

MOHAMED NIZAR HMADI

1. Name and academic rank

Mohamed Nizar Hmadi, Assistant Professor.

2. Education – degree, discipline, institution, year

- Ph.D., Renewable Energy Engineering, Saint Joseph University of Beirut (USJ-ESIB), Lebanese University (Doctoral School-EDST), Lebanon, August 2020.
- Master's Degree in Renewable Energy Engineering, Saint Joseph University of Beirut (USJ-ESIB), Lebanese University – Faculty of Engineering, Lebanon, July 2016.
- Degree of Mechanical Engineer, Lebanese University, Faculty of Engineering, Mechanical Department, Branch 3, Lebanon, July 2014.

3. Academic and Professional experience

3.1 Academic experience

- Beirut Arab University, Lebanon, Assistant Professor, Fall 2023-present, full time.
- BEEE Consult, Lebanon, Research Assistant Professor, 2022-2023, part time.

3.2 Non-academic experience

- Consult sarl, Mechanical and Energy Engineer HVAC, Public Health, Firefighting, Energy Modeling, 2014-2023, full time.

4. Professional credentials, certificates, or licensing

- Member of Order of Engineers and Architects – Beirut.
- Certified Energy Manager® (CEM®), 2017, Association of Energy Engineers (AEE), credential id: 94791 – CEMI
- LEED Green Associate Certification, 2017, GBCI Green Building Certification Institute, credential id: 11149443-GREEN-ASSOCIATE

5. Professional development activities

- Participated in AEE seminars and workshops
- “TRAIN THE TRAINER” UNDP WORKSHOP on Energy Efficiency System, 2022, United Nations Development Program (UNDP), CEDRO5, EEASER, European Union
- Advanced Energy Audit and Process Integration Summer School, 2018, Mines ParisTech, Centre Efficacite Energetique des Systemes, CES Holy Spirit University of Kaslik, USEK
- Certificate of Completion Project Management Professional (PMP®), 2015 PROMASTAR: Project Management Institute (PMI), Oracle Platinum Partner, Oracle Approved Education Provider
- Certificate of Completion Revit MEP, 2014, HVAC and Piping EXPERTISE TRAINING CENTER / ETC, Autodesk® Authorized Training Center (ATC®)

6. Contribution to the discipline

6.1 Service activities

- Member of BAU Faculty of Engineering Library Committee
- AEE Lebanon Chapter Mechanical Engineering internship advisor
- AEE BAU Student Chapter advisor

6.2 Publications

6.2.1 Journal Publications:

- M. Hmadi, S. Amine, and M. Kanaan, “Active evaporative cooling for pilgrim tents in Mina, Makkah: A sustainable approach to energy and water efficiency,” *Case Studies in Thermal Engineering*, vol. 75, p. 107119, Nov. 2025, doi: 10.1016/j.csite.2025.107119.
- M. Kanaan, S. Amine, and M. Hmadi, “Optimized Solar-Powered Evaporative-Cooled UFAD System for Sustainable Thermal Comfort: A Case Study in Riyadh, KSA,” *Thermo*, vol. 5, no. 3, p. 26, Jul. 2025, doi: 10.3390/thermo5030026.
- M. Kanaan, S. Amine, and M. Hmadi, “Numerical Analysis of Ceiling-Mounted Air Curtains for Reducing Airborne Pathogen Transmission in Offices,” *European Journal of Pure and Applied Mathematics*, vol. 19, no. 1, p. 6760, Feb. 2026, doi: 10.29020/nybg.ejpam.v19i1.6760.
- Eid S, Lahoud Chawki, Brouche M, Hmadi M, Lahoud Christy. Modeling and Validation of the Enthalpy-Temperature Curve for Phase Change Materials. *MSF* 2022; 1050:149–59. <https://doi.org/10.4028/www.scientific.net/msf.1050.149>
- Lahoud Christy, Brouche ME, Lahoud Chawki, Hmadi M. A Review of single-effect solar absorption chillers and its perspective on Lebanese case. *Energy Reports* 2021; 7:12–22. <https://doi.org/10.1016/j.egyr.2021.09.052>.
- Saad S, Lahoud C, Brouche M, Hmadi M, Ghandour M, Mourtada A. Advanced tool for elaborating a sustainable energy and climate action plan at municipalities level. *Energy Reports* 2021; 7:51–69. <https://doi.org/10.1016/j.egyr.2021.09.049>.
- Hmadi M, Mourtada A, Daou R. Forecasting the performance of a district solar thermal smart network in desert climate – A case study. *Energy Conversion and Management* 2020; 207:112521. <https://doi.org/10.1016/j.enconman.2020.112521>.

6.2.2 International Conference Proceedings:

- Lahoud Christy, Brouche M, Lahoud Chawki, Hmadi M. Thermo-Economic Comparison of Solar Thermal Cooling and Solar Photovoltaic Cooling Systems for a Typical Residential Building – Lebanese Case Study. 2023 IEEE 4th International Multidisciplinary Conference on Engineering Technology (IMCET) 2023. <https://doi.org/10.1109/imcet59736.2023.10368259>.
- Lahoud Christy, Brouche M, Lahoud Chawki, Hmadi M. Thermo-Economic Performance of a Solar-Driven Single-Effect Absorption Chiller in Lebanon. 2023 6th International Conference on Renewable Energy for Developing Countries (REDEC) 2023. <https://doi.org/10.1109/redec58286.2023.10208167>
- Itani A, Akilli H, Hmadi M, Ghandour M. Investigating the Performance of a Solar PV Driven VRF System Using Cold PCM Thermal Storage. 2023 6th International Conference on Renewable Energy for Developing Countries (REDEC) 2023. <https://doi.org/10.1109/redec58286.2023.10208176>.
- Hmadi M, Ghandour M, Mourtada A, Daou RZ. Near Zero Cooling Residential Building Using Hot and Cold Phase Change Material Thermal Storages - Lebanon Case Study. 5th International Conference Efficient Building Design. ASHRAE 2022. Product Code (ASHRAE Bookstore): D-ICEB22-11.

Available online: https://www.techstreet.com/standards/c11-near-zero-cooling-residential-building-using-hot-and-cold-phase-change-material-thermal-storages-lebanon-case-study?product_id=2523000

- Hmadi M, Mourtada A, Daou RZ. Optimized Methodology Towards Near Zero Thermal Energy Residential Building in Lebanon. 4th International Conference Efficient Building Design. ASHRAE 2020. Product Code (ASHRAE Bookstore): D-ICEB20-02. Available online: https://www.techstreet.com/standards/optimized-methodology-towards-near-zero-thermal-energy-residential-building-in-lebanon?product_id=2201079
- Hmadi M, Mourtada A. High Solar Combi-Plus System Using PCM Storage: KSA Case Study. 3rd International Conference Efficient Building Design. ASHRAE 2018. Product Code (ASHRAE Bookstore): D-ICEB18-C023. Available online: https://www.techstreet.com/ashrae/standards/high-solar-combi-plus-system-using-pcm-storage-ksa-case-study?product_id=2025527#product
- Hmadi M, Mourtada A, Daou RZ. Integrating a High Solar Combi-Plus System using PCM Storage in a Smart Network: KSA Case Study. 2018 4th International Conference on Renewable Energies for Developing Countries (REDEC) 2018. <https://doi.org/10.1109/redec.2018.8598126>.