**FORMAT FOR ANNUAL DEPARTMENT/CENTRE REPORT**

**(PERIOD: 1 APRIL 2018 – 31 MARCH 2019)**

1. **Year of Establishment of the Department /Centre: 1995**
2. **Academic Programmes Offered:**

Bachelor of Technology (BTech) in

* + 1. Mechanical Engineering

Master of Technology (MTech) in

(1) Machine Design,

(2) Fluid and Thermal Engineering,

(3) Manufacturing Science and Engineering,

(4) Computational Mechanics,

(5) Aerodynamics and Propulsion

Doctor of Philosophy (PhD)

1. **No. of Laboratories with brief introduction: (Total No: 15 + 14) Brief Description of each**

* Advanced Manufacturing Laboratory: Equipped with advanced equipments for manufacturing including micro-fabrication facility using CO2 Laser cutting technology.
* Strength of Materials Laboratory: Basically dedicated for doing all kinds of testing including tensile testing, fatigue testing, compressive testing, torsion testing, hardness testing, impact testing etc.
* Materials Science Laboratory: Dedicated for carrying out metallographic studies using highly precise microscope, XRD etc.
* Fluid Mechanics Laboratory: This lab has basic fluid mechanics set-up. The lab is equipped with different flow measuring set-ups such as venturimeter, orifice-plate, pitot tube, rotometer etc., where students can visualize the basic theory of working of the flow meter.
* Thermal Science Laboratory: This lab consists of heat exchangers, equipments for conducting experiments on conduction, convection and radiation, refrigeration systems etc. All these equipments facilitate learning of basic Thermodynamics and Thermal Engineering at undergraduate level.
* Turbo-machinery Laboratory: This lab has different tabletop model of pumps and turbines where students can study the performance characteristics of those machines. Students can strengthen their basic understandings of working and applications of these machines.
* IC Engine Laboratory: This lab is for both undergraduates and graduate students. Some of the experiments which are performed by under-graduate students are performance studies of both C.I. and S.I. engines, etc. Moreover studies on the calorific values, exhaust gas characteristics, extensive studies of bio-diesel with both engines are done by post-graduate students in their respective project works.
* Vibrations and Acoustics Laboratory: This lab demonstrates basic vibrational instruments to students at undergraduate level. Also provides facilities for measurement of frequency signals, rpm etc, and facilities for data-acquisition which are very much beneficial for research activities in the domain of vibrational analysis.
* Mechatronics and Robotics Laboratory: The Mechatronics and Robotics lab is equipped with various facilities to educate the students at the undergraduate and postgraduate levels. Most of the robotics activities are facilitated to students by this lab.
* Instrumentation and Control Laboratory: This lab performs calibration of pressure transducer/ gauge and other mechatronics apparatus, provides strain-gauge measurement facilities etc.
* Theory of Machines Laboratory: This lab consists of all basic equipments for understanding mechanisms, apparatus etc. at undergraduate level such as gyroscope, governor, jib-crane, screw jack, worm-wheel apparatus etc.
* Tribology Laboratory: Provides facilities for carrying out wear test of specimens of diff erent materials under the condition of with lubrication/without lubrication.
* CAD/CAM Laboratory: Specialized in extending computer-assisted software tools needed for design and analysis such as ABAQUS, ANSYS, Master CAM, Pro/E, ADAMS etc.
* Wind Tunnel Laboratory: Provides facilities for carrying out wind tunnel related experiments.
* 3D Printer Laboratory: Provides facilities for 3D printing.

In addition, 14 new laboratories have been built –

* Micro-machining lab
* Aerodynamics lab
* Electromechanics lab
* Fracture Mechanics and Composites Lab
* Welding lab
* Dynamics and Vibration lab
* Advance Mechatronics and Bio-materials lab
* Computation MD Lab
* Microfluidics Lab-1
* Microfluidics Lab-2
* Smart materials and structures lab
* CFD lab
* Gasification and Thermal Lab
* Hydraulic lab

1. **Major Equipment and Facilities acquired during 1 April 2018 – 31 March 2019:**
2. **Major Areas of Research and Development:**

#### Groupwise Research Areas are

**Fluids and Thermal Engineering**

* Computational methods for Incompressible flows
* DNS and LES of Turbulence
* Energy management and conservation
* High speed aerodynamics
* Interfacial heat and mass transport
* Metal hydride based thermal machines
* Micro and nano-scale thermal/fluid transport
* Micro-fuel cells
* Thermal aspects of biological systems
* Thermal radiation

**Machine Design Engineering**

* Acoustics
* Active Materials
* Composites
* Dynamics and Vibrations
* Finite Element Method and Analysis
* Fracture Mechanics and Design
* Mechatronics
* Micromechanics
* Nanocomposites
* Rolling Element Bearings Design and Analysis
* Smart Structures
* Tribology

**Manufacturing Engineering**

* Bio-MEMS
* Casting
* CAD/CAM/CIM
* Coating
* Composites
* Computer Application in Metal Forming
* Design and Manufacturing
* Electromagnetic pulse processing
* FEM, Neural Network
* Fuzzy Set Application
* Genetic Algorithms and Fuzzy logic in manufacturing
* Mechatronics
* Metal Forming
* Unconventional machining processes
* Welding of light weight metals
* Welding Process Monitoring and Control

1. **Major initiatives and breakthrough in Research and Development during 1 April 2018 – 31 March 2019:**
2. **Research Projects:**
3. **New Sponsored Projects (Total No: 14)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Principal Investigator | Name of Project | Sponsoring Agency | Amount Sanctioned (Rs. in Lakh) | Co-Investigator | Duration |
| Amaresh Dalal | Analysis of flow transitions, thermo-physical properties, materials testing and heat transfer coefficient in Supercritical Steam based open loop | DST under Clean Energy Research Initiatives | 33.7 | Prof. Gautam Biswas, Dr. Dipankar N Basu | 2023 |
| Amaresh Dalal | Development of Microbial Fuel Cells and theoretical modeling on the multiple effect of flow-materials in waste water bio-energy reactor | GITA-DST | 42.96 | Prof. Gautam Biswas, Dr. Vimal Katiyar, Dr. Chandan Mukherjee | 2021 |
| S Kanagaraj and S K Dwivedy | North East Centre for Biological sciences and Healthcare Engineering (NECBH) | DBT | 3735.28 | Prof. R. Swaminathan, Prof. S. Dandapat, Prof. Ashish Anand, HOD BSBE and HD Chemsitry, Dean R&D, Associat Dean R&D | 3 years |
| S Senthilvelan | Feasibiliy Evaluation of Powder Metallurgy Connecting Rod for Automotive Applications | DST | 47.65 | Prof P S Robi | 2 years |
| Manas Das | Fabrication of Prosthetic Implants and further Nanofinishing Using Magnetic Field Assisted Finishing (MFAF) Process | SERB, DST | 47.68 |  | 3 years |
| S Kanagaraj | Indigenous development of a suture mediated vascular closure device for closure of arterial access site to achieve instant hemostasis following catheter angiography and interventions | DBT | 34.264 | Dr.Ganesh Narayanan IITG, Dr. Akash Handique, Dr. Amit Malviya, Dr.Prajal Saikia NEIGRIHMS and Dr.Bhupen Sarma CVS | 2 years |
| S Kanagaraj | Development of new generation Acetabular Socket Linear and Femoral Head Prototypes with unique 3D microstructures and better fracture resistance for Osteoporosis and Osteoarthritis treatment | IMRPINT, MHRD | 30.26 | Prof. Bikramjit Basu, IISc, Prof. S. Senthilvelan, IITG, Prof. K. Balani, IITK,  Prof. Alok Dhawan, IITR, Mr. R. Joseph Bensingh, CIPET | 3 years |
| S Kanagaraj | An affordable lower limb prosthesis with polycentric knee joint, dynamic ankle joint and suction-suspension socket system having advanced features | IMRPINT, MHRD | 73.37 | Prof. Nelson Muthu | 3 years |
| Dipankar N Basu | Experimental & computational analyses of flow-induced heat transfer deterioration in supercritical natural circulation loop | DERB, DST | 47.26 |  | 3 years |
| Ganesh Narayanan | NewGen IEDC | DST |  | S. K. Dwivedy |  |
| Prof P Muthukumar | Metal hydride materials and systems for the increase of efficiency in renewable and hydrogen energy | BRICS Multilateral Research and Development Projects, DST | 36 | Dr Pankaj Kalita | 3 years |
| Prof P Muthukumar | DST – IIT Bombay Energy Storage Platform on Hydrogen | SERB, DST | 170 |  | 5 years |
| Prof P Muthukumar | Reversible Alkali Metal Based Hydrides for High Temperature Thermal Energy Storage | MES, DST | 76 |  | 3 years |
| Nelson Muthu | Computational and Experimental study of damage and failure in carbon/glass fiber reinforced composite materials | SERB, DST | 49.59 |  | 3 years |

