

DR. MUHAMMAD UZAIR

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EDUCATIONAL BACKGROUND:

- **Doctor of Philosophy (Ph.D.)**, Auckland University of Technology Auckland, New Zealand
 - Thesis topic: Wind induced heat losses from solar dish receiver systems
 - ❖ Experimental and numerical study on the solar parabolic dish system.
 - ❖ Building of experimental setup and scaled down testing on the prototype.
 - ❖ Used of ANSYS CFX to examine the problem numerically.
 - ❖ Used Statistical tools to find mathematical correlation.
- **Master of Engineering (M.E.)**, Mechanical Engineering, N.E.D. University of Engineering & Technology, Karachi, Pakistan (CGPA 3.95)
- **Bachelor of Engineering (B.E.)**, Mechanical Engineering, N.E.D. University of Engineering & Technology, Karachi, Pakistan

ACADEMIC EXPERIENCE:

1. **Associate Professor, Department of Mechanical Engineering** (<https://med.neduet.edu.pk/>)
NED University of Engineering and Technology, Pakistan (Jan 2022 to Till date)
2. **Assistant Professor, Department of Mechanical Engineering** (<https://med.neduet.edu.pk/>)
NED University of Engineering and Technology, Pakistan (Dec 2009 to Jan 2022)
 - Taught the following Courses to under graduate and post-graduate students:
Thermodynamics, Fluid Mechanics, Heat Transfer, Renewable Energy, Solar Thermal Energy Systems,
 - Mentored and supervised final year students in their Final Year Project as a Project Advisor
3. **Lecturer, Department of Mechanical Engineering** (<https://med.neduet.edu.pk/>)
NED University of Engineering and Technology, Pakistan (Nov 2006 to Dec 2009)
 - Taught the following Courses and Labs:
Thermodynamics, Fluid Mechanics, Heat Transfer, Engineering Mechanics,
 - Worked as a Class advisor for the students of 1st Year of Engineering
4. **Teaching Assistant, Department of Design and Creative Technology**
Auckland University of Technology (AUT), (July 2014 – July 2018)
 - Taught the following Courses and Labs:
Thermodynamics, Fluid Mechanics, Heat Transfer
 - Trained the students on different computer aided design (CAD) software such as SOLIDWORKS and AUTOCAD
 - Laboratory tutor for a variety of mechanical engineering courses
 - Involved in assessment of student assignments, practical labs, projects and exams

ADMINISTRATIVE AND VOLUNTEER EXPERIENCE:

- Manager Research Operation and Development in ORIC, NED University (March 2023 to till date)
- Member Board of Governor, ASHRAE Pakistan Chapter (July 2022 to till date)
- Treasurer, ASHRAE Pakistan Chapter (July 2022 to till date)
- Chair, Student Activity, ASHRAE Pakistan Chapter (July 2022 to till date)
- Member Chapter Technology Transfer Committee (CTTC), ASHRAE Pakistan Chapter (July 2022 to till date)
- Member Senate NED University (2019 to till date)
- Member Board of Studies, Department of Mechanical Engineering, NED University (Jan 2022 till date)
- Member Board of Studies, Faculty of Engineering, Indus University (March 2022 to till date)

- Member Board of Review, Department of Student Affairs, NED University (Jan 2022 till date)
- Member Board of Studies, Nazeer Hussain University, Karachi (December 2021 to till date)
- Regional Lecturer of ASHRAE Regional At Large (Nov 2021 to till date)
- Industrial Liaison Coordinator, Department of Mechanical Engineering, NED University (June 2019 – February 2021)

GRANTS:

