

**Department of Mechanical, Automobile and Production & Industrial
Engineering**

Delhi Technological University, Bawana Road, Delhi-110042

SCHEDULE FOR

**“INTERNATIONAL CONFERENCE on
RECENT ADVANCES in MECHANICAL ENGINEERING”**

(14th & 15th October 2016)

Venue: Senate Hall

Chairman: Prof. R. S. Mishra,

Vice Chairman :Prof. Samsher

Organizing Secretary: Dr. Amit Pal

Joint Organizing Secretary Dr. Raj kumar Singh Vijay Gautam Girish Kumar Md. Zunaid

Day 1: 14th October 2016

09:30-10:10 AM	Registration
10:00-10:15 AM	Lighting of Lamp and national anthom
10:15-10:45 AM	Floral welcome of the guests. Introduction of the programme by Dr. Amit Pal Inaugural address by the Chief Guest Address by the Pro.VC, DTU, Prof. S.K Garg Address by the VC, DTU, Prof. Yogesh Singh Vote of thanks by by Prof. R. S. Mishra, H.O.D, MED, DTU Shri Vijay Gautam
10:45-11:00 AM	High Tea
Key note lectures (11:00 AM- 2:00 PM)	
2:00 - 3:00 PM	Lunch
3.00 - 4:30 PM	Technical Session T1 - Thermal Engineering 38 Mohammad Zunaid, Md. Gulam Mustafa and Naushad Ahmad Ansari Numerical Analysis of Wind Turbine Blade at Different Angle of Attack and Reynold Numbers Using Ansys 70 Aseem Dube Development of Polynomials for the Thermodynamic Properties of Refrigerant R-134A 106 Dheeraj Kumar Shrivastav A Review of Solar Energy Utilization System 88 Sunny Chandra and Dr. Om Prakash THD Heat Transfer in Microchannel Heat Sink: Review 23 Divyaj Shah and Ketaki Godbole Numerical analysis of forced convection in a lid driven cavity with discrete heat sources moving along the bottom wall 55 Manjunath K Thermoeconomic comparative analysis of constructal and conventional heat Exchangers

<p>3:00 - 4:30 PM</p>	<p>79 Abhishek . and Rajesh Kumar Comparative Analysis of Wind Turbine Power Generation for Different Turbine Rotors</p> <p>13 Vikrant Mishra and Mrs. Kiran Pal Mathematical Analysis of exhaust based Thermoelectric Generator</p> <p>Technical Session P1 - Production & Industrial Engineering</p> <p>22 Sandeep Mathur, V K Mittal, Nitin Kumar Upadhye, Vipul Mathur and Kshitij Mathur Analysis of the Merits of Hot Runner system over Cold Runner System in Moulding Technology</p> <p>44 Anand Dhruv and Kintu Patel Recent Research development in Micro Forming</p> <p>59 Vaibhav Chandra, Umesh Khandey, Sudarshan Ghosh and P.V Rao Modeling and Analysis of Machining Parameters on Surface Roughness and Cutting Force in Finish Dry Hard Turning (FDHT) of AISI D2 Tool Steel by RSM Approach</p> <p>78 Vijay Gautam and Jitender Singh Experimental Studies And Fe-Simulations On Springback In U-Bending Of Deep Draw Quality Steel Sheet</p> <p>82 Pankaj Kumar Sharma, Vijay Gautam and Atul Agrawal Optimization of EDM Process Parameters with Al-8% SiC Composite Produced by Stir Casting Route</p> <p>85 Prahlad Tewari, Vijay Gautam and D Ravi Kumar Formability Characterisation Of AISI202 Stainless Steel</p> <p>86 Manoj Kumar, Suresh Kumar, Vijay Gautam and Prahlad Tewari Experimental and Numerical Investigations on formability of AA1200</p> <p>41 Vijay Gautam, Rohit Shukla, Jitendra Singh and D. Ravi Kumar Effect of Grain Size on Spring Back in V-bending of Interstitial Free Steel</p> <p>27 Ravinder Kumar, Udit Kukreja and Sahil Joshi An Empirical study on application of Information and Communication Tools (ICT) in Indian SMEs</p>
	<p>Tea Break</p>
<p>4:30 -6: 00 PM</p>	<p>Poster Session 1 - Thermal Engineering</p> <p>12 Amrik Singh TAG's transesterification for biodiesel a review</p> <p>14 Vikrant Mishra, Manisha Singh and Amit Pal Optimization of solar assisted production of biodiesel from Cotton seed oil</p> <p>16 Manisha Singh, Amit Pal and R.S. Mishra Biodiesel Production: A Review on Innovative Techniques</p> <p>37 Onkar . and Amit Pal Optimisation of Ultrasound Assisted Enzymatic Interesterification Biodiesel Production by Taguchi Methods</p> <p>40 Mohit Kumar and Amit Pal Effect of Diethyl Ether and Biodiesel Blend on the Performance and Emissions from a Diesel Engine</p> <p>46 Ashok Kumar Yadav, M. Emran Khan, Amit Pal and Alok Manas Dubey Storage Stability of Biodiesel: A Review</p> <p>52 Vikram Pandey, Sachin Singh, Suyash Rai, Abhinav Verma and Ashok Kumar Yadav Performance Analysis of Solar Air Conditioning: A Review</p> <p>57 Navendu Srivastava, Rashi Srivastava, Ravi Shekhar Singh and Ashok Kumar Yadav A Review on Zeolite - Water Adsorption Refrigeration System</p>