1. **Ongoing Sponsored Projects (Total No: 11)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Principal Investigator | Name of Project | Sponsoring Agency | Amount Sanctioned (Rs. in Lakh) | Co-Investigator | Duration |
| Amaresh Dalal | Development of a General Purpose CFD Solver over a Hybrid Unstructured Grid | BRNS-DAE | 300.88 | Dr. Ganesh Natarajan, Dr. Nanda Kishore | 2019 |
| S Senthilvelan | Manufacturing Solutions for the Preparation of Siddha Medicines (Traditional Medicines Originated from Tamilnadu) | MHRD IMPRINT | 57.98 | Dr S Kanagaraj  Prof P S Robi  Prof . Kannan Pakshirajan  Prof G Pugazhenthi  Indian Institute of Technology Guwahati  Prof R Gnanamoorthy  Professor , Indian Institute of Technology Madras  Dr P Selva Shanmugam( MD Siddha), PhD  Siddha Consultant Physician,  Dr J Raamachandran  (Retd.) Professor Indian Institute of Technology Madras  Prof R A Kalaivani  Vels University Chennai 600117 |  |
| Sachin Singh Gautam | Development of A Nonlinear Finite Element Based Framework for Elasto-plastic Contact Problems | VSSC, ISRO | 12.5 |  | 2 Years |
| Sachin Singh Gautam | Numerical Methods For Dynamic Analysis of Adhesive Contact Problems | SERB, DST | 32.26 |  | 3 Years |
| Vinayak Kulkarni | Compressible Flow solver with Immersed Boundary Approach | Respond, ISRO | 16.32 | Niranjan Sahoo and Ganesh Natarajan | 1 year |
| Poonam Kumari | Analytical solution for boundary layer stresses in piezoelectric plates with  longitudinally functionally graded materials | SERB, DST | 23.96 |  | 3 years |
| Prof P Muthukumar | Development of High Temperature Thermal Energy Storage System for Solar Thermal Power Plant | SERB, DST | 150 | Dr R Anandalakshmi, Chemical Engg | 3 years |
| Prof P Muthukumar | Design and development of energy efficient and environment friendly LPG and Kerosene cooking stoves with Porous Radiant Burners for household and large-scale cooking applications | IMRPINT, MHRD | 160 |  | 3 years |
| Prof P Muthukumar | Design, development and demonstration of indigenous hydrogen storage and fuel cell system for mobile and stationary applications of 5 kW capacity | IMRPINT, MHRD | 48 |  | 3 years |
| Pranab K Mondal | Experimental investigation on the roughness-surface wettability coupling in capillary filling in microchannel | SERB, DST | 66.07 | Prof. Gautam Biswas | 3 years |
| Manmohan Pandey | Investigations on Hydroodynamics, Flow Regimes and Heat Transfer Characteristics of Flow Boiling in Mini- and Microchannels | SERB, DST | 59 | Prof. Anugrah Singh (Chemical Engineering) | 3 years |

**c) Completed Sponsored Projects (Total No:……)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Principal Investigator | Name of Project | Sponsoring Agency | Amount Sanctioned (Rs. in Lakh) | Co-Investigator | Duration |

1. **Consultancy (Total No: 3)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Principal Investigator | Name of Project | Sponsoring Agency | Amount Sanctioned (Rs. in Lakh) | Co-Investigator | Duration |
| S Kanagaraj | Design of a Food Ecology System (FES) for Pig feed | GNRC Limited | 11.68 | Prof.S.K.Dwivedy, Prof.P.S.Robi , Prof.P. Muthukumar, Prof. R. Ganesh Narayanan, Prof. Poonam Kumari, Prof. Deepak Sharma | 6 months |
| Prof P Muthukumar | Design and development of metal hydride based hydrogen purification system: | NTPC Ltd | 20.2 |  | 2 years |
| Nelson Muthu | Training on Creep and Thermal Fatigue | FCA Engineering Pvt. India Ltd. | 2.301 |  | 2 days |