- Recipient of grant of **National Research Program for Universities (NRPU) by Higher Education of Pakistan** for a project of “Performance Optimization of Energy storage using Phase change materials” in 2022
- Recipient of grant of Rs. 2.65 million from the **Ministry of Science and Technology (MoST) Endowment Fund** for a project of “Performance Enhancement of Concentrated Parabolic Trough Collector System” in 2022
- Recipient of **ASHRAE USA** grant of USD 5000/- for a project “Demonstration unit of solar driven thermo-acoustic refrigeration system for HVACR Laboratory” in 2022-23
- Recipient of **ASHRAE USA** grant of USD 5000/- for a project “Demonstration unit of solar air-conditioning system for HVACR Laboratory” in 2022-23
- Recipient of **ASHRAE USA** grant of USD 5000/- for a project “Small scale solar based vapor absorption cycle system” in 2021-22
- Recipient of **ASHRAE USA** grant of USD 5000/- for a project “Geo-thermal air-conditioning system ” in 2020-21
- Recipient of Seed funding of PKR 0.89 million from **NED University of Engineering and Technology** in 2020-21
- Recipient of **ASHRAE USA** grant of USD 5000/- for a project “Small-Sized Parabolic Trough Collector System for Solar De-humidification Application: Design, Development, and Potential Assessment” in 2019-20

PUBLICATIONS

JOURNAL PAPERS:

JCR (SCI AND SCIE)

1. Ali Rizvi, S.A., **Uzair, M.** & Siddiqui, M.A. (2023). The effects of using different thermal storage materials and their mixtures on the performance of a solar cooker. *Forsch Ingenieurwes* <https://doi.org/10.1007/s10010-023-00714-2>
2. **Uzair, M.**, Rehman, N., (2023). Optical-irradiance performance investigation to optimize a solar still with internal reflectors and double external boosters. *Forschung im Ingenieurwesen*, <https://doi.org/10.1007/s10010-023-00666-7>
3. Rizvi, S. A. A., & **Uzair, M.** (2023). Numerical Investigation of Solar Flux Homogeneity and Intensity of a Parabolic Trough Receiver with Various Secondary Reflectors. *Arabian Journal for Science and Engineering*, 48, 4081–4094. <https://doi.org/10.1007/s13369-022-07372-6>
4. **Uzair, M.**, Rehman, N., (2022). Optical concentration ratio of a parabolic trough collector with flat receiver and concentrator with surface irregularities. *Forschung im Ingenieurwesen*, 86, 903–911. <https://doi.org/10.1007/s10010-022-00603-0>
5. **Uzair, M.**, Kazmi, S. U. H., Yousuf, M. U., Zaidi, A. A., (2022). Optimized performance of PV panels and site selection for a solar park in Pakistan. *Transactions of the Canadian Society for Mechanical Engineering*, 46(2), 412-426, <https://doi.org/10.1139/tcsme-2021-0134>
6. **Uzair, M.**, Rehman, N., Yousuf, M. U., (2022). Sensitivity Analysis of Capital and Energy Production Cost for Off-Grid Building Integrated Photovoltaic Systems. *Renewable Energy*, 186, 195-206. <https://doi.org/10.1016/j.renene.2022.01.003>
7. **Uzair, M.**, Siddiqui, M.A., Allauddin, U., (2022). Numerical study of Flow patterns and performance of a coupled cavity-dish system under different focal lengths. *Transactions of the Canadian Society for Mechanical Engineering*, 46 (2), 225-235, <https://doi.org/10.1139/tcsme-2021-0110>

