M, Al-Omary M, Hindiyeh M, Alterman D, Ishbeytah M. Optimum Building Design Variables in a Warm Saharan Mediterranean Climate Zone. *International Journal of Photoenergy*. 2021 May 26;2021.
- **Albatayneh A**, Jaradat M, AlKhatib MB, Abdallah R, Juaidi A, Manzano-Agugliaro F. The Significance of the Adaptive Thermal Comfort Practice over the Structure Retrofits to Sustain Indoor Thermal Comfort. *Energies*. 2021 Jan;14(10):2946.
- **Albatayneh A**. Optimising the Parameters of a Building Envelope in the East Mediterranean Saharan, Cool Climate Zone. *Buildings*. 2021 Feb;11(2):43.
- **Albatayneh A**, Mustafa J, Al-Omary M, Zaquot M. Evaluation of Coupling PV and Air Conditioning vs. Solar Cooling Systems—Case Study from Jordan. *Applied Sciences*. 2021 Jan;11(2):511.
- **Albatayneh A**, Alterman D, Page A, Moghtaderi B. Examining the Thermal Properties of Full-Scale Test Modules on the Overall Thermal Performance of Buildings. In *Resilient and Responsible Smart Cities 2021* (pp. 169-177). Springer, Cham.
- **Albatayneh A**, Abueid O, Alterman D. Time Value of Energy as a Low-Cost Energy Efficiency Technique. *Environmental and Climate Technologies*. 2020 Nov 1;24(3):1-0.
- **Albatayneh A**, Assaf MN, Jaradat M, Alterman D. The Effectiveness of Infiltration against Roof Insulation aimed at Low Income Housing Retrofits for Different Climate Zones in Jordan. *Environmental and Climate Technologies*. 2020 Nov 1;24(3):11-22.
- **Albatayneh A**, Alterman D, Page A, Moghtaderi B. The significance of sky temperature in the assessment of the thermal performance of buildings. *Applied Sciences*. 2020 Jan;10(22):8057.
- **Albatayneh A**, Assaf MN, Alterman D, Jaradat M. Comparison of the Overall Energy Efficiency for Internal Combustion Engine Vehicles and Electric Vehicles. *Environmental and Climate Technologies*. 2020 Jan 1;24(1):669-80.
- **Albatayneh A**, Alterman D, Page A, Moghtaderi B. Development of a new metric to characterise the buildings thermal performance in a temperate climate. *Energy for Sustainable Development*. 2019 Aug 1;51:1-2.

- **Albatayneh A**, Assaf MN, Al-Qroum M, Alterman D. Energy Saving and CO Mitigation as a Result of Reshaping Transportation in Jordan to Focus on the Use of Electric Passenger Cars. *Environmental and Climate Technologies*. 2021 Jan;25(1):222-32.
- **Albatayneh A**, Alterman D, Page A, Moghtaderi B. Alternative Method to the Replication of Wind Effects into the Buildings Thermal Simulation. *Buildings*. 2020 Dec;10(12):237.
- **Albatayneh A**, Al-Khasawneh Y, Alawneh F, Alkhazali A, Mohaidat S. Biofuel in Developing Countries—Ethical Concerns. In *Advanced Studies in Energy Efficiency and Built Environment for Developing Countries 2019* (pp. 149-154). Springer, Cham.
- **Albatayneh, A.**, Alterman, D., Page, A. and Moghtaderi, B., 2019. The Significance of the Adaptive Thermal Comfort Limits on the Air-Conditioning Loads in a Temperate Climate. *Sustainability*, 11(2), p.328.
- **Albatayneh, A.**, Alterman, D., Page, A. and Moghtaderi, B., The Significance of Building Design for the Climate. *Environmental and Climate Technologies* 2018, vol. 22, pp. 165–178;
- **Albatayneh, A.**, Alterman, D., Page, A. and Moghtaderi, B., 2018. The Impact of the Thermal Comfort Models on the Prediction of Building Energy Consumption. *Sustainability*, 10(10), p.3609.