1. **Research Publications**

**International and National Journal (PERIOD: 1 APRIL 2018 – 31 MARCH 2019)**

**Total No. of International Journal: ………………………….**

**Total No. of National Journal: ………………………………. 222 nos.**

**Format for submission of Research Publications/Journals**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sl. No. | Authors | Paper Title | Journal Name | Year | **Volume** | Issue Number  (If any) | Starting Page | Ending Page |
| 1 | Nath, B., Biswas, G., and Dalal, A. | Influence of electric field on deformation of a drop in shear flow | Physics of Fluids | 2019 | 31 | 4 | 042102-1 | 042102-13 |
| 2 | Deka, H., Biswas, G., Sahu K.C., Kulkarni, Y., and Dalal, A. | Coalescence Dynamics of a Compound Drop on a Deep Liquid Pool | Journal of Fluid Mechanics | 2019 | 866 |  | R2-1 | R2-11 |
| 3 | Deka, H., Tsai, P-H, Biswas, G., Dalal, A., Ray, B., and Wang, A-B. | Dynamics of Formation and Oscillation of Non-spherical Drops | Chemical Engineering Science | 2019 | 201 |  | 413 | 423 |
| 4 | Deka, H., Biswas, G., Chakraborty, S., and Dalal, A. | Coalescence Dynamics of Unequal Sized Drop | Physics of Fluids | 2019 | 31 |  | 012105-1 | 012105-17 |
| 5 | Bhardwaj, S., Dalal, A., and Mukherjee, P. P. | Mesoscale Understanding of Capillarity Driven Two-phase Flow in a Packed Bed Architecture | International Journal of Heat and Mass Transfer | 2019 | 136 |  | 116 | 127 |
| 6 | Parmananda, M., Dalal, A., and Natarajan, G. | Numerical appraisal of three low Mach number algorithms for radiative-convective flows in enclosures | Computers and Mathematics with Applications | 2019 | 77 | 8 | 2162 | 2181 |
| 7 | Manik, J., Dalal, A., and Natarajan, G. | A Parametric Study on the Droplet Detachment Process from the Ceiling Under the Effect of Gravity | Engineering Computations | 2019 | 36 | 2 | 445 | 465 |
| 8 | Randive, P., Dalal, A., and Mukherjee, P. | Probing the Influence of Confinement and Wettability on Droplet Displacement Behavior: A Mesoscale Analysis | European Journal of Mechanics, B/Fluids | 2019 | 75 |  | 327 | 338 |
| 9 | Nath, B., Raza, A., Sethi, V., Dalal, A., Ghosh, S., and Biswas, G. | Understanding Flow Dynamics, Viability and Metastatic Potency of Cervical Cancer (HeLa) Cells Through Constricted Microchannels | Scientific Reports | 2018 | 8 |  | 17357-1 | 17357-10 |
| 10 | Bhardwaj, S., Dalal, A., Mukherjee, P. P., and Biswas, G. | Analysis of Droplet Dynamics in a Partially Obstructed Confinement in a Three-dimensional Channel | Physics of Fluids | 2018 | 30 |  | 102102-1 | 102102-14 |
| 11 | Pandey, V., Biswas, G., and Dalal, A. | Effect of Surface Wettability and Electric Field on Transition of Film Boiling to Nucleate Boiling | Numerical Heat Transfer, Part A | 2018 | 74 | 3 | 1105 | 1120 |
| 12 | Pandey, V., Biswas, G., Dalal, A., and Welch, S.W.J. | Bubble Lifecycle During Heterogeneous Nucleate Boiling | ASME Journal of Heat Transfer | 2018 | 140 | 12 | 121503-1 | 121503-17 |
| 13 | Parmananda, M., Thirumalaisamy, R., Dalal, A., and Natarajan, G. | Investigations of Turbulence-radiation Interaction in Non-Oberbeck-Boussinesq Buoyancy-driven Flows | International Journal of Thermal Sciences | 2018 | 134 |  | 298 | 316 |
| 14 | Bhardwaj, S., and Dalal, A. | Sweeping of the Entrapped Fluid out of the Groove in a Three-dimensional Channel Using Lattice Boltzmann Method | European Journal of Mechanics, B/Fluids | 2018 | 2 |  | 328 | 339 |
| 15 | Kotoky, S., Dalal, A., and Natarajan, G. | Effects of Specularity and Particle-particle Restitution Coefficients on the Recirculation Characteristics of Dispersed Gas-particle Flows Through a Sudden Expansion | Advanced Powder Technology | 2018 | 29 | 10 | 2463 | 2475 |
| 16 | Borgohain, P., Arumughan, J., Dalal, A., and Natarajan, G. | Design and Performance of a Three-dimensional Micromixer with Curved Ribs | Chemical Engineering Research and Design | 2018 | 136 |  | 761 | 775 |
| 17 | Parmananda, M., Dalal, A., and Natarajan, G. | Unified Framework for Buoyancy Induced Radiative-convective Flow and Heat Transfer on Hybrid Unstructured Meshes | International Journal of Heat and Mass Transfer | 2018 | 126 |  | 908 | 925 |
| 18 | Nath, B., Biswas, G., Dalal, A., and Sahu, K. C. | Cross-stream Migration of Drops Suspended in Poiseuille Flow in the Presence of an Electric Field | Physical Review E | 2018 | 97 |  | 63106-1 | 63106-13 |
| 19 | Manik, J., Dalal, A., and Natarajan, G. | A Generic Algorithm for Three-dimensional Multi-phase Flows on Unstructured Meshes | International Journal of Multiphase Flow | 2018 | 106 |  | 228 | 242 |
| 20 | Thirumalaisamy, R., Natarajan, G., and Dalal, A. | A Charge-conservative Approach for Simulating Electrohydrodynamic Two-phase Flows Using Volume-of-fluid | Journal of Computational Physics | 2018 | 230 | 5 | 1939 | 1955 |
| 21 | Deka, H., Ray, B., Biswas, G., Dalal, A. | Dynamics of Tongue Shaped Cavity Generated During the Impact of High-speed Microdrops | Physics of Fluids | 2018 | 30 |  | 42103-1 | 42103-14 |
| 22 | Randive, P., Dalal, A., and Mukherjee, P. P. | Mesoscopic Modeling of Capillarity-induced Two-phase Transport in a Microfluidic Porous Structure | Transport in Porous Media | 2018 | 122 | 3 | 673 | 691 |
| 23 | Borgohain, P., Choudhary, D., Dalal, A., and Natarajan, G. | Numerical Investigation of Mixing Enhancement for Multi-species Flows in Wavy Channels | Chemical Engineering & Processing: Process Intensification | 2018 | 127 |  | 191 | 205 |
| 24 | Arnab Kr. De | A diffuse interface immersed boundary method for complex moving boundary problems | Journal of Computational Physics | 2018 | 366 |  | 226 | 251 |
| 25 | Arnab Kr. De, V. Eswaran, P. K. Mishra | Dynamics of plumes in turbulent Rayleigh-Benard convection | European Journal of Mechanics - B/Fluids | 2018 | 72 |  | 164 | 178 |
| 26 | Arup Nandy, C. S. Jog | Conservation Properties of the Trapezoidal Rule for Linear Transient Electromagnetics | Journal of Advances in Mathematics and Computer Science | 2018 | 26 | 4 | 1 | 26 |
| 27 | Arup Nandy, C. S. Jog | A monolithic finite-element formulation for magnetohydrodynamics | Sadhana: Indian Academy of Sciences | 2018 | 43 |  | 151 |  |
| 28 | P Paul, KSRK Murthy and D Chakraborty | A strain gage technique for mode I notch stress intensity factor of sharp V-notched configurations | "Theoretical and Applied Fracture Mechanics | 2018 | 94 |  | 57 | 70 |
| 29 | S Kirtania and D Chakraborty | Determination of Thermoelastic Properties of Carbon Nanotube/Epoxy Composites Using Finite Element Method |  | 2018 | 27 | 7 | 3783 | 3788 |
| 30 | Nada Barakat and Deepak Sharma | Modeling and Bi-Objective Optimization of Soil Cutting and Pushing Process for Bulldozer and its Blade | Journal of The Institution of Engineers (India): Series C | 2019 | 100 | 1 | 129 | 143 |
| 31 | Deepak Sharma and Nada Barakat | Evolutionary Bi-Objective Optimization for Bulldozer and its Blade in Soil Cutting | Journal of The Institution of Engineers (India): Series C | 2019 | 100 | 2 | 295 | 310 |
| 32 | Parth Paritosh, Bhaben Kalita and Deepak Sharma | A Game Theory based Land Layout Optimization of Cities Using Genetic Algorithm | International Journal of Management Science and Engineering Management | 2018 | Accepted, Available onlint |  |  |  |
| 33 | Nada Barakat and Deepak Sharma | Evolutionary Multi-Objective Optimization for Bulldozer and its Blade in Soil Cutting | International Journal of Management Science and Engineering Management | 2018 | Accepted, Available onlint |  |  |  |
| 34 | V. Pandey, G. Biswas and A. Dalal | Effect of surface wettability and electric field on transition of film boiling to nucleate boiling | Numerical Heat Transfer, Part A | 2018 | 74 |  | 1105 | 1120 |
| 35 | S. Bhardwaj, A. Dalal, G. Biswas and P. P. Mukherjee | Analysis of droplet dynamics in a partially obstructed confinement in a three-dimensional Channel | Physics of Fluids | 2018 | 30 |  | 102102-1 | 102102-14 |
| 36 | V. Pandey, G. Biswas, A. Dalal and S.W.J. Welch | Bubble Lifecycle During Heterogeneous Nucleate Boiling | Journal of Heat Transfer (ASME) | 2018 | 140 |  | 121503-1 | 121503-17 |
| 37 | B. Nath, G. Biswas, A. Dalal, and K. C. Sahu | Cross-stream migration of drops suspended in Poiseuille flow in the presence of an electric field | Physical Review E | 2018 | 97 |  | 063106-1 | 063106-13 |
| 38 | H. Deka, B. Ray, G. Biswas, and A. Dalal | Dynamics of tongue shaped cavity generated during the impact of high-speed microdrops | Physics of Fluids | 2018 | 30 |  | 042103-1 | 042103-14 |
| 39 | M. P. Borthakur, G. Biswas, and D. Bandyopadhyay | Dynamics of deformation and pinch-off of a migrating compound droplet in a tube | Physical Review E | 2018 | 97 |  | 043112-1 | 043112-9 |
| 40 | M.P. Borthakur, D. Bandyopadhyay and G. Biswas | Electric field mediated separation of water–ethanol mixtures in carbon nanotubes integrated in nanoporous graphene membranes | Faraday Discuss | 2018 | 209 |  | 259 | 271 |
| 41 | M. P. Borthakur, G. Biswas and D. Bandyopadhyay | Dynamics of drop formation from submerged orifices under the influence of electric field | Physics of Fluids | 2018 | 30 |  | 1 | 11 |
| 42 | M. P. Borthakur, G. Biswas and D. Bandyopadhyay | Dynamics of an arched liquid jet under the influence of gravity | European Journal of Mechanics / B Fluids | 2018 | 74 |  | 1 | 9 |
| 43 | S. Sajith, K.S.R.K. Murthy and P.S. Robi | A simple technique for estimation of mixed mode (I/II) stress intensity factors. | Journal of Mechanics of Materials and Structures | 2018 | 13 |  | 141 | 154 |
| 44 | S. Sajith, K.S.R.K. Murthy and P.S. Robi | Prediction of accurate mixed mode fatigue crack growth curves using the Paris’ law. | Journal of The Institution of Engineers (India): Series C. | 2019 | 100 | 1 | 165 | 174 |
| 45 | M.K. Hussian and K.S.R.K. Murthy | A point substitution displacement technique for estimation of elastic notch stress intensities of sharp V-notched bodies | Theoretical and Applied Fracture Mechanics | 2018 | 97 |  | 87 | 97 |
| 46 | P. Paul, K.S.R.K. Murthy and D. Chakraborty | A strain gage technique for mode I notch stress intensity factor of sharp Vnotched configurations | Theoretical and Applied Fracture Mechanics | 2018 | 94 |  | 57 | 90 |