8. Shaikh, M., **Uzair, M.** and Raza, S.A., (2022). Optimization of thermal storage system for solar cooking using different materials. *Transactions of the Canadian Society for Mechanical Engineering*, 46 (2), 490-502, <http://dx.doi.org/10.1139/tcsme-2021-0160>
9. Rasheed, A., Allauddin, U., Ali, H. M., **Uzair, M.**, Verdin, P. G., & Siddiqui, Y. H. (2022). Heat transfer and fluid flow characteristics investigation using detached ribs in an axisymmetric impinging jet flow. *Journal of Thermal Analysis and Calorimetry*, 147, 14517–14537, <https://doi.org/10.1007/s10973-022-11640-w>
10. Shahzad, A., Jadoon, J., **Uzair, M.**, Akhtar, M., Abdul, S., Muzamil, M., & Sattar, M. (2022). Effect of composition and microstructure on the rusting of MS rebars and ultimately their impact on mechanical behavior. *Transactions of the Canadian Society for Mechanical Engineering*. 46(4): 685-696, <https://doi.org/10.1139/tcsme-2021-0207>
11. **Uzair M.**, Rehman, N., Asif, M., (2022). Effect of receiver misalignment on the intercept factor of parabolic trough collectors. *Journal of Solar Energy Engineering*, 144 (2), 024502-1, <https://doi.org/10.1115/1.4052866>
12. Rehman, N., **Uzair M.**, (2022). Comparison of North-South and East-West facing solar collector pairs with and without reflectors. *Journal of Solar Energy Engineering*, 144 (2), 024501-11, <https://doi.org/10.1115/1.4052490>
13. Naseer, M.N., Zaidi, A.A., Khan, H., Kumar, S., Owais, M.T.B., Wahab, Y.A., Dutta, K., Jaafar, J., **Uzair, M.**, Johan, M.R. and Badruddin, I.A., 2022. Desalination technology for energy-efficient and low-cost water production: A bibliometric analysis. *Green Processing and Synthesis*, 11(1), 306-315, <https://doi.org/10.1515/gps-2022-0027>
14. Shaikh, M., **Uzair, M.**, Allauddin, U., (2021). Effect of geometric configurations on charging time of latent heat storage of solar applications. *Renewable Energy*, 179, 262-271. <https://doi.org/10.1016/j.renene.2021.07.062>
15. Naseer, M. N., Zaidi, A. A., Khan, H., Kumar, S., bin Owais, M. T., Jaafar, J., Nuor, S. S., Yasmin, A., Kingshuk D., Muhammad, A., S.F. Wan Muhamad Hatta, **Uzair, M.** (2021). Mapping the field of microbial fuel cell: A quantitative literature review (1970–2020). *Energy Reports*, 7, 4126-4138. <https://doi.org/10.1016/j.egy.2021.06.082>
16. **Uzair, M.**, & Rehman, N. U. (2021). Intercept Factor for a Beam-Down Parabolic Trough Collector. *Journal of Solar Energy Engineering*, 143(6), 061002. <https://doi.org/10.1115/1.4050804>
17. Rehman, N.U., **Uzair, M.** & Asif, M. (2021). Optical Design of a Novel Polygonal Trough Collector for Solar Concentrating Photovoltaic Applications. *Arabian Journal of Science and Engineering*. 46. 2963–2973 <https://doi.org/10.1007/s13369-020-05163-5>
18. Allauddin, U., Salahuddin, S., & **Uzair, M.** (2021) Performance enhancement of an impinging jet system using different working fluids-A numerical study. *Heat Transfer Research*, 52(1), 17-30.
19. Rehman, N. U., & **Uzair, M.** (2021). Hybrid Ray Tracing Model and Particle Swarm Optimization for the Performance of an Internally Reflecting Solar Still with a Booster Reflector. *Arabian Journal for Science and Engineering*, 46(3), 2021-2032. <https://doi.org/10.1007/s13369-020-04963-z>
20. **Uzair, M.**, Sohail, S. S., Shaikh, N. U., & Shan, A. (2020). Agricultural residue as an alternate energy source: A case study of Punjab province, Pakistan. *Renewable Energy*, 162, 2066-2074. <https://doi.org/10.1016/j.renene.2020.10.041>
21. ur Rehman, N., & **Uzair, M.** (2020). Optimizing the inclined field for solar photovoltaic arrays. *Renewable Energy*, 153, 280-289. <https://doi.org/10.1016/j.renene.2020.02.028>
22. ur Rehman, N., **Uzair, M.**, & Asif, M. (2020). Evaluating the solar flux distribution uniformity factor for parabolic trough collectors. *Renewable Energy*, 157, 888-896. <https://doi.org/10.1016/j.renene.2020.05.058>
23. ur Rehman, N., Hijazi, M., & **Uzair, M.** (2020). Solar potential assessment of public bus routes for solar buses. *Renewable Energy*, 156, 193-200. <https://doi.org/10.1016/j.renene.2020.04.081>
24. ur Rehman, N., **Uzair, M.**, & Allauddin, U. (2020). An optical-energy model for optimizing the geometrical layout of solar photovoltaic arrays in a constrained field. *Renewable Energy*, 149, 55-65. <https://doi.org/10.1016/j.renene.2019.12.040>
25. **Uzair, M.**, Anderson, T., & Nates, R. (2020). Effect of Insertion of the Dish on the Behaviour of the Convective Heat Loss. *Arabian Journal for Science and Engineering*, 45(2), 989-1000. <https://doi.org/10.1007/s13369-019-04208-8>