- 63 Neeraj Budhraj and Dr. Amit Pal
Production, utilization and performance of diesel-biodiesel-ethanol blends in IC engines.
- 81 Gurpreet Singh and Dr. Amit Pal
Key Technologies of using Hydrogen as a IC Engine Fuel in Indian Scenario
- 94 Kiran Pal and Naveen Kumar Garg
Fuzzy method for the Selection of Suitable Feed Stock for the production of Biodiesel
- 96 Kiran Pal, Tulika Srivastava and Manish Jain
Clean India Mission: Issues and Challenges
- 47 Balbir Singh and Dr. Amit Pal
Catalysts used in Biodiesel Production
- 11 Sanjay Mohite, Sudhir Kumar, Sagar Maji and Amit Pal
Biodiesel Feedstock in India: A Review

4:30 -6: 00 PM

Poster Session 2 - Design & Production Engineering

- 90 Dr. L. N Das and Raj Singh Poster D
Engineering Mathematical assessment of buckling effect on the mechanical pumps column-beam structure during crude deportation through the bore well
- 101 Surabhi Lata, Nitish Kumar Verma, Chetan Singh, Roop Lal and Ramakant Rana
Review on morphology and microstructure analysis of MgO reinforced Al Composites
- 91 Akshay Kaushika and Raj Kumar Singh
Design of a Mechanical Hexapod using Klann Mechanism
- 24 Lalit Kumar Sharma
Application of design of experiment technique for optimization of machining process parameters: A Review
- 33 Dr. Ravinder Kumar, Shikhar Saxena and Ashish Kumar Aggarwal
An Empirical study on Problems & Risks faced by Indian Small & Medium-Sized Enterprises
- 65 Salman Javed, Farhan Javed, Taha Bilal, Samsher Gautam and Tarun Mehra
Review of Formula One Aerodynamic Devices
- 51 Aditya Natu and Dr. T. Moasunep Jamir
Go-Kart Chassis Analysis: Design Methodology Integrating Revolutionary Safety Features
- 95 Ramakant Rana, Ravinder Walia and Manik Singla
Effect of Friction Coefficient on EN-31 with different pin materials using pin-on-disc apparatus
- 7 Navriti Gupta Poster P
Review of Tool Coatings in Machining
- 18 Sumit Joshi, Narayana Yuvaraj, Rajiv Chaudhary and Ramesh Chandra Singh
Fabrication of Magnesium based Metal Matrix Composites Through Friction Stir Processing – A Review
- 99 Nitesh Kumar and Manoj Kumar
Experimental Assessment of Waste vegetable oil as alternative dielectric fluid in Electric Discharge Machining
- 105 Navriti Gupta and Pushpendra Yadav
Overview of Carbon Nano Tubes
- 68 Prashant Kumar Singh and Saurabh Agrawal
Sustainable Manufacturing System: Literature review
- 100 Suresh Kumar, Manoj Kumar, Nitesh Kumar, Sumit Jain and Preety Rani
Optimization of Process Parameters in WEDM By Using Taguchi Method