| 47 | K. Saikia, M. Pandey, D.N. Basu | Numerical investigation of the effect of inlet subcooling on flow instabilities in a parallel channel natural circulation boiling system | Nuclear Engineering and Design | 2019 | 114 |  | 13 | 21 |
| 48 | A. Iqbal, M. Pandey | Effect of local thermophysical propertiesand flashing on ow boiling pressure drop in microchannels | International Journal of Multiphase Flow | 2018 | 106 |  | 311 | 324 |
| 49 | A. Iqbal, M. Pandey | A simple methodology to incorporateflashing and variation of thermophysical properties for flow boilingpressure drop in a microchannel | International Journal of Thermal Sciences | 2018 | 132 |  | 137 | 145 |
| 50 | K. K. Gajrani, S. Suresh, M. Ravi Sankar, | Environmental friendly hard machining performance of uncoated and MoS2 coated mechanical micro-textured tungsten carbide cutting tools | Tribology International | 2018 | Accepted for Publication |  |  |  |
| 51 | K. K. Gajrani, R. P. Reddy, M. Ravi Sankar | Tribo-Mechanical, Surface Morphological Comparison of Un-Textured, Mechanical Micro-Textured (MμT) and Coated MμT Cutting Tools during Machining | IMechE, Part J: Journal of Engineering Tribology | 2018 | Accepted for Publication |  |  |  |
| 52 | S. Singh, D. Kumar, M. Ravi Sankar | Viscoelastic medium modeling and surface roughness simulation of microholes finished by abrasive flow finishing process | International Journal of Advanced Manufacturing Technology | 2018 | Accepted for Publication |  |  |  |
| 53 | S. Singh, D. Kumar, M. Ravi Sankar, K. Rajurkar | Nanofinishing of Microslots on Surgical Stainless Steel by Abrasive Flow Finishing Process: Experimentation and Modeling | ASME Journal of Micro-Nano Manufacturing | 2018 | 6 | 2 | 21005-1 | 21005-12 |
| 54 | W. Jiru, M. Ravi Sankar, U. S. Dixit | Laser Surface Melting of Al-12Si-4Cu-1.2Mn Alloy | International Journal of Mechatronics and Manufacturing Systems | 2018 | Accepted for Publication |  |  |  |
| 55 | K.K. Gajrani, M.R. Sankar and U.S. Dixit | Environmentally friendly machining with MoS2 filled mechnaically micro-textured cutting tools | Journal of Mechnical Science and Technology | 2018 | 32 | 8 | 3797 | 3805 |
| 56 | K.K. Gajrani, R. P. K. Reddy and M.R. Sankar | Tribo-mechanical, surface morphological comparison of un-textured, mechanical micro-textured (MµT) and coated-MµT cutting tools during machining | Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology | 2018 | Available online | DOI: 10.1177/1350650118764975 |  |  |
| 57 | K.K. Gajrani, M.R. Sankar and U.S. Dixit | Tribological performance of MoS2-filled microtextured cutting tools during dry sliding test | ASME Journal of Tribology | 2018 | 140 | 2 | 021301-1 | 021301-11 |
| 58 | K.K. Gajrani, S. Suresh and M.R. Sankar | Environmental friendly hard machining performance of uncoated and MoS2 coated mechanical micro-textured tungsten carbide cutting tools | Tribology International | 2018 | 125 |  | 141 | 155 |
| 59 | Apurba Das, Anil Kumar Chikkala, Gyan Prakash Bharti, Rasmi Ranjan Behera, M. Ravi Sankar, Alika Khare, Pamu Dobbidi | Effect of Thickness on Optical and Microwave Dielectric Properties of Hydroxiapetite Films Deposited by RF Magnetron Sputtering | Journal of Alloys and Compounds | 2018 | 739 |  | 729 | 736 |
| 60 | Rasmi Ranjan Behera, M. Ravi Sankar, Prahlad Kumar Baruah, Ashwini Kumar Sharma, Alika Khare | Experimental investigation of nanosecond-pulsed Nd:YAG laser beam micromachining on 304 stainless steel | Journal of Micromanufacturing | 2018 | Available online | DOI: 10.1177/2516598418766937 |  |  |
| 61 | Rasmi Ranjan Behera, A. Das, D. Pamu, L.M. Pandey, M. Ravi Sankar | Mechano-tribological properties and in vitro bioactivity of biphasic calcuim phosphate coating on Ti-6Al-4V | Journal of the Mechanical Behavior of Biomedical Materials | 2018 | 86 |  | 143 | 157 |
| 62 | M. Ravi Sankar, V.K. Jain, J. Ramkumar, Shivesh K. Sareen, Sachin Singh | Medium rheological characterization and performance study during rotational abrasive flow finishing (R-AFF) of Al alloy and Al alloy/SiC MMCs | International Journal of Advanced Manufacturing Technology | 2018 | Available online | DOI: 10.1007/s00170-018-2244-y |  |  |
| 63 | Rasmi Ranjan Behera, Abshar Hasan, M. Ravi Sankar, L.M. Pandey | Laser cladding with HA and functionally graded TiO2-HA precursors on Ti-6Al-4V alloy for enhancing bioactivity and cyto-compatibality | Surface and Coatings Technology | 2018 | Available online | DOI: 10.1016/j.surfcoat.2018.08.044 |  |  |
| 64 | Anwesa Barman, Manas Das | Nano-finishing of bio-titanium alloy to generate different surface morphologies by changing Magnetorheological polishing fluid compositions | Precision Engineering | 2018 | 51 |  | 145 | 152 |
| 65 | Anwesa Barman, Manas Das | Magnetic field assisted finishing process for super-finished Ti alloy implant and its 3D surface characterization | The Proceedings of the Institution of Mechanical Engineers | 2018 | Available online | DOI: https://doi.org/10.1177/2516598418785506 |  |  |
| 66 | Anwesa Barman, Manas Das | Simulation and experimental investigation of finishing forces in magnetic field assisted finishing process | Journal of Materials and Manufacturing Processes | 2018 | 133 | 11 | 1223 | 1232 |
| 67 | Chandan Kumar, Manas Das, C.P. Paul, K.S. Bindra | Characteristics of ﬁber laser weldments of two phases (α+β) titanium alloy | Journal of Manufacturing Processes | 2018 | 35 |  | 351 | 359 |
| 68 | Chandan Kumar, Manas Das, C.P. Paul, K.S. Bindra | Comparison of bead shape, microstructure and mechanical properties of ﬁber laser beam welding of 2 mm thick plates of Ti-6Al-4V alloy | Optics and Laser Technology | 2018 | 105 |  | 306 | 321 |
| 69 | Anupam Alok, Manas Das | Multi-objective optimization of cutting parameters during sustainable dry hard turning of AISI 52100 steel with newly develop HSN2coated carbide insert | Measurement | 2018 | Available online | DOI: https://doi.org/10.1016/j.measurement.2018.10.009 |  |  |
| 70 | P. Dinesh, M.R. Behera, P.G. Ranjith, N. Muthu | An element-free Galerkin method using vertically averaged multiphase flow model for carbon sequestration | Computers and Geotechnics | 2018 | 105 |  | 195 | 210 |
| 71 | S. Brahmachary, G. Natarajan and N. Sahoo | On maximum ballistic coefficient axisymmetric geometries in hypersonic flows | Journal of Spacecraft and Rockets | 2018 | 55 |  | 518 | 522 |
| 72 | S. Brahmachary, G. Natarajan, V. Kulkarni and N. Sahoo | A sharp‐interface immersed boundary framework for simulations of high‐speed inviscid compressible flows | International Journal of Numerical Methods in Fluids | 2018 | 86 |  | 770 | 791 |
| 73 | N. Sahoo, V. Kulkarni and R. K. Peetala | Conjugate heat transfer study in hypersonic flows | Journal of the Institution of Engineers (India): Series C | 2018 | 99 | 2 | 151 | 158 |
| 74 | S. Agarwal and N. Sahoo | An experimental investigation towards calibration of a shock tube and stagnation heat flux determination | International Journal of Aerodynamics | 2018 | 6 | 1 | 18 | 40 |
| 75 | S. Sarma, N. Sahoo and A. Unal | Prediction of impulse heat load on thin film gauges through soft computing technique | Journal of the Institution of Engineers (India): Series C | 2018 | Article in Press | doi: 10.1007/s40032-018-0458-2 |  |  |
| 76 | S. Pandian, S. L. N. Desikan and N. Sahoo | Experimental investigation of starting characteristics and wave propagation from a shallow open cavity and its acoustic emission at supersonic speed | Physics of Fluids | 2018 | 30 |  | 16104-1 | 16104-11 |
| 77 | Sodhi GS, Jaiswala AK, Vigneshwaran K, Muthukumar P | Investigation of charging and discharging characteristics of a horizontal conical shell and tube latent thermal energy storage device | Energy Conversion and Management |  |  |  |  |  |
| 78 | Lakshmi DVN, Muthukumar P, Ekka JP, Nayak PK, Layek A | Performance Comparison of Mixed Mode and Indirect Mode Parallel Flow Forced Convection Solar Driers for Drying Curcuma Zedoaria, | J Food Process Engineering |  |  |  |  |  |
| 79 | Alok Kumar, Nithin N. Raju, Muthukumar P, Vivek Selvan P | Experimental Studies on Industrial Scale Metal Hydride based Hydrogen Storage System with Embedded Cooling Tubes | Int J Hydrogen Energy |  |  |  |  |  |
| 80 | Kiran Naik B, Muthukumar P | Experimental Investigation and Parametric Studies on Structured Packing chamber based Liquid Desiccant Dehumidification and Regeneration Systems. | Building and Environment |  |  |  |  |  |
| 81 | Man Mohana, Vinod Kumar Sharma, Anil Kumar E. Satheesh A, Muthukumar P. | Performance analysis of metal hydride based simultaneous cooling and heat transformation system | Int J Hydrogen Energy |  |  |  |  |  |
| 82 | Muthukumar P, Alok Kumar, Nithin N. Raju, Malleswararao K, Muhammad M. Rahman | A Critical Review on Design Aspects and Developmental Status of Metal Hydride Based Thermal Machines | Int J Hydrogen Energy |  |  |  |  |  |
| 83 | Nithin Narmada Raju, Alok Kumar, Malleswararao K, Muthukumar P | Parametric Studies on LaNi4.7Al0.3 based Hydrogen Storage Reactor with Embedded Cooling Tubes | Energy Procedia |  |  |  |  |  |
| 84 | Lav Kumar Kaushik, Muthukumar P | Performance Assessment of a Porous Radiant Cook Stove Fueled with Blend of Waste Vegetable Oil (WVO) and Kerosene | Energy Procedia |  |  |  |  |  |
| 85 | Sangjukta Devi, Niranjan Sahoo, Muthukumar P | Combustion of biogas in Porous Radiant Burner: Low emission combustion | Energy Procedia |  |  |  |  |  |
| 86 | Gurpreet Singh Sodhi, Vigneshwaran K, Abhishek Kumar Jaiswal, Muthukumar P | Assessment of Heat Transfer Characteristics of a Latent Heat Thermal Energy Storage System: Multi Tube Design. | Energy Procedia |  |  |  |  |  |
| 87 | Vigneshwaran K, Gurpreet Singh Sodhi, Muthukumar P, Arvind VK, Balamurugan G, Sriram S, Senthilmurugan S | Experimental investigation of a Cast-Steel based Thermal Energy Storage System, Energy Procedia | Energy Procedia | 2018 | 176 |  | 627 | 637 |
| 88 | J.Sunku Prasad, P.Muthukumar, R.Anandalakshmi, HakeemNiyas | Comparative study of phase change phenomenon in high temperature cascade latent heat energy storage system using conduction and conduction-convection models | Solar Energy |  |  |  |  |  |