26. ur Rehman, N., Siddiqui, M. A., & **Uzair, M.** (2019). Performance Modeling and Experimental Investigation of Parasitic Losses in a Flat-Panel Solar Thermoelectric Generator. *Arabian Journal for Science and Engineering*, 44(6), 5589-5602. <https://doi.org/10.1007/s13369-018-3640-1>
27. ur Rehman, N., **Uzair, M.**, Siddiqui, M. A., & Khamooshi, M. (2019). Regression models and sensitivity analysis for the thermal performance of solar flat-plate collectors. *Arabian Journal for Science and Engineering*, 44(2), 1119-1127. <https://doi.org/10.1007/s13369-018-3432-7>
28. **Uzair, M.**, Anderson, T. N., & Nates, R. J. (2018). Modeling of convective heat loss from a cavity receiver coupled to a dish concentrator. *Solar Energy*, 176, 496-505. <https://doi.org/10.1016/j.solener.2018.10.060>
29. ur Rehman, N., Uzair, M., & Siddiqui, M. A. (2018). Optical analysis of a novel collector design for a solar concentrated thermoelectric generator. *Solar Energy*, 167, 116-124. <https://doi.org/10.1016/j.solener.2018.03.087>
30. **Uzair, M.**, ur Rehman, N., & Raza, S. A. (2018). Probabilistic approach for estimating heat fluid exit temperature correlation in a linear parabolic trough solar collector. *Journal of Mechanical Science and Technology*, 32(1), 447-453. <https://doi.org/10.1007/s12206-017-1245-3>
31. Rehman, N. U., & **Uzair, M.** (2017). The proper interpretation of analytical sky view factors for isotropic diffuse solar irradiance on tilted planes. *Journal of Renewable and Sustainable Energy*, 9(5), 053702. <https://doi.org/10.1063/1.4993069>
32. **Uzair, M.**, Anderson, T. N., & Nates, R. J. (2017). The impact of the parabolic dish concentrator on the wind induced heat loss from its receiver. *Solar Energy*, 151, 95-101. <https://doi.org/10.1016/j.solener.2017.05.022>

MASTER LIST (WOS)

1. **Uzair, M.**, Naqvi, A. A., & Kazmi, S. U. H. (2023). Estimation of the Diffused Solar Irradiation on the Tilted Plane of Photovoltaic Solar Panels. *Memoria Investigaciones en Ingeniería*, (24), 37-52. <https://doi.org/10.36561/ING.24.4>
2. Shazad, A., & **Uzair, M.** (2023). Utilization of Solar Energy for Cooling Applications. *Memoria Investigaciones en Ingeniería*, (24), 69-91. <https://doi.org/10.36561/ING.24.6>
3. Shazad, A., Jadoon, J., **Uzair, M.**, & Muzammil, M. (2023). Material Modelling and Failure Study of Different Fiber Reinforced Composites for Pressure Vessel. *Memoria Investigaciones en Ingeniería*, (24), 92-104. <https://doi.org/10.36561/ING.24.7>
4. **Uzair, M.**, Naqvi, A.A., Akhtar, M., Zaidi, A. A., (2022). Statistical Approach to select the best suitable solar model for Global Radiation: Case study of Karachi, Pakistan. *TECCIENCIA* 17(32), 17-28, <http://dx.doi.org/10.18180/tecciencia.2022.32.2>
5. **Uzair, M.**, Naqvi, A.A., Yousuf, U., (2022). Numerical investigation to determine the optimal tilt angle of single slope solar still during summer season. *TECCIENCIA*, 17 (32), 29-40, <https://doi.org/10.18180/tecciencia.2022.32.3>
6. Asad A. Naqvi, Talha Bin Nadeem, Ahsan Ahmed, **Muhammad Uzair** and S. Asad Ali Zaidi, (2021) Techno-economic design of a grid-tied Photovoltaic system for a residential building. *Advances in Energy Research*, 8(1), 59-71 <http://doi.org/10.12989/eri.2021.8.1.059>

