Email: kashif.Irshad@kfupm.edu.sa
Contact: +966-547854711

Dr. Kashif Irshad

Research Engineer III/ Assistant Professor

Interdisciplinary Research Center for Renewable Energy and Power Systems (IRC-REPS)
King Fahd University of Petroleum & Minerals, Saudi Arabia

Executive Summary:
Over seven years of experience with real scale demonstration projects in the fields of building integrated photovoltaics, cold thermal energy storage, phase change heat transfer, nanomaterials, and thermoelectric cooling. Thermal comfort analysis of occupants in both awake and sleep states using novel building dynamic variations. Integrating machine learning and IoT concepts into the design and analysis of thermal systems enabling smart, fast, and robust sustainable solutions. Developing research proposals (both fundamental and industrial client proposals), as well as published research data in the form of research articles and patent applications. Development of new courses and short courses. Master's and undergraduate students training in prototyping, simulation, numerical and experimental analysis.

Education:

- ❑ PhD Mechanical Engineering [Universiti Teknologi PETRONAS, Malaysia, 2016]
- ❑ M.Tech Mechanical [Aligarh Muslim University (AMU), INDIA, 2011]
- ❑ B.Tech Mechanical [AMU, INDIA, 2008]

Distinguished Projects

- *Project title* "Performance investigation of Photo Thermoelectric Air-conditioning system (PTE-AC) for self-sustainable building" funding by *DSR KFUPM*, Dhahran, Saudi Arabia, Role: *PI*.
- *Project title* "Study of novel thermoelectric air cooling/heating system for sustainable building development" funding by *DSR King Khalid University*, Abha, Saudi Arabia, Role: *PI*.
- *Project title* "Solar photovoltaic powered phase change material thermal storage system for air conditioning system" funding by *IRC-REPS, KFUPM*, Dhahran, Saudi Arabia, Role: *PI*.
- *Project title* "Homeostasis control of building environment using Thermoelectric, phase change and photovoltaic system" funding by *DSR King Khalid University*, Abha, Saudi Arabia, Role: *Co-PI*.
- *Project title* "Evaluation of effect of climate change on soil erosion, evapotranspiration and energy consumption for different geographical regions" funding by *DSR King Khalid University*, Abha, Saudi Arabia, Role: *Co-PI*.
- *Project title* "Synthesis of hierarchical porous and hollow MgO microspheres for solar energy storage" funding by *DSR KFUPM*, Dhahran, Saudi Arabia, Role: *Co-PI*.
- *Project title* "Solar PV Module End-of-Life Dispose" funding by *IRC-REPS, KFUPM*, Dhahran, Saudi Arabia, Role: *Co-PI*.

Research Summary

- Number of Published Papers: 45
- Citations : 601
- H-Index : 13
- Number of Patents : 3
- Book Chapters: 6
- Article Reviewed (Elsevier, Springer, MDPI): 235

Award and Recognitions

- Guest Editor MDPI , Polymers , Impact Factor: 4.3, Ranking Q1.
- Gold, 25th International Invention & Innovation Exhibition (ITEX), Malaysia on product entitled 'Photo thermoelectric air duct system'.
- Silver, 27th International Invention & Innovation Exhibition (ITEX), Malaysia on product entitled 'Solar Thermoelectric Air Conditioning System'.

Skills and Expertise

- Renewable system, HVAC, Photovoltaic, Sustainable Building and Thermofluids ;
- Designing, Computing, Simulation & Modelling by ANSYS, Energy Plus, Solid works, Auto CADD and TRNSYS;
- Prototyping, Experimental Analysis and Environmental Assessment;
- Thermal comfort, Energy Management, Life cycle cost analysis and Energy Efficiency;
- Smart system design by IoT and Machine learning;
- Phase Change Material, Thermoelectric, and Nanomaterials.