| 89 | B Kiran Naik, P Muthukumar, P Sunil Kumar | A novel finite difference model coupled with recursive algorithm for analyzing heat and mass transfer processes in a cross flow dehumidifier/regenerator | International Journal of Thermal Sciences | 2018 | 131 |  | 1 | 13 |
| 90 | B Kiran Naik, Mrinal Bhowmik, P Muthukumar | Experimental investigation and numerical modelling on the performance assessments of evacuated U–Tube solar collector systems | Renewable Energy | 2018 | Article in Press | https://doi.org/10.1016/j.renene.2018.09.066 |  |  |
| 91 | B Kiran Naik, P Muthukumar | Energy, Entransy and Exergy Analyses of a Liquid Desiccant Regenerator | International Journal of Refrigeration | 2018 | Article in Press | https://doi.org/10.1016/j.ijrefrig.2018.08.016 |  |  |
| 92 | P Muthukumar, Alok Kumar, Nithin N Raju, K Malleswararao, Muhammad M Rahman | A critical review on design aspects and developmental status of metal hydride based thermal machines | International Journal of Hydrogen Energy | 2018 | 43 | 37 | 17753 | 17779 |
| 93 | B Kiran Naik, P Muthukumar, C Bhattacharyya | Thermal modelling and parametric investigations on coupled heat and mass transfer processes occurred in a packed tower | Heat and Mass Transfer | 2018 | Article in Press | https://doi.org/10.1007/s00231-018-2440-1 | 1 | 18 |
| 94 | DVN Lakshmi, P Muthukumar, Apurba Layek, Prakash Kumar Nayak | Drying kinetics and quality analysis of black turmeric (Curcuma caesia) drying in a mixed mode forced convection solar dryer integrated with thermal energy storage | Renewable Energy | 2018 | 120 |  | 23 | 34 |
| 95 | Lav Kumar Kaushik, P Muthukumar | Life cycle Assessment (LCA) and Techno-economic Assessment (TEA) of medium scale (5–10 kW) LPG cooking stove with two-layer porous radiant burner | Applied Thermal Engineering | 2018 | 133 |  | 316 | 326 |
| 96 | Chilaka Ravi Chandra Rao, Hakeem Niyas, P Muthukumar | Performance tests on lab–scale sensible heat storage prototypes | Applied Thermal Engineering | 2018 | 129 |  | 953 | 967 |
| 97 | Niraj Kumar Mishra, P Muthukumar | Development and testing of energy efficient and environment friendly porous radiant burner operating on liquefied petroleum gas | Applied Thermal Engineering | 2018 | 129 |  | 482 | 489 |
| 98 | Niraj Kumar Mishra, P Muthukumar, Snehasish Panigrahy | A Review on Clean Combustion Within Porous Media | Air Pollution and Control | 2018 |  |  | 209 | 224 |
| 99 | Hakeem Niyas, Muthukumar P | A Novel Encapsulation Technique for Performance Improvements in Latent Heat Storage System | Solar Energy | 2018 | Accepted on 15 Jan 2018 |  |  |  |
| 100 | Muthukumar P, Bukke Kiran Naik, Amarendra Goswami | Performance Evaluation of a Mechanical Draft Cross Flow Cooling Towers Employed in a Subtropical Region | Journal of The Institution of Engineers (India) | 2018 | Accepted on 28th Dec 2017 |  |  |  |
| 101 | S. gorthi, H. S. Gaikwad, P. K. Mondal, G. Biswas | Surface Tension Driven Filling in a Soft Microchannel: Role of Streaming Potential | Industrial & Engineering Chemistry Research | 2019 | Article in Press |  | DOI: 10.1021/acs.iecr.9b00767 |  |
| 102 | S. Shyam, B. Mehta, P. K. Mondal, S. Wongwises | Investigation into the thermo-hydrodynamics of ferrofluid flow under the influence of constant and alternating magnetic field by InfraRed Thermography | International Journal of Heat and Mass Transfer | 2019 | 135 |  | 1233 | 1247 |
| 103 | P. Kaushik, P. K. Mondal, P. K. Kundu, S. Wongwises | Rotating electroosmotic flow through a polyelectrolyte-grafted microchannel: An analytical solution | Physics of Fluids | 2019 | 31 | 2 | 22009 |  |
| 104 | H. Gaikwad, P. Baghel, R. Sarma, P. K. Mondal | Transport of neutral solutes in a viscoelastic solvent through a porous microchannel | Physics of Fluids | 2019 | 31 | 2 | 22006 |  |
| 105 | S. Dutta, P. K. Mondal, P. Goswami | Slipping hydrodynamics of Powell-Eyring fluid in a cylindrical microchannel under electrical double layer phenomenon | Physica Scripta | 2019 | 94 | 2 | 25002 |  |
| 106 | S. Pati, P.K. Mondal | Limiting thermal characteristics for flow of non-Newtonian fluids between asymmetrically heated parallel plates: An analytical study | Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering | 2018 | Accepted for Publication |  |  |  |
| 107 | H.S. Gaikwad, P.K. Mondal, D. N. Basu, N. Chimres, S. Wongwises | Analysis of the effects of Joule heating and viscous dissipation on combined pressure-driven and electrokinetic flows in a two-parallel plate channel with unequal constant temperatures | Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering | 2018 | Accepted for Publication |  |  |  |
| 108 | A. Gogoi, K. Anki Reddy, P. K. Mondal | Multilayer Graphene Oxide Membrane in Forward Osmosis: Molecular Insights | ACS Applied Nano Materials | 2018 | 1 | 9 | 4450 | 4460 |
| 109 | R. Sarma, N. Deka, K. Sarma, P. K. Mondal | Electroosmotic flow of Phan-Thien–Tanner fluids at high zeta potentials: An exact analytical solution | Physics of Fluids | 2018 | 30 | 6 | 62001 |  |
| 110 | G. Kunti, P. K. Mondal, A. Bhattacharya, S. Chakraborty | Electrothermally modulated contact line dynamics of a binary fluid in a patterned fluidic environment | Physics of Fluids | 2018 | 30 | 9 | 92005 |  |
| 111 | P. K. Mondal, S. Chaudhry | Effects of gravity on the thermo-hydrodynamics of moving contact lines | Physics of Fluids | 2018 | 30 | 4 | 42109 |  |
| 112 | A. Lahiri, P. K. Mondal | Evaluation of temperature history of a spherical nanosystem irradiated with various short-pulse laser sources | Physical Review E | 2018 | 97 | 4 | 43302 |  |
| 113 | R. Sarma, P. K. Mondal | Marangoni instability in a thin film heated from below: Effect of nonmonotonic dependence of surface tension on temperature | Physical Review E | 2018 | 97 | 4 | 043105-1 | 043105-13 |
| 114 | H. S. Gaikwad, P. K. Mondal, S.Wongwises | Softness induced enhancement in net throughput of non linear bio fluids in nanofluidic channel under EDL phenomena | Scientific Reports - Nature | 2018 | 8 | 1 | 7893-1 | 7893-16 |
| 115 | H. S. Gaikwad, A. Roy, P. K. Mondal, N. Chimres, S. Wongwises | Irreversibility analysis in a slip aided electroosmotic flow through an asymmetrically heated microchannel: The effects of joule heating and the conjugate heat transfer | Analytica Chimica Acta | 2018 | 1045 |  | 85 | 97 |
| 116 | A. Mukherjee, P. K. Mondal | Analysis of Heat Transfer Through Optically Participating Medium in a Concentric Spherical Enclosure: The Role of Dual-Phase-Lag Conduction and Radiation | Journal of Thermal Science and Engineering Applications | 2018 | 10 | 4 | 41022 |  |
| 117 | R. Sarma, A. Nath, T. Konwar, P. K. Mondal, S. Wongwises | Thermo-hydrodynamics of a viscoelastic fluid under asymmetrical heating | International Journal of Heat and Mass Transfer | 2018 | 125 |  | 515 | 524 |
| 118 | P. K. Mondal, S. Wongwises | Assesment of Thermodynamic Irreversibility in a Micro-Scale Viscous Dissipative Circular Couette Flow | Entropy | 2018 | 20 | 01-Jan | 50-1 | 50-18 |
| 119 | Purnendu Kumar Mandal, P.S. Robi, | Influence of micro-alloying with silver on microstructure and mechanical Properties of Al-Cu alloy | Materials Science and Engineering A. | 2018 | A722 | 1 | 99 | 111 |
| 120 | D. G. Gunjo, P. Mahanta and P. S. Robi | Melting enhancement of a latent heat storage with dispersed Cu, CuO and Al2O3 nanoparticles for solar thermal applications | Renewable Energy. 121C (2018)pp: 652-665. | 2018 | 121 |  | 652 | 665 |
| 121 | S. Behera, P. Kumari | Free Vibration of Levy-type Rectangular Laminated Plates using Efficient Zig-Zag Theory | Advances in Computational Design | 2018 | 3 |  | 213 | 232 |
| 122 | A. Singh, P. Kumari | Two-Dimensional elasticity solution for arbitrarily supported axially functionally graded | Journal of Solid Mechanics | 2018 | Inpress |  |  |  |
| 123 | Poonam Kumari, Shranish Kar | Static behavior of arbitrarily supported composite laminated cylindrical shell panels: An analytical 3D elasticity approach | Composite Structures | 2019 | 207 |  | 949 | 965 |
| 124 | Agyapal Singh, Poonam Kumari | Analytical Solution of Functionally Graded Beam Having Longitudinal Stiffness Variation | International Journal for Computational Methods in Engineering Science & Mechanics | 2018 | Inpress |  |  |  |
| 125 | S. Behera, P. Kumari | "Analytical piezoelasticity solution for natural frequencies of levy-type piezolaminated plates | International Journal of Applied Mechanics | 2019 | Accepted for Publication |  |  |  |
| 126 | Agyapal Singh, Poonam Kumari, and Rupam Hazarika | Analytical Solution for Bending Analysis of Axially Functionally Graded Angle-Ply Flat Panels | Mathematical Problems in Engineering | 2018 | ID 2597484 |  | 1 | 17 |
| 127 | Sandeep Singh, R. Tiwari | Model Based Identification of Crack and Bearing Dynamic Parameters In Flexible Rotor Systems Supported with an Auxillary Active Magnetic Bearing | Mechanisn and Machine Theory | 2018 | 122 | https://doi.org/10.1016/j.mechmachtheory.2018.01.006 | 292 | 307 |
| 128 | P. Gangsar, R. Tiwari | Multi-fault Diagnosis of Induction Motor at Intermediate Operating Conditions using Wavelet Packet Transform and Support Vector Machine | ASME, Journal of Dynamic Systems, Measurement and Control | 2018 | 140 | 8 |  |  |
| 129 | J. S. Rapur, R. Tiwari | Automation of Multi-Fault Diagnosing of Centrifugal Pumps using Multi-Class Support Vector Machine with Vibration and Motor-Current Signals in Frequency Domain | Journal of the Brazilian Society of Mechanical Sciences and Engineering (BMSE) | 2018 | 40 | https://doi.org/10.1007/s40430-018-1202-9 | 278 | 298 |
| 130 | R. S. Srinivas, R. Tiwari and Ch. K. Babu | Application of Active Magnetic Bearings in Flexible Rotordynamic Systems - A State-of-the-Art Review | Mechanical Systems and Signal Processing | 2018 | 106 |  | 537 | 572 |
| 131 | G. Ranjan and R. Tiwari | Application of Active Magnetic Bearings for In-Situ Flexible Rotor Residual Balancing Using a Novel Generalized Influence Coefficient Method | Inverse Problems in Science & Engineering | 2018 | Available online | https://doi.org/10.1080/17415977.2018.1503258 |  |  |