SCOPUS

1. **Muhammad Uzair**, Naveed Rehman, Mubashir Siddique, Syed Umair Hassan Kazmi (2022). Improved Methodology for Determining Seasonal and Fixed Optimum Tilt Angles for Solar Collectors, *GMSARN International Journal*, 16 (2), 325-330.
2. **Muhammad Uzair**, Ghulam Qadir Chaudhary, Naveed ur Rehman, Zeeshan Anwar, Syed Hamza Hassan, Hamza Siddiqui, Muhammad Shahbaz Hussain, (2022). Numerical investigation to determine the optimized solar parabolic cavity shape. *GMSARN International Journal*, 16(1), 55-65.
3. Khan, S. Y., **Uzair, M.**, Allaudin, U., & Masri, A. R. (2021). Experimental Investigation of Spray Characteristics of Electro-Hydro-Dynamic Atomization. *GMSARN International Journal*, 15, 250-258.

4. Ahmed, A., Naqvi, A.A., Nadeem, T.B. and **Uzair, M.**, (2021). Experimental Investigation of Dust Accumulation on the Performance of the Photovoltaic Modules: a Case Study of Karachi, Pakistan. *Applied Solar Energy*, 57(5), pp.370-376, <https://doi.org/10.3103/S0003701X21050029>
5. Yousuf, M. U., Umair, M., & **Uzair, M.** (2020). Estimating the average diffuse solar radiation based on multiple parameters: A case study of arid climate zone of Pakistan. *International Journal of Ambient Energy*, 43(1) 1615-1625, <https://doi.org/10.1080/01430750.2020.1712244>

CONFERENCE PAPERS:

1. Asad Ali Ziadi, Abdul Hameed Memon, Rahool Rai, **Muhammad Uzair**, 2023, “Development and performance study of lab scale continuously stirred tank reactor for Biogas production”, 12th International Mechanical Engineering Conference, Karachi, Pakistan
2. Rahool Rai, Asad Ali Ziadi, Kashif Ahmed, **Muhammad Uzair**, Ali Mustafa Shah, 2023, “Performance evaluation of multi-nozzle pesticide sprayer with chain and sprocket mechanics”, 12th International Mechanical Engineering Conference, Karachi, Pakistan
3. Muhammad Wajahat Rasool Arain, Asad A. Zaidi, Muhammad Asif, **Muhammad Uzair**, 2022, “Design and fabrication of catalytic converter with new material”, 11th International Mechanical Engineering Conference, Karachi, Pakistan
4. Muhammad Farhan, Asad A. Naqvi, **Muhammad Uzair**, 2022, “Increasing photovoltaic performance through temperature regulation by Soy wax as phase change material” 11th International Mechanical Engineering Conference, Karachi, Pakistan
5. Ghulam Qadar Chaudhary, Allah Ditta , Dr. Muzaffar Ali, **Muhammad Uzair**, Naveed Akram, Amar Gulnawaz, 2022, “Experimental study to analyse the effect of critical parameters on the performance of integrated solid desiccant using cross flow m-cycle” 11th International Mechanical Engineering Conference, Karachi, Pakistan
6. **Muhammad Uzair**, M. Zeeshan Anwar, Hamza Siddiqui, S. Hamza Hasan, M. Shahbaz Hussain, 2021, “Convective heat losses in a parabolic dish cavity receiver”, 10th International Mechanical Engineering Conference, Karachi, Pakistan
7. **Uzair, M.**, Anderson, T., and Nates, R., 2017, “Convective heat loss investigation from a couple parabolic dish receiver system”, Proceeding of the 10th Australasian Natural Convection workshop (10ANCW), Auckland, New Zealand.
8. **Uzair, M.**, Anderson, T., and Nates, R., 2016, “Impact of dish structure on the convective heat loss from a parabolic dish solar cavity receiver”, Proceedings of the Asia-Pacific Solar Research Conference, Canberra, Australia.
9. **Uzair, M.**, Anderson, T., Nates, R., and Etienne, J., 2015, “A validated simulation of wind flow around a parabolic dish”, Proceedings of the Asia-Pacific Solar Research Conference, Brisbane, Australia.
10. **Uzair, M.**, Anderson, T., and Nates, R., 2014, “Wind Flow around a Parabolic Dish Solar Concentrator”, Proceedings of the Asia-Pacific Solar Research Conference, Sydney, Australia.

