

Research publications of Mechanical Engg department:

The faculties and students of mechanical department are actively engaged in Research and development activities. Following is the list of overall contributions.

INTERNATIONAL JOURNALS:

- Gupta KK, Rehman A, Sarviya RM. **Bio-Fuels for the Gas Turbine: A Review. Renewable and Sustainable Energy Reviews**, 2010; 14(9), 2946-2955. (ELSVIOR)
- Gupta KK, Rehman A, Sarviya RM. **Evaluation of Soya Bio-diesel as a Gas Turbine Fuel.** Iranica Journal of Energy & Enviornment. 2010; 1(3): 205-210.
- Gupta KK, Rehman A, Sarviya RM. **Characterization of Karanj bio-diesel for Gas Turbine Applications.** International Journal of Engineering Research and Industrial Applications 2010; 3 (III) : 287-297.
- A.P. Singh, O.P. Singh, Saket B.S.Pandey, Antim Rewapati, Pratik Sharma. **“Computational Analysis of Supersonic Combustion with Swept Ramp Injection Using K-ε Turbulence Model”**, Elixir International Thermal Engg. 72 (2014) 25867-25873,26 July 2014.
- AP Singh, Saket B.S. Pandey, Pratik Sharma,,”**Analysis of Supersonic Flows in the De-Laval Nozzle at 2.1 into A Suddenly Expanded Duct at L/D=2with Cavity Aspect Ratio 1 Using CFD”** IJAETech International Journal, Vol.1, No. 1. Oct.2014.
- A.P. Singh, Saket B.S.Pandey, Antim Rewapati. **“Computational Analysis of De Laval Nozzle into A Suddenly Expanded Duct”** IJAETech International Journal, Vol.1, No.1, Oct.2014.
- A.P. Singh, K.M. Pandey, Surendra yadav **“Computational analysis of isolator for de-laval nozzle for supersonic flow”** IJAETech International Journal, Vol.1, No.1, Oct.2014.

INTERNATIONAL CONFERENCES:

- Gupta KK, Rehman A, Sarviya RM. **Analysis and Characterization of Biodiesels for the Gas Turbine.** XIX ISAF International Symposium on Alcohol Fuels, Verona Italy, During Oct 10-14, 2011.
- Gupta KK, Rehman A, Sarviya RM. **Feasibility of Jatropha bio-diesel for the Gas Turbine.** International Conference on Energy Engineering, Pondicherry Engineering College, Puducherry. January, 2009.
- Gupta KK, Rehman A, Sarviya RM. **Effect of alternative fuels and operating conditions on the performance and emissions of a Gas Turbine.** 15th International Conference on New Horizons of Mechanical Engineering, Rajiv Gandhi Technological University, Bhopal , during Jan 18- 20th March, 2008.
- A.P. Singh, O.P. Singh, Antim Rewapati, Akshay sangamnerkar, **“Design analysis and Fabrication of electric bicycle and recover energy by different methods”** International Conference on Advances in Mechanical Engineering, Energy System and Sustainability (ICAMES-2014), 22-23 December, 2014 in LNCT Gwalior.
- A.P. Singh, Shantanu Roy, Pratik Sharma, Moin Khan, **“Numerical Analysis of heat Exchanger by fluent using K- ϵ turbulence model”** International Conference on Advances in Mechanical Engineering, Energy System and Sustainability (ICAMES-2014), 22-23 December, 2014 in LNCT Gwalior.
- A.P. Singh, O.P. Singh, Saket B.S.Pandey and Gaurav Patel, **“Numerical analysis of S.I. engine Carburetor at different angles of throttle valve”** International Conference on Advances in Mechanical Engineering, Energy System and Sustainability (ICAMES-2014), 22-23 December, 2014 in LNCT Gwalior.

NATIONAL CONFERENCES:

- Gupta KK, Rehman A, Sarviya RM. **Inlet air cooling – an effective method for performance enhancement in Gas Turbine.** National Conference on “Recent Trends & Challenges in Mechanical Engineering, KITS, Nagpur, during 5-6th October, 2009.
- Presented a paper “**Bio-fuels as diesel substitute – Problems and possible Solution**”, in the All India Seminar on “**Development of Green Fuels for Energy Security & Environment Protection**” organized by IES, IPS Academy, Indore during September 2009.
- Presented a paper “**Latest Developments in Hybrid Vehicle**” in a National Conference organized by Institute of Technology, Guru Ghansi Das University, Bilaspur (C.G.) in Jan 2007.
- Presented a paper “**Refrigerant R-152a an environment friendly alternative to R-134a**”, in a National Seminar on “Eco-Friendly Technologies and Challenges for Mechanical Engineers”, at S.G.S.I.T.S. Indore (M. P.) Jan 2006.
- Presented a paper “**World Class Manufacturing- A winning concept in Indian context**”, in a National Seminar organized by Takshshila Institute of Engineering & Technology, Jabalpur (M.P.) April 2006.
- Presented a paper ‘**Pool boiling of Refrigerants on Horizontal Tubes**’, during XIII National Conference of Indian Society of Mechanical Engineers (ISME), at IIT Roorkee, Dec 2003.
- A. P. Singh, O.P. Singh, Saket Bihari Sharan Pandey, Gaurav Patel,. “**Analysis of Emission characteristics of Karanja Bio-Diesel at different loads**”, National Conference in CDGI Institute, Indore.Nov-2014
- A.P. Singh, O.P. Singh, Saket B.S. Pandey, , Gaurav Patel. “**Analysis Of A Helical Savonius Rotor At 45^o Twist Angle Using Fluent**” National Conference (NCIRE-2014) at MIST, Indore, Sept 2014.
- A.P.Singh, O.P. Singh, Antim Reawpati, S.B.S. Pandey, Pratik Sharma “**Performance Analysis of a shell and finned tube heat exchanger in the light of waste heat recovery**” National Conference (NCIRE-2014) at MIST, Indore, Sept 2014.
- A.P. Singh and O.P. Singh. Prateek Sharma, Nishant Moona, S.B.S.Pandey. “**Analysis of combined Savonius -Darrieus and Helical Savonius wind rotor using ANN**” National Conference (NCIRE-2014) at MIST, Indore, Sept 2014.

- A.P. Singh, O.P. Singh. Antim Rewapati. **“Perform two-dimensional modeling and simulation of the performance of combined two bucket savonius and two-bladed Darrieus rotor”** National Conference (NCIRE-2014) at MIST, Indore, Sept 2014,
- A. P. Singh Saket Bihari Sharan Pandey, Pratik Sharma, **“ Analysis of Engine Performance of Karanja Bio-Diesel at different loads”** National Conference (NCIRE-2014) at Patel group of Institution , Indore, 31st oct 2014 -01 nov 2014.