| 132 | A. Panda, J. S. Rapur and R. Tiwari | Prediction of Flow Blockages and Impending Cavitation in Centrifugal Pumps using Support Vector Machine (SVM) Algorithms Based on Vibration Measurements | Measurement | 2018 | 130 |  | 44 | 56 |
| 133 | Vikas Prasad and R. Tiwari | Identification of Speed-Dependent Active Magnetic Bearing Parameters and Rotor Balancing in High-Speed Rotor Systems | ASME, Journal of Dynamic Systems, Measurement and Control | 2018 | Available online | doi:10.1115/1.4042026 |  |  |
| 134 | P. Gangsar and R. Tiwari | A Support Vector Machine based Fault Diagnostics of Induction Motors for Practical Situation of Multi-Sensor Limited Data Case Measurement | Measurement | 2018 | 135 |  | 694 | 711 |
| 135 | J. S. Rapur and R. Tiwari | On-line Time Domain Vibration and Current Signals Based Multi-Fault Diagnosis of Centrifugal Pumps using Support Vector Machines | Journal of Nondestructive Evaluation | 2018 | Available online | https://doi.org/10.1007/s10921-018-0544-7 | 1 | 18 |
| 136 | Arnab Chanda and S. K. Dwivedy | Nonlinear dynamic analysis of flexible workpiece and tool in turning operation with delay and internal resonance | Journal of Sound and Vibration | 2018 | 434 |  | 358 | 378 |
| 137 | R. K. Ojha and S. K Dwivedy | Dynamic Analysis of Sandwich Plates with Isotropic Skins and Viscoelastic Core | International Journal of Structural Stability and Dynamics | 2018 | Available Online |  |  |  |
| 138 | Devarshi Kashyap, P. Kishore Kumar, and S. Kanagaraj | 4D printed porous radiopaque shape memory polyurethane for endovascular embolization | Additive Manufacturing | 2018 | 24 |  | 687 | 695 |
| 139 | R. Vignesh Babu, S. Kanagaraj | Thermal, electrical and mechanical characterization of microwave sintered Copper/carbon nanotubes (CNT) composites against sintering duration, CNT diameter and its concentration | Journal of Materials Processing Tech | 2018 | 258 |  | 296 | 309 |
| 140 | R. Vignesh Babu, Avanish Verma Kunwar, M. Charan, S. Kanagaraj | Tweaking the diameter and concentration of carbon nanotubes and sintering duration in Copper based composites for heat transfer applications | Advanced Powder Technology | 2018 | 29 |  | 2356 | 2367 |
| 141 | S Pushp, A Saikia, A Khan, SM Hazarika | A cognitively enhanced collaborative control architecture for an intelligent wheelchair: Formalization, implementation and evaluation | Cognitive Systems Research | 2018 | 49 |  | 114 | 127 |
| 142 | R Bhattacharyya, SM Hazarika | Object affordance driven inverse reinforcement learning through conceptual abstraction and advice | Paladyn Journal of Behavioral Robotics | 2018 | 9 | 1 | 277 | 294 |
| 143 | U Talukdar, SM Hazarika, JQ Gan | A Kernel Partial least square based feature selection method | Pattern Recognition | 2018 | 83 |  | 91 | 106 |
| 144 | U Talukdar, SM Hazarika, JQ Gan | Motor imagery and mental fatigue: inter-relationship and EEG based estimation | Journal of computational neuroscience | 2019 | 46 | 1 | 55 | 76 |
| 145 | Vishal Agrawal, Sachin S. Gautam | Higher-order Hermite enriched contact finite elements for adhesive contact problems, | International Journal of Materials and Structural Integrity, | 2018 | Accepted for Publication |  |  |  |
| 146 | Vishal Agrawal, Sachin S. Gautam | IGA: A simplified introduction and implementation details for finite element users | Journal of The Institution of Engineers (India): Series C | 2018 | Accepted for Publication |  |  |  |
| 147 | Utpal Kiran, Deepak Sharma, Sachin Singh Gautam | GPU warp based FE matrices generation and assembly using coloring method | Journal of Parallel and Distributed Computing | 2018 | Accepted |  |  |  |
| 148 | Vishal Agrawal, Sachin Singh Gautam | NURBS-enriched contact isogeometric element for adhesive contact problems | Journal of Aerospace Systems Engineering | 2018 | Accepted |  |  |  |
| 149 | Dipankar Bora, Manoj Kumar, Sachin Singh Gautam | Ductile fracture at high velocity impact of cylindrical tubes | Materials Today: Proceedings | 2018 | 5 |  | 18983 | 18991 |
| 150 | S. Panda, A Kumar | A design of active constrained layer damping treatment for vibration control of circular cylindrical shell structure | Journal of Vibration and Control | 2018 | 24 | 24 | 5811 | 5841 |
| 151 | A Kumar, S Panda, V Narsaria, A Kumar | Augmented constrained layer damping in plates through the optimal design of a 0-3 viscoelastic composite layer. | Journal of Vibration and Control | 2018 | 24 | 23 | 5514 | 5524 |
| 152 | A Kumar, S Panda, A Kumar, V Narsaria | Performance of a graphite wafer-reinforced viscoelastic composite layer for active-passive damping of plate vibration | Compoiste Structures | 2018 | 186 |  | 303 | 314 |
| 153 | Manish Kumar Dubey and Satyajit Panda | Electromechanical properties and actuation capability of an extension mode piezoelectric fiber composite actuator with cylindrically periodic microstructure | Archive of Applied Mechanics | 2018 | 88 |  | 2261 | 2281 |
| 154 | Manish Kumar Dubey and Satyajit Panda | A balanced laminate of piezoelectric fiber composite for improved shear piezoelectric actuation of beams | Mechanics of Advanced Materials and Structures. | 2018 | Accepted for publication |  |  |  |
| 155 | Singh S. S., Baruah P. K., Khare A. and Joshi S. N. | Incubation studies and the threshold for surface damage and cavity formation in the processing of polycarbonate by Nd:YAG laser | Optics and Laser Technology | 2018 | 108 |  | 592 | 601 |
| 156 | N Devarani, SN Joshi | Surface Alloying of Ti-6Al-4V on P20 Mold Steel using Electric Discharge Processing (EDP) | Materials Today: Proceedings | 2018 | 5 | 2 | 8523 | 8531 |
| 157 | G Bolar, M Mekonen, A Das, SN Joshi | Experimental Investigation on Surface Quality and Dimensional Accuracy during Curvilinear Thin-Wall Machining | Materials Today: Proceedings | 2018 | 5 | 2 | 6461 | 6469 |
| 158 | G Bolar, A Das, SN Joshi | Measurement and analysis of cutting force and product surface quality during end-milling of thin-wall components | Measurement | 2018 | 121 |  | 190 | 204 |
| 159 | R. Kant and S N Joshi | Numerical investigations into influence of scanning path curvature on deformation behavior during curvilinear laser bending of magnesium sheets | Journal of Thermal Stresses | 2018 | 41 | 3 | 313 | 330 |
| 160 | SS Singh, PK Baruah, A Khare, SN Joshi | Effect of laser beam conditioning on fabrication of clean micro-channel on stainless steel 316L using second harmonic of Q-switched Nd: YAG laser | Optics and Laser Technology | 2018 | 99 |  | 107 | 117 |
| 161 | G Bolar, SN Joshi | Numerical Modeling and Experimental Validation of Machining of Low-Rigidity Thin-Wall Parts | Precision Product-Process Design and Optimization | 2018 |  |  | 99 | 122 |
| 162 | Prakash Kumar Sahu and Sukhomay Pal | Effect of FSW Parameters on Microstructure and Mechanical Properties of AM20 welds | Journal of Materials and Manufacturing Processes | 2018 | 33 | 3 | 288 | 298 |
| 163 | D. K. Yaduwanshi, S. Bag and Sukhomay Pal | On the effect of tool offset in hybrid FSW of copper and aluminium alloy | Journal of Materials and Manufacturing Processes | 2018 | 33 | 3 | 277 | 287 |
| 164 | Bipul Das, Sukhomay Pal, Swarup Bag | Monitoring of friction stir welding process using main spindle motor current | Journal of The Institution of Engineers (India): Series C | 2018 | 99 | 6 | 711 | 716 |
| 165 | T. saikia, M. Baruah, S. Bag | On the effect of heat input in plasma microwelding of maraging steel | Proceedings of IMechE, Part B: Journal of Engineering Manufacture | 2018 |  |  |  |  |
| 166 | R. Shufen and U.S. Dixit | A review of theoretical and experimental research on various autofrettage processes | ASME Journal of Pressure Vessel Technology | 2018 | 140 | 5 |  |  |
| 167 | Xiaojing Suo, Hengcheng Liao, Yiyun Hu, Uday S. Dixit, Pavel Petrov | Formation of Al15Mn3Si2 phase during solidification of a novel Al-12%Si-4%Cu-1.2%Mn heat-resistant alloy and its thermal stability | Journal of Materials Engineering and Performance | 2018 | Online on Feb. 21, 2018 |  |  |  |
| 168 | B.N. Fetene, V. Kumar, U.S. Dixit and R. Echempati | Numerical and experimental study on multi-pass laser bending of AH36 steel strips | Optics and Laser Technology | 2018 | 99 |  | 291 | 300 |
| 169 | G. Li, H. Liao, X. Suo, Y. Tang, U.S. Dixit and P. Petrov | Cr-induced morphology change of primary Mn-rich phase in Al-Si-Cu-Mn heat resistant aluminum alloys and its contribution to high temperature strength | Materials Science & Engineering | 2018 | 709 |  | 90 | 96 |
| 170 | P.P. Dutta, K. Kalita, U.S. Dixit and H. Liao | Magnetic-force-assisted straightening of bent mild steel strip by laser irradiation | Lasers in Manufacturing and Materials Processing | 2018 | 4 | 4 | 206 | 226 |
| 171 | G.C. Verma, P.M. Pandey and U.S. Dixit | Modeling of static machining force in axial ultrasonic-vibration assisted milling considering acoustic softening | International Journal of Mechanical Sciences | 2018 | 136 |  | 1 | 16 |
| 172 | S. Das, S.S. Gautam, C.R. Gautam, A. Madheshiya and U.S. Dixit | Parametric optimization of dry sliding wear and friction of germanium doped lead calcium titanate borosilicate glass ceramic | Ceramic International | 2018 | 44 | 6 | 6541 | 6550 |
| 173 | R. Shufen and U.S. Dixit | A review of theoretical and experimental research on various autofrettage processes | ASME Journal of Pressure Vessel Technology | 2018 | 140 | 5 | 50802-1 | 50802-15 |
| 174 | U.S. Dixit, V. Yadav, R.G. Naryanan and N. Bhardwaj | Friction in micromanufacturing: a review | Journal of Micromanufacturing | 2018 | 1 | 1 | 76 | 91 |
| 175 | W.G. Jiru, M.R. Sankar and U.S. Dixit | Laser surface alloying of aluminum for improving acid corrosion resistance | Journal of Institution of Engineers, Series (C) | 2018 | Available online |  |  |  |
| 176 | G.C. Verma, P.M. Pandey and U.S. Dixit | Estimation of workpiece-temperature during ultrasonic-vibration assisted milling considering acoustic softening | International Journal of Mechanical Sciences | 2018 | 140 |  | 547 | 556 |
| 177 | K.K. Gajrani, M.R. Sankar and U.S. Dixit | Environmentally friendly machining with MoS2 filled mechnaically micro-textured cutting tools | Journal of Mechnical Science and Technology | 2018 | 32 | 8 | 3797 | 3805 |