PROJECTS PUBLISHED IN THE FORM OF BOOKS:

1. **Book chapter:** Azhar, M., Zaidi, A.A., Naseer, M.N., Noorollahi, Y. and **Uzair, M.**, 2022. Historical overview of geothermal energy. In *Utilization of Thermal Potential of Abandoned Wells* (pp. 3-10). Academic Press.
2. **Project** on “To design and study a Centrifugal Compressor for Gas Compression Station”, Published by Lambert Academic Publishing’s Foundation (ISBN: 978-3-659-18581-6)
3. **Project** on “Design of Solar Thermal powered Air Conditioner”, Published by Lambert Academic Publishing’s Foundation (ISBN: 978-3-659-11449-6)

HONORS AND AWARDS:

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- **Student Activities Achievement Award (Life Time) by ASHRAE Global** in 2022.
 - **Student Body Advisor Award** for the year 2022 from ASHRAE Pakistan Chapter.
 - **Best Researcher Award** for year 2022 from NED University of Engineering and Technology
 - **Best Researcher Award** for year 2021 from NED University of Engineering and Technology
 - **Best Researcher Award** for year 2020 from NED University of Engineering and Technology

- **Best Published Research Award** for year 2021 from NED Alumni Association of Southern California (NEDAASC)
- **Best Published Research Award** for year 2020 from NED Alumni Association of Southern California (NEDAASC)
- **Best Published Research Award** for year 2018 from NED Alumni Association of Southern California (NEDAASC)
- **Best Published Research Award** for year 2017 from NED Alumni Association of Southern California (NEDAASC)
- **Scholarship** to pursue PhD under Faculty development Program from NED University in 2014.
- **Grant** from Auckland University of Technology to participate in Asia-Pacific Solar Research Conference, Sydney, Australia in 2014
- **Grant** from Auckland University of Technology to participate in Asia-Pacific Solar Research Conference, Brisbane, Australia in 2015
- **Grant** from Auckland University of Technology to participate in Asia-Pacific Solar Research Conference, Canberra, Australia in 2016

CONFERENCE/WORKSHOPS/SEMINARS:

CONFERENCES CONDUCTED

- **Conference Secretary** of 12th International Mechanical Engineering Conference (IMEC-23) under the theme “Role of Mechanical Engineering in Economic Uplift and Sustainability” held on 11th and 12th of May 2023.
- **Member Organizing Committee** of **2nd HVACR Trends Expo & Conference** organized on 3rd and 4th December 2022
- **Conference Secretary** of 11th International Mechanical Engineering Conference (IMEC-22) under the theme “Sustainable Smart Advancements in Mechanical Engineering”, held on 14th and 15th of January 2022
- **Member Organizing Committee** of **Pakistan Water Summit** organized on 22nd March 2022
- **Conference Secretary** of 10th International Mechanical Engineering Conference (IMEC-2020-21) under the theme “Green Practices in Mechanical Engineering”, held on 12th February 2021.
- **Focal Person** of 9th International Mechanical Engineering Conference (IMEC-2019) under the theme “Futuristic trends in Mechanical Engineering”, held on 15th and 19th of March 2019.

WORKSHOPS CONDUCTED

- Conducted 3-Days workshop on ASHRAE Learning Course titled “Fundamental of thermodynamics and Psychrometry” with collaboration of ASHRAE Pakistan Chapter in March 2011 as **Master Trainer**.
- Conducted 3-Days workshop on ASHRAE Learning Course titled “Fundamental of Heating and Cooling Loads” with collaboration of ASHRAE Pakistan Chapter in April 2011 as **Master Trainer**.
- Participated a workshop as **Training of Trainer** on “Design and Installation of Off- Grid and On- Grid Solar PV System”, organized by REAP with collaboration of GIZ in November 2012.
- Participated a workshop as **Training of Trainer** on “ASHRAE’s Variable Refrigerant Flow Systems Design and Applications” organized by Pakistan HVACR Society with collaboration with Global Training Center for Building Excellence – Dubai in 2019.