- **Albatayneh, A.**, Alterman, D., Page, A., & Moghtaderi, B. (2017). The Significance of Temperature Based Approach Over the Energy Based Approaches in the Buildings Thermal Assessment. *Environmental and Climate Technologies*, 19(1), 39-50.
- **Albatayneh, A.**, Alterman, D., Page, A., & Moghtaderi, B. (2017). Thermal Assessment of Buildings Based on Occupants Behavior and the Adaptive Thermal Comfort Approach. *Energy Procedia*, 115, 265-271.
- **Albatayneh, A.**, Alterman, D. and Page, A., 2018, January. Adaptation the Use of CFD Modelling for Building Thermal Simulation. In *Proceedings of the 2018 International Conference on Software Engineering and Information Management* (pp. 68-72). ACM.
- **Albatayneh, A.**, Alterman, D., Page, A., & Moghtaderi, B. (2017). Discrepancies in Peak Temperature Times using Prolonged CFD Simulations of Housing Thermal Performance. *Energy Procedia*, 115, 253-264.
- **Albatayneh, A.**, Alterman, D., Page, A., & Moghtaderi, B. (2017). Temperature versus energy based approaches in the thermal assessment of buildings. *Energy Procedia*, 128, 46-50.
- **Albatayneh A**, Mohaidat S, Alkhazali A, Dalalah Z, Bdour M. The Influence of Building's Orientation on the Overall Thermal Performance. *Environmental Science & Sustainable Development*. 2018 Jul 31;3(1):63-9.
- **Albatayneh A**, Alterman D, Page A, Moghtaderi B. Renewable Energy Systems to Enhance Buildings Thermal Performance and Decrease Construction Costs. *Energy Procedia*. 2018 Oct 1;152:312-7.
- **Albatayneh, A.**, Alterman, D., Page, A., & Moghtaderi, B. (2018). An Alternative Approach to the Simulation of Wind Effects on the Thermal Performance of Buildings. *International Journal of Computational Physics Series*. No 1 (2018):35-44.
- **Albatayneh A**, Alterman D, Page A, Moghtaderi B. The Significance of the Orientation on the Overall buildings Thermal Performance-Case Study in Australia. *Energy Procedia*. 2018 Oct 1;152:372-7.
- **Albatayneh A**, Assaf M, Jaradat M. The Benefits of Lower Thermal Mass Over Higher Thermal Mass Constructions in Sub-Mediterranean Climates.
- Jaradat M, **Albatayneh A**, Juaidi A, Abdallah R, Ayadi O, Ibbini J, Campana PE. Liquid desiccant systems for cooling applications in broilers farms in humid subtropical climates. *Sustainable Energy Technologies and Assessments*. 2022 Jun 1;51:101902.
- Monna, S.; Abdallah, R.; Juaidi, A.; **Albatayneh, A.**; Zapata-Sierra, A.J.; Manzano-Agugliaro, F. Potential Electricity Production by Installing Photovoltaic Systems on the Rooftops of Residential Buildings in Jordan: An Approach to Climate Change Mitigation. *Energies* 2022, 15, 496. <https://doi.org/10.3390/en15020496>

- Hindiyeh M, **Albatayneh A**, Tarawneh R, Suleiman S, Juaidi A, Abdallah R, Jellali S, Jeguirim M. Preparedness Plan for the Water Supply Infrastructure during Water Terrorism—A Case Study from Irbid, Jordan. *Water*. 2021 Jan;13(20):2887.
- Abdallah R, Juaidi A, Savaş MA, Çamur H, **Albatayneh A**, Abdala S, Manzano-Agugliaro F. A Critical Review on Recycling Composite Waste Using Pyrolysis for Sustainable Development. *Energies*. 2021 Jan;14(18):5748.
- Hindiyeh M, **Albatayneh A**, Altarawneh R, Jaradat M, Al-Omary M, Abdelal Q, Tayara T, Khalil O, Juaidi A, Abdallah R, Dutournié P. Sea Level Rise Mitigation by Global Sea Water Desalination Using Renewable-Energy-Powered Plants. *Sustainability*. 2021 Jan;13(17):9552.