| 178 | P.P. Dutta, K. Kalita and U.S. Dixit | Electromagnetic-force-assisted bending and striaghtening of AH36 steel strip by laser irradaition | Lasers in Manufacturing and Materials Processing | 2018 | 5 | 3 | 201 | 221 |
| 179 | R. Bhadra, P. Pankaj, P. Biswas and U.S. Dixit | Thermo-mechanical analysis of CO2 laser butt welding on AISI 304 steel thin plates | International Journal of Steel Structures | 2018 | Available online |  | 1 | 14 |
| 180 | R. Shufen and U.S. Dixit | An analysis of thermal autofrettage process with heat treatment | International Journal of Mechanical Sciences | 2018 | 144 |  | 134 | 145 |
| 181 | V. Kumar and U.S. Dixit | A model for the estimation of hardness of laser bent strips | Optics and Laser Technology | 2018 | 107 |  | 491 | 499 |
| 182 | A. Bisht, V. Yadav, S. Suwas and U.S. Dixit | Deformation behavior of AM30 magnesium alloy | Journal of Materials Engineering and Performance | 2018 | 27 | 9 | 4900 | 4910 |
| 183 | N. Alom and U. K. Saha | Influence of blade profiles on Savonius rotor performance: Numerical simulation and experimental validation | Energy Conversion and Management | 2019 | 186 |  | 267 | 277 |
| 184 | N. Alom and U. K. Saha | Evolution and progress in the development of Savonius wind turbine rotor blade profiles and shapes | ASME Journal of Solar Energy Engineering | 2019 | 141 | 6 | 030801-15 |  |
| 185 | N. Alom and U. K. Saha | Examining the aerodynamic drag and lift characteristics of a newly developed elliptical-bladed Savonius rotor | ASME Journal of Energy Resources Technology | 2018 | 141 | 5 | 051201-12 |  |
| 186 | N. Alom and U. K. Saha | Four decades of research into the augmentation techniques of Savonius wind turbine rotor | ASME Journal of Energy Resources Technology | 2018 | 140 | 5 | 050801-1 | 050801-14 |
| 187 | N. Alom and U. K. Saha | Performance evaluation of vent-augmented elliptical-bladed Savonius rotors by numerical simulation and wind tunnel experiments | Energy | 2018 | 152 |  | 277 | 290 |
| 188 | N. Alom and U. K. Saha | An insight into the drag and lift characteristics of modified Bach and Benesh profiles of Savonius wind rotor | Energy Prodedia | 2018 | 144 |  | 50 | 56 |
| 189 | A. Sarkar and U. K. Saha | A critique on the research activities and potential benefits of dual fuel diesel engine run on biogas and biofuel-blended biodiesel | ASME Journal of Engineering for Gas Turbines and Power | 2019 | 141 |  | 6 | 090801-26 |
| 190 | A. Sarkar and U. K. Saha | Role of global fuel-air equivalence ratio and preheating on the behavior of biogas fueled diesel engine under dual fuel mode | Fuel | 2018 | 232 |  | 743 | 754 |
| 191 | A. Sarkar and U. K. Saha | Impact of intake charge preheating on a biogas run dual fuel diesel engine using ternary blends of diesel-biodiesel-ethanol | ASCE Journal of Energy Engineering | 2018 | 144 | 3 | 04018031-1 | 4018031-13 |
| 192 | A. Sarkar and U. K. Saha | Effect of intake charge preheating and equivalence ratio in a dual fuel diesel engine run on biogas and ethanol-blended diesel | ASME Journal of Energy Resources Technology | 2018 | 140 | 5 | 050801-14 |  |
| 193 | P. K. Talukdar, V. Kulkarni and U. K. Saha | Performance estimation of Savonius wind and Savonius hydrokinetic turbines under identical power input | AIP Journal of Renewable and Sustainable Energy Reviews | 2018 | 10 | 5 | 064704-1 | 064704-15 |
| 194 | P. K. Talukdar, V. Kulkarni and U. K. Saha | Field testing of model helical-bladed hydrokinetic turbine for small-scale power generation | Renewable Energy | 2018 | 127 |  | 158 | 167 |
| 195 | P. K. Talukdar, V. Kulkarni and U. K. Saha | Parametric analysis of model Savonius hydrokinetic turbines through experimental and computational investigations | Energy Conversion and Management | 2018 | 158 |  | 36 | 49 |
| 196 | A. Zayoud, P. Mahanta and U. K. Saha | A Novel method of pure oxy-fuel circulating fluidized bed combustion with zero recirculation flue gas – Experimental validation | Materials Today: Proceedings | 2018 | 5 |  | 50 | 56 |
| 197 | S. Roy, R. Das and U. K. Saha | An inverse method for optimization of geometric parameters of a Savonius-style wind turbine | Energy Conversion and Management | 2018 | 155 |  | 116 | 127 |
| 198 | Pallekonda R. B., Nanda S. R., Dwivedy S. K. | Application of Neural-Networks and Neuro-Fuzzy Systems for the Prediction of Short Duration Forces Acting on the Blunt Bodies | Soft Computing | 2018 |  |  |  |  |
| 199 | Ashish J. Chaudhari, Vinayak Kulkarni and Niranjan Sahoo | State-of-the-art technology in variable compression ratio mechanism for spark ignition engine | Sadhana | 2018 | 43 | 211 |  |  |
| 200 | Hotta, S.K., Sahoo, N., Mohanty, K. and Mahanta, P. | Effect of Compression Ratio on the Performance of a Constant Speed Spark Ignition Engine Operating on Raw Biogas | Journal of Energy and Environmental Sustainability | 2018 | 5 |  | 53 | 57 |
| 201 | Hotta, S.K., Sahoo, N., Mohanty, K. and Mahanta, P. | Effect of Compression Ratio on the Performance of a Constant Speed Spark Ignition Engine Operating on Raw Biogas | Journal of Energy and Environmental Sustainability | 2018 | 5 |  | 53 | 57 |
| 202 | Hotta, S.K., Sahoo, N. and Mohanty, K. | Comparative assessment of a spark ignition engine fueled with gasoline and raw biogas | Renewable Energy | 2018 |  |  |  |  |
| 203 | Hotta, S.K., Sahoo, N. and Mohanty, K. | Ignition Advancement Study for Optimized Characteristics of a Raw Biogas Operated Spark Ignition Engine | Journal of green energy | 2018 | 16 | 1 | 101 | 113 |
| 204 | Mallick, D., Poddar, M.K., Mahanta, P. and Moholkar, V.S. | Discernment of synergism in pyrolysis of biomass blends using thermogravimetric analysis |  |  |  |  |  |  |
| 205 | Kumar, A., Singh, A., Kumar, A., Singh, M.K., Mahanta, P. and Mukhopadhyay, S.C. | Sensing Technologies for Monitoring Intelligent Buildings: A Review. | Bioresource technology | 2018 | 261 |  | 294 | 305 |
| 206 | Gunjo, D.G., Jena, S.R., Mahanta, P. and Robi, P.S., | Melting enhancement of a latent heat storage with dispersed Cu, CuO and Al2O3 nanoparticles for solar thermal application. | IEEE Sensors Journal, | 2018 | 18 | 12 | 4847 | 4860 |
| 207 | Deb, S., Tammi, K., Kalita, K. and Mahanta, P., | Impact of Electric Vehicle Charging Station Load on Distribution Network. | Renewable Energy | 2018 | 121 |  | 652 | 665 |
| 208 | Zayoud, A., Mahanta, P. and Saha, U.K., | A Novel Method of Pure Oxy-fuel Circulating Fluidized Bed Combustion with Zero Recirculation Flue Gas–Experimental Validation. | Energies | 2018 | 11 | 1 | 178 |  |
| 209 | Deb, S., Tammi, K., Kalita, K., & Mahanta, P. | Review of recent trends in charging infrastructure planning for electric vehicles | Wiley Interdisciplinary Reviews: Energy and Environment | 2018 | 7 | 6 |  |  |
| 210 | Kumar, G., Kalita, K., Tammi, K. | Analysis of Bridge Currents and UMP of an Induction Machine With Bridge Configured Winding Using Coupled Field and Circuit Modeling | IEEE Transactions on Magnetics | 2018 | 54 | 9 |  |  |
| 211 | Sarita Bharti, S Senthilvelan | Effects of lubricant on the surface durability of an injection molded polyamide 66 spur gear paired with a steel gear | Tribology International | 2019 | Article In Press |  |  |  |
| 212 | Piyush Singh, Pankaj Biswas and Sachin D Kore , | Influence of Welding Traverse Speed in Self-Reacting Friction Stir Welding of Aluminium alloy AA6061-T6 | Journal of Ship Production and Design | 2018 | http://dx.doi.org/10.5957/JSPD.160047 |  |  |  |
| 213 | H. K. Narang, M. M. Mahapatra, P. K. Jha, PVSS Sridhar and P. Biswas (2018) , | Experimental and Numerical Study on Effect of Weld Reinforcement on Angular Distortion of SAW Square butt Welded Plates | Journal of Welding and Joining, | 2018 | ISSN 2466-2232, Online ISSN 2466-2100, https://doi.org/10.5781/JWJ.2018.36.2.8. |  |  |  |
| 214 | R. Chakrabarti,  P. Biswas,  S. C. Saha | A Review on Welding Residual Stress Measurement by Hole Drilling Technique and its Importance | Journal of Welding and Joining | 2018 | ISSN 2466-2232Online ISSN 2466-2100, pp 38-45. |  |  |  |
| 215 | Rakesh Bhadra, Pardeep Pankaj, Pankaj Biswas and U. S. Dixit | Thermo-mechanical analysis of CO2 Laser butt welding on AISI 304 steel thin plates | Internation Journal of Steel Structures | 2018 | DOI 10.1007/s13296-018-0085-z,pp 1-14 (accepted). February 2019, Volume 19, Issue 1, pp 14–27 |  |  |  |
| 216 | Arun Kadian & Biswas Pankaj | The study of material flow behaviour in dissimilar material FSW of AA6061 and Cu-B370 alloys plates | Journal of Manufacturing Processes | 2018 | 34, Part A |  |  |  |
| 217 | Avinish Tiwari, Pardeep Pankaj, Pankaj Biswas, Sachin D. Kore, and A Gourav Rao | Tool performance evaluation of friction stir welded Shipbuilding grade DH36 steel butt joints | International Journal of Advanced Manufacturing Technology | 2019 | Accepted |  |  |  |
| 218 | V. Kumar, U.S. Dixit and J. Zhang | Determination of thermal conductivity, absorptivity and heat transfer coefficient during Laser-based manufacturing | Measurement | 2019 | 131 | January | 319 | 328 |
| 219 | A. Misra, P.M. Pandey, U.S. Dixtt, A. Roy and V.V. Silberschmidt | Multi-objective optimization of ultrasonic-assisted magnetic abrasive finishing process | International Journal of Advanced Manufacturing Technology, | 2019 | https://doi.org/10.1007/s00170-018-3060-0. |  | 1 | 10 |
| 220 | G.C. Verma, P.M. Pandey and U.S. Dixit | An experimental study on surface roughness and frictional property of ultrasonic-vibration-assisted milled surface | Proceedings of IMECH-E, Part C: Journal of Mechanical Engineering Science | 2019 | DOI: 10.1177/0954406219834587 |  |  |  |
| 221 | V. Kumar, U.S. Dixit and J. Zhang | Determination of thermal conductivity, specific heat capacity and absorptivity during Laser-based materials processing | Measurement | 2019 | 139 | June | 213 | 225 |
| 222 | M. K. Dubey and S. Panda | Shear-based vibration control of annular sandwich plates using different piezoelectric fiber composites: A comparative study | Journal of Sandwich Structures & Materials | 2019 | Accepted(doi.org/10.1177/1099636219838446) |  |  |  |