Day 2: 15th October 2016

10:00- 11:30AM Technical Session T2- Thermal Engineering

- 45 Nitesh Bansal
Effects of Cetane Improver on Diesel Engine Performance and Emissions
- 108 Amrik Singh
Engine performance parameter and combustion characteristics for biodiesel:
a review
- 107 Janardan Prasad Kesari
Current World and Indian Energy Scenario: The Challenges of Achieving 175 GW
of Renewable Energy by 2022
- 58 Siddharth Srivastava, Pragya Sharma, Ashok Kumar Yadav and Gaurav Kanaujia
Application of Additives to Improve the Performance of Biodiesel Fueled C.I.
Engine: A Review
- 61 Hm Cho and Bhupender Chauhan
Jatropha biodiesel combustion study
- 32 S Lalhriatpuia, Kunal Kumar Bose and Diwakar Gurung
Performance Analysis of Biogas run Dual- Fueled Diesel Engine
- 66 Kintu Patel and Anand Dhruv
Potential research study of utilizing water- diesel emulsion in diesel engine – An
overview
- 74 Priyanka Goyal, Santosh Sharma and Amit Pal
Experimental Investigation of the Performance Characteristics of a Spark Ignition
Engine

10:00- 11:30AM Technical Session D1 - Engineering Design

- 98 Shubham Srivastava and Raj Singh
CFD Analysis of Single Phase Turbulent Flow with Forced Convection Heat
Transfer inside a Circular Micro-channel
- 49 Mohammad Zunaid, Afzal Husain, Anant Jindal and Avinash Gupchup
CFD Analysis of wavy edge rectangular micro-channel heat sink at different
Reynolds number
- 75 Paras Kumar
Hydrodynamic Journal Bearing Performance : An Experimental and CFD
approach
- 102 Sushila Rani and Atul K Agrawal
Harmonic Analysis of First Stage IN738 Gas Turbine Blade
- 8 Kadir Ozdemir, Turker Temiz and Turker Temiz
Stress life fatigue approach for the design of automotive engine thermostat
- 34 Sanjay Singh Tomar and Mohammad Talha
Vibration Response of Finite element modeled FGM plate in thermal environment
- 103 Krovvidi Srinivas
Corrosion case study
- 42 Raj Kumar Singh, Mohammad Zunaid, Md. Gulam Mustafa and Jasmeet Singh
CFD Analysis and Optimisation of Operational Parameters for an F1 Racing Car's
Front wing to Maximize its Aerodynamic Performance