- Monna S, Juaidi A, Abdallah R, **Albatayneh A**, Dutournie P, Jeguirim M. Towards sustainable energy retrofitting, a simulation for potential energy use reduction in residential buildings in Palestine. *Energies*. 2021 Jan;14(13):3876.
- Al-Addous, M. and **Albatayneh, A.**, 2019. Knowledge gap with the existing building energy assessment systems. *Energy Exploration & Exploitation*, p.0144598719888100.
- Alawneh F, **Albatayneh A**, Al-Addous M, Al-Khasawneh Y, Dalalah Z. Solar Photovoltaic (PV) Power Systems in Jordan: The Past, the Present and the Future?. In *Advanced Studies in Energy Efficiency and Built Environment for Developing Countries 2019* (pp. 155-159). Springer, Cham.
- Al-Addous M, Al-Taani H, Dalalah Z, Alawneh F, **Albatayneh A**. Wind Resource Assessment for a Proposed Wind Farm. In *Advanced Studies in Energy Efficiency and Built Environment for Developing Countries 2019* (pp. 179-189). Springer, Cham.
- Al-Taani H, Al-Addous M, Dalalah Z, **Albatayneh A**, Ayoub N. A Simplified Model for the Estimation of Solar Cell Efficiency Based on the Air Mass Effect. *The Academic Research Community publication*. 2019 Feb 7;3(1):199-204.
- Al-Khasawneh Y, **Albatayneh A**. The Application of Ground-Source Heat Pumps for a Residential Building in Jordan. In *Advanced Studies in Energy Efficiency and Built Environment for Developing Countries 2019* (pp. 161-167). Springer, Cham.
- Mohammad Al-Addous, Motasem Saidan, Mathhar Bdour, Zakariya Dalalah, Aiman **Albatayneh**, Christina B Class, Key aspects and feasibility assessment of a proposed wind farm in Jordan, 2019, *International Journal of Low-Carbon Technologies*.
- Jaradat, Mustafa, Mohammad Al-Addous, and **Aiman Albatayneh**. "Adaption of an Evaporative Desert Cooler into a Liquid Desiccant Air Conditioner: Experimental and Numerical Analysis." *Atmosphere* 11, no. 1 (2020): 40.
- Al-Addous, M., Jaradat, M., **Albatayneh, A.**, Wellmann, J. and Al Hmidan, S., 2020. The Significance of Wind Turbines Layout Optimization on the Predicted Farm Energy Yield. *Atmosphere*, 11(1), p.117.
- Jaradat, M., Al-Addous, M., **Albatayneh, A.**, Dalala, Z. and Barbana, N., 2020. Potential Study of Solar Thermal Cooling in Sub-Mediterranean Climate. *Applied Sciences*, 10(7), p.2418.
- Haj Hussein M, Monna S, Abdallah R, Juaidi A, **Albatayneh A**. Improving the Thermal Performance of Building Envelopes: An Approach to Enhancing the Building Energy Efficiency Code. *Sustainability*. 2022 Jan;14(23):16264.
- Jaradat M, Alsotary O, Juaidi A, **Albatayneh A**, Alzoubi A, Gorjian S. Potential of Producing Green Hydrogen in Jordan. *Energies*. 2022 Jan;15(23):9039.
- Abdallah R, Juaidi A, Savaş MA, Çamur H, **Albatayneh A**, Abdala S, Manzano-Agugliaro F. Retraction: Abdallah et al. A Critical Review on Recycling Composite Waste Using Pyrolysis for Sustainable Development. *Energies* 2021, 14, 5748. *Energies*. 2022 Oct 17;15(20):7645.
- Abdallah R, Alsurakji T, Juaidi A, Abdel-Fattah S, Haniyeh M, **Albatayneh A**, Çamur H. The use of SolidWorks in the evaluation of wind turbines in Palestine. *Energy Nexus*. 2022 Sep 1;7:100135.