RESEARCH SUPERVISION:

PhD Topics:

- Performance Enhancement of Concentrated Parabolic Trough Collector System (Mr. Aun Ali Rizvi, In progress)
- Thermal and Optical performance enhancement of solar dish-cavity receiver system (Shehzaib Yousuf Khan, In Progress)
- Development and optimization of Thermal Energy Storage system by utilizing Phase Change Materials (PCMs) (Atif Shezad, In Progress)

Master Level Topics:

- Numerical Modeling and Simulation of Thermal Energy Storage System (Mr. Mahad Shaikh, completed)
- Optimization of the Tilt and Azimuth Angle to produce maximum power in Karachi (Syed Umair Hasan Kazmi, completed)

- Energy Harness using animal waste: a case study of Karachi (Syed Talha Ahmed Qasmi, completed)
- Frequency Domain micromechanical finite element analysis of viscoelastic particulate composites (Mr. Wajahat Hussain, completed)
- Experimental Investigation of solar panel cooling with phase change material (Mr. Muhammad Farhan, completed)

PROFESSIONAL TRAININGS

- Attended Training on “HEC NATIONAL UNIVERSITY RANKING-2023” in August 2023.
- Attended 17th World Wind Energy **Conference** and Expo 2018 in November 2018.
- Attended **Workshop** on “Statistical Testing”, organized by Academic Consultant at AUT in 2016.
- Attended **Conference** on “Energy Conference - Roadmap for the Future!” organized by ASHRAE Pakistan Chapter in May 2012.
- Attended **Conference** on “Developing Energy Codes leading towards high performance buildings in Pakistan”, organized by ASHRAE Pakistan Chapter in June 2011.
- Attended **Conference** on “5th International Conference on Alternative Energy & Power” in 2011.
- Attended **Training** on “Training of Dealer management System”, in 2011.
- Attended a **course** on “Occupational Health and safety” in 2011.
- Attended **workshop** on ASHRAE Learning Course titled “Fundamental of Thermodynamics and Psychrometrics” with collaboration of ASHRAE Pakistan Chapter in April 2007
- Attended **workshop** on ASHRAE Learning Course titled “Fundamental of electrical systems and buildings energy use” with collaboration of ASHRAE Pakistan Chapter in April 2007
- Attended **workshop** on ASHRAE Learning Course titled “Fundamental of HVAC control systems” with collaboration of ASHRAE Pakistan Chapter in April 2007
- Attended **workshop** on ASHRAE Learning Course titled “Fundamental of ANSI/ASHRAE/IESNA Standard 90.1-2004” with collaboration of ASHRAE Pakistan Chapter in April 2007
- 40 days **Internship** at Karachi Electric Supply Corporation (KESC) in 2004.

PROFESSIONAL AFFILIATIONS AND MEMBERSHIPS

1. Member of Pakistan Engineering Council (PEC) (Life Time Member)
2. Member American Society of Heating, Refrigeration and Air-conditioning Engineers (ASHRAE)
3. Member American Society of Mechanical Engineers (ASME)
4. Member Pakistan HVACR Society (Life Time Member)
5. Member of Institution of Engineers Pakistan (IEP) (Life Time Member M-21495/KAR-3830)

REFERENCES:

1. **DR. TIMOTHY ANDERSON (PH.D)**
ASSOCIATE PROFESSOR/ HONORARY RESEARCH ASSOCIATE
VICTORIA UNIVERSITY OF WELLINGTON, NEW ZEALAND
EMAIL: tim.anderson@vuw.ac.nz
2. **DR. HAIDER ALI (PH.D)**
ASSOCIATE PROFESSOR
NED UNIVERSITY OF ENGINEERING AND TECHNOLOGY
EMAIL: haider.ali@neduet.edu.pk
3. **Dr. Maaz Akhtar (PH.D)**
ASSOCIATE PROFESSOR
IMAM MUHAMMAD IBN SAUD ISLAMIC UNIVERSITY, RIYADH, KSA.
EMAIL: maakhtar@imamu.edu.sa