<p>12:00 -1:30 PM</p>	<p>Technical Session T3 - Thermal Engineering</p> <p>10 R S Mishra Effect of Variation of High temperature R1234ze condenser temperature and Intermediate R1234yf Temperature Cascade condenser and Low temperature evaporator circuit in three stage Cascade refrigeration systems</p> <p>19 Abhishek Verma, Akhilesh Arora and R.S. Mishra Energy Analysis and Optimization of Flat Pate Collector Area of a Solar Driven Water-Lithium Bromide Half Effect Vapour Absorption Refrigeration System for a given Cooling load</p> <p>30 Rs Mishra Thermoeconomic Insulation For Environmental Sustainability</p> <p>31 Rs Mishra Analysis And Optimization Of Thermal Insulations</p> <p>39 Naveen Solanki, Akhilesh Arora and Raj Kumar Singh Performance evaluation of fouled evaporator vapour compression system</p> <p>53 Ranjeet Jha and Durgesh Sharma Second Law Analysis of Different Desiccant Cooling Cycles</p> <p>71 Rajinder Singh and Surendra Kachhwaha Comparison of Cooling Duty and Pressure Drop of Green Secondary Refrigerant (Ice Slurry) with Chilled Water in a Plate Heat Exchanger</p> <p>83 Professor Rs Mishra Search for Ecofriendly Alternatives Refrigerants in Vapour Compression Refrigeration Systems for Reducing Global Warming and Ozone Depletion</p> <p>84 Professor Rs Mishra Search for Ecofriendly Alternatives Refrigerants in Vapour Compression Refrigeration Systems for Reducing Global Warming and Ozone Depletion</p>
<p>12:00 -1:30 PM</p>	<p>Technical Session D 2 - Engineering Design</p> <p>54 Sanjay Kumar and Vikrant Tiwari Evaluation of static fracture toughness (K_{Ic}) of Al2014-T6</p> <p>69 Sameen Mustafa and Ateeb Ahmad Khan Design of Gear Train for Speed Magnification using the Cumulative Effect of Compounded Sun-Planet Gear Train</p> <p>77 Vijay Gautam, Rakesh Singla and Sunil Kumar Design & Development of a Fixture to Study Biaxial Behavior of Engineering Materials in Tension</p> <p>92 Rajashekhar Sardagi Experiential Study of Two stroke Engine on Variation of Exhaust pipe diameter</p> <p>93 Jasminder Singh, Mudit Aggarwal and Prajay Lohani Automatic Turn-off Indicator System for Vehicle Safety in Two Wheelers</p> <p>89 Suyash Nigam and Rajkumar Singh Low-Cost Manufacturing And Implementation Of An Optimized Model of Horizontal Axis Hydrokinetic Turbine And Test Bed Assembly</p> <p>43 Naveen J and Veerendra Kumar A N Mechanical Characterization of Epoxy Based Thermoses Polymer Composite with sugar cane trash natural filler</p>
	<p style="text-align: center;">Lunch Break</p>

<p>3:00 - 4:30 PM</p>	<p>Technical Session T4 - Thermal Engineering</p> <p>97 Sanjay Mohite, Sudhir Kumar, Sagar Maji and Amit Pal A Feasibility Study of Potential Biodiesel Feedstock in Indian Sub-Continent</p> <p>21 Richa Srivastava, Kumar Gaurav and Pritam Babu Sharma Process Optimization of Transesterification for Biodiesel Production From Jatropha Oil</p> <p>64 Naveen Kumar Garg and Dr Amit Pal Kusum A Potential Non Edible Feed Stock for Biodiesel Production in India</p> <p>5 Onkar . and Amit Pal Ultrasound Assisted Biodiesel Synthesis via Enzymatic Interesterification</p> <p>15 Manisha Singh, Amit Pal and R.S. Mishra Experimental Analysis of solar assisted biodiesel production</p> <p>87 Shiv Ray and Om Prakash Bio-diesel derived from Waste Vegetable Oil as an alternative fuel for Diesel Engine: A review</p> <p>20 Akash Deep, Sarbjot Singh Sandhu and Subhash Chander Comparative performance, emissions and combustion analysis of single cylinder CI engine fuelled with biodiesel derived from castor oil</p> <p>48 Balbir Singh and Amit Pal Biodiesel Production from Waste Cooking Oil (WCO) using Calcined Chalk as Heterogeneous Catalyst</p>
<p>3:00 - 4:30 PM</p>	<p>Technical Session P 2 - Production & Industrial Engineering</p> <p>50 Gaurav Khattar, Tushar Gupta and Girish Kumar Availability analysis of a mechanical system with load sharing arrangement using Semi-Markov approach</p> <p>2 N Yuvaraj and Vipin Dr Fabrication of Al6082/ZrO2 Surface Composite by Friction Stir Processing</p> <p>3 Nitin Sehra, Jasvinder Singh and Mohit Gaba Comparison of Micro-hardness in Dry and Thermal Assisted Machining on turning of EN8 Steel</p> <p>60 Dimple Bhandari Application of AMT IN Indian SMEs</p> <p>67 Pravin Kumar and Rajesh Kumar Singh Solving the vendor selection problem using fuzzy TOPSIS</p> <p>76 Dr. S.K Dhakad Characteristic Behavior effect of Al 6061 by TiC in Metal Matrix Composites (MMCs)</p> <p>56 Barvaliya Sagarkumar and Dr. Sudhakar Jindal Impact of Cutting Parameters on Tool Tip Temperature in Turning Operation</p> <p>36 Rohitash Singh and Ajai Jain Job Shop Scheduling Optimisation Using Genetic Algorithm</p>