- Al-Omary M, Aljarrah R, **Albatayneh A**, Alzaareer K, Malkawi A, Jaradat H. Optimal Neural Network for Predicting Solar Energy in Sensor Units Based on a Cascaded Input/Structure Direct Optimization. *Journal of Sensors*. 2022 Aug 22;2022.
- Abdallah R, Juaidi A, Abdel-Fattah S, Qadi M, Shadid M, **Albatayneh A**, Çamur H, García-Cruz A, Manzano-Agugliaro F. The Effects of Soiling and Frequency of Optimal Cleaning of PV Panels in Palestine. *Energies*. 2022 Jan;15(12):4232.

- Juaidi A, Muhammad HH, Abdallah R, Abdalhaq R, **Albatayneh** A, Kawa F. Experimental validation of dust impact on-grid connected PV system performance in Palestine: An energy nexus perspective. *Energy Nexus*. 2022 Jun 16;6:100082.
- Jaradat M, **Albatayneh** A, Juaidi A, Abdallah R, Ayadi O, Ibbini J, Campana PE. Liquid desiccant systems for cooling applications in broilers farms in humid subtropical climates. *Sustainable Energy Technologies and Assessments*. 2022 Jun 1;51:101902.
- Muhaidat J, **Albatayneh** A, Abdallah R, Papamichael I, Chatziparaskeva G. Predicting COVID-19 future trends for different European countries using Pearson correlation. *Euro-mediterranean Journal for Environmental Integration*. 2022 May 12:1-4.
- Hindiyeh M, Jaradat M, **Albatayneh** A, Alabdellat B, Al-Mitwali Y, Hammad B. Sustainable Green University: Waste Auditing, German Jordanian University as a Case Study. *Front. Built Environ*. 2022 Apr 26;8:884656.
- Monna S, Abdallah R, Juaidi A, **Albatayneh** A, Zapata-Sierra AJ, Manzano-Agugliaro F. Potential Electricity Production by Installing Photovoltaic Systems on the Rooftops of Residential Buildings in Jordan: An Approach to Climate Change Mitigation. *Energies*. 2022 Jan 11;15(2):496.

## CONFERENCE PRESENTATIONS

- Urban Planning, Architecture Design for Sustainable Development, (UPADSD). 14- 16 October 2015, Lecce, Italy. •
- Alternative and Renewable Energy Quest in Architecture and Urbanism. 1st – 3rd February, 2017. ETSAV – Universitat Politècnica de Catalunya – Barcelona, Spain. 4
- CONECT-2017 – International Scientific Conference of Environmental and Climate Technologies –Institute of Energy Systems and Environment, Riga Technical University, 10–12 May 2017, Riga, Latvia. •
- Alternative and Renewable Energy Quest (AREQ), 27 - 29 November 2017 Thessaloniki, Greece. • International Conference on Big Data and Smart Computing (ICBDSC 2018) on January 4- 6, 2018, Casablanca, Morocco.
- International Conference on Computational Materials Science and Thermodynamic Systems (CMST 2018) 22 – 23 March, 2018 in Wolfson College, University of Cambridge, Cambridge City, United Kingdom.
- CONECT-2018 – International Scientific Conference of Environmental and Climate Technologies –Institute of Energy Systems and Environment, Riga Technical University, 17–18 May 2018, Riga, Latvia.
- Applied Energy Symposium and Forum 2018: Low carbon cities and urban energy systems, CUE2018, 5–7 June 2018, Shanghai, China.
- The 11th International Conference on the Challenges in Environmental Science and Engineering CESE-2018 4 -8 November, Bangkok, Thailand. • CONECT-2019 – International Scientific Conference of Environmental and Climate Technologies –Institute of Energy Systems and Environment, Riga Technical University, 15–17 May 2019, Riga, Latvia.
- The 2nd International Conference on Applied Research in Engineering Science and Technology. October 18-20, 2019 Central European University, Budapest, Hungary.
- Future Smart Cities (FSC) - 2nd Edition. 05- 07, Nov 2019, Xiamen University Malaysia, Sepang, Malaysia.