

## RESUME OF DR. AHMAD FAIZAN SHERWANI



**Designation:** Associate Professor, Mechanical Engineering, F/O Engineering & Technology, Jamia Millia Islamia. New Delhi.

### **Research & Development:**

(i) **Developed** “Solar Energy lab in the Dept of Mechanical Engineering, JMI.

(ii) **Sanction of DST sponsored project (worth Rs. 50 lakh)** on Bulk Hetrojunction Hybrid solar cells based on perovskite Photo-active layer.

**Research Interest:** Thermal Engineering, Renewable energy

**Doctoral Thesis Supervised: ONE**

**Topic:** Thermodynamic Analysis of Solar Driven Organic Rankine Cycle.

**Research Scholar:**Dr. Deepak Tiwari

**Doctoral Theses under supervision:**

The following students are pursuing their Ph.D. in the area of Thermal Engineering

Name of the Student	Topic
Mohd. Muqem	Improving diesel engine performance and exhaust emission by optimizing various parameters of air supplied from turbo charger
Deshdeep Gambhir	Thermodynamic Analysis of Solar Driven Refrigeration Cycle
Mohd. Waseem	Design and Development of Solar Powered Assisted Hybrid Vehicle
Rohit Singh	Reliability Analyses of Mechanical System Design.
Mohd.Zahid	CFD Analyses of Multi Cylinder Flow.
Ruchi Yadav	Performance study of Hybrid PV/solar concentration system coupled with Rankine cycle for power generation.

**M. Tech. Dissertation Supervision:** - 1 (Comparative Analysis of the Performance and Emissions Characteristics of a CI Engine Operated with Different Blends of Biodiesel Derived from Mahua Oil and Waste cooking Oil)

**B. Tech. Project Supervision:** – More than 10 (In the Area of Thermal Engineering).

### **Publications:**

#### **International Journals:**

Published more than 30 Research Papers So Far.

#### **Recent Publications**

1. Energy and exergy analysis of solar driven recuperated organic Rankine cycle using glazed reverse absorber conventional compound parabolic concentrator (GRACCPC) system. Solar Energy 2017; Elsevier
2. Thermodynamic analysis of low-grade solar heat source-powered modified organic Rankine cycle using zeotropic mixture (Butane/R1234yf). International journal of ambient energy 2017 , Taylor and Francis.
3. Grey relational analysis coupled with principal component analysis for optimization of the cyclic parameters of a solar-driven organic Rankine cycle. Grey Systems: Theory and Application, 2017, Emerald
4. Thermodynamic and multi-objective optimization of solar driven organic Rankine cycle using zeotropic mixtures. International journal of ambient energy, 2017, Taylor and Francis

5. Thermo-economic and multi-objective optimization and comparisons of low grade solar heat source powered saturated and superheated organic Rankine cycle using butane/R1234ze. Renewable and sustainable energy, 2017, American Institute of Physics.
6. Application of the Taguchi based entropy weighted TOPSIS method for optimisation of diesel engine performance and emission parameters, Int. J. Heavy Vehicle Systems, 2017, Inderscience
7. "Optimization of Diesel Engine Input Parameters for Reducing Hydrocarbon Emission and Smoke Opacity Using Taguchi Method and Analysis of Variance (ANOVA)" Energy & Environment, 2017, Sage
8. Taguchi-based combined grey relational and principal component analyses for multi-response optimization of diesel engines, Grey Systems: Theory and Application, 2017 Emerald.
9. Life cycle assessment of solar PV based electricity generation systems: A review, RSER, 2010, Elsevier.
10. Life cycle assessment of 50 kWp grid connected solar photovoltaic (SPV) system in India. International Journal of Energy & Environment. 2011.
11. Thermodynamic analysis of solar power organic Rankine cycle based on experimental data. International journal of ambient energy, 2018, Taylor and Francis.
12. Optimization and thermo-economic performance analysis of organic Rankine cycles using mixture working fluids driven by solar energy. Energy SOURCES, Part A: Recovery, Utilization, and Environmental Effects, 2018, Taylor and Francis
13. Optimization of diesel engine input parameters for reducing hydrocarbon emission and smoke opacity using Taguchi method and analysis of variance. Energy and Environment, 2018, SAGE.
14. Optimization of diesel engine input parameters running on Polanga biodiesel to improve performance and exhaust emission using MOORA technique with standard deviation. Energy SOURCES, Part A: Recovery, Utilization, and Environmental Effects, 2018, Taylor and Francis.