**Conference/Workshop/Seminar/Symposia (PERIOD: 1 APRIL 2018 – 31 MARCH 2019)**

**Total No. of papers published in Conference Proceedings: 141**

**Format for submission of papers published in Conference Proceedings**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Sl. No. | Authors | Paper Title | Name of Conference/ Workshop/ Seminar/ Symposia Proceedings | Year | Starting Page | Ending Page |
| 1 | Deka, H., Biswas, G., and Dalal, A., | Oscillation Dynamics of Falling Drops” | Paper No. FMFP2018-148, Proceedings of the 7th International and 45th National Conference on Fluid Mechanics and Fluid Power, December 10-12, 2018, Indian Institute of Technology Bombay, Mumbai, India | 2018 |  |  |
| 2 | Sarma, B., Basu, D. N., and Dalal, A., | “Universal Scaling Laws in Drop-on-demand Generation from A Yarn” | Paper No. FMFP2018-467, Proceedings of the 7th International and 45th National Conference on Fluid Mechanics and Fluid Power, December 10-12, 2018, Indian Institute of Technology Bombay, Mumbai, India. | 2018 |  |  |
| 3 | Shahapure, V., Sarma, B., Basu, D. N., and Dalal, A., | “High Speed Imaging and Analysis of Drop Formation” | ”, Paper No. FMFP2018-680, Proceedings of the 7th International and 45th National Conference on Fluid Mechanics and Fluid Power, December 10-12, 2018, Indian Institute of Technology Bombay, Mumbai, India. | 2018 |  |  |
| 4 | Deka, H., Biswas, G., and Dalal, A., | “A Coupled Level Set and Volume-of-fluid Method for Modelling Two-phase Flows”, | Paper No. IC-RIDME18: 194, International Conference on Recent Innovations and Developments in Mechanical Engineering, National Institute of Technology Meghalaya, Shillong, India, November 8 – 10, 2018. | 2018 |  |  |
| 5 | Kotoky, S., Dalal, A., and Natarajan, G., 2018 | , “The Role of Particle Diameter on the Fluidization Behavior in a Bubbling Gas-Solid Fluidized Bed” | ”, Paper No. FMFP2018-680, Proceedings of the 7th International and 45th National Conference on Fluid Mechanics and Fluid Power, December 10-12, 2018, Indian Institute of Technology Bombay, Mumbai, India. | 2018 |  |  |
| 6 | Nath, B., Borthakur, M.P., Biswas, G., and Dalal, A., | , “Influence of Electric Field in the Lateral Migration of a Drop Inside a Microchannel” | Paper No. IC-RIDME18: 245, International Conference on Recent Innovations and Developments in Mechanical Engineering, National Institute of Technology Meghalaya, Shillong, India, November 8 – 10, 2018. | 2018 |  |  |
| 7 | Sarma, B., Pokhrel, S., Kumar, S., Dalal, A., Bandyopadhyay, D., and Basu, D. N. | “Prediction of Sauter Mean Diameter of Spray During Electric Discharge Mediated Bursting of a Droplet” | ”, Paper No. IC-RIDME18: 251, International Conference on Recent Innovations and Developments in Mechanical Engineering, National Institute of Technology Meghalaya, Shillong, India, November 8 – 10, 2018. | 2018 |  |  |
| 8 | Parmananda, P., Dalal, A., and Natarajan, G. | “Three-dimensional Analysis of Non-Boussinesq Natural Convection with Radiative Heat Transfer in a Vertical Seven Rod Bundle” | Paper No: IHTC16-23267, 16th International Heat Transfer Conference, Beijing, China. | 2018 |  |  |
| 9 | Dalal, A., Gupta, A., Gupta A., Mukherjee, P.P. | “Modeling of Thermal Management in Automotive Battery Modules” | Paper No: 538, 4th International Conference on Computational Methods for Thermal Problems, Indian Institute of Science, Bangalore, India. | 2018 |  |  |
| 10 | Chayanika Nath and S. M. Hazarika | A Hybrid Visual Information Representation and Reasoning Paradigm Towards Video Analysis. | , Lecture Notes in Computer Science, (To Appear). Springer, June 18-22, 2018, Edinburgh, UK. | 2018 |  |  |
| 11 | D.V.N. Lakshmi, Muthukumar P | Design and development of mixed mode forced convection solar dryer for drying of curcuma zeodaria | Presented at 12th International Conference on Thermal Engineering: Theory and Applications, February 23-26, 2019, Gandhinagar, India | 2019 |  |  |
| 12 | Kiran Naik B and Muthukumar P | Energy Exergy and Entransy Analyses of an Air Cooled Condenser Employed in a Vapour Compression Chiller | Presented at 12th International Conference on Thermal Engineering: Theory and Applications, February 23-26, 2019, Gandhinagar, India | 2019 |  |  |
| 13 | Sunku Prasad J, Saurabh Dongare, Anandalakshmi R, Muthukumar P | Numerical Investigation of PCM based Heat Sinks under Constant and Variable Heat Load Conditions | Presented at 12th International Conference on Thermal Engineering: Theory and Applications, February 23-26, 2019, Gandhinagar, India | 2019 |  |  |
| 14 | Lakshmi DVN, Apurba Layek, Muthukumar, P | Evaluation of Convective Heat Transfer Coefficient of Herbs Dried in a Mixed Mode Solar Dryer | . Presented at ICUE 2018 on: Green Energy for Sustainable Development, Phuket, Thailand, 24-26 Oct 2018 | 2018 |  |  |
| 15 | Kaushik L K, Muthukumar P | Experimental Analysis of a Porous Radiant Pressurized Cook Stove by Using a Blend of Waste Cooking Oil (WCO) and Kerosene | Presented at ICUE 2018 on: Green Energy for Sustainable Development, Phuket, Thailand, 24-26 Oct 2018 | 2018 |  |  |
| 16 | Lav Kumar Kaushik, Muthukumar P | Performance Assessment of a Porous Radiant Cook Stove Fueled with Blend of Waste Vegetable Oil (WVO) and Kerosene | Presented at The 10th International Conference on Applied Energy (ICAE2018), 22-25 August 2018, Hong Kong | 2018 |  |  |
| 17 | Sangjukta Devi, Niranjan Sahoo, Muthukumar P | Combustion of biogas in Porous Radiant Burner: Low emission combustion | . Presented at The 10th International Conference on Applied Energy (ICAE2018), 22-25 August 2018, Hong Kong | 2018 |  |  |
| 18 | Gurpreet Singh Sodhi, Vigneshwaran K, Abhishek Kumar Jaiswal, Muthukumar P | Assessment of Heat Transfer Characteristics of a Latent Heat Thermal Energy Storage System: Multi Tube Design | . Presented at The 10th International Conference on Applied Energy (ICAE2018), 22-25 August 2018, Hong Kong | 2018 |  |  |
| 19 | Nithin N. Raju, Muthukumar P, K. Malleswararao | Determination of Absorption Conditions for LaNi4.7Al0.3 Based Hydrogen Storage Device: A Numerical Investigation | 5th International Conference on Computation Methods for Thermal Problems (Thermacomp 2018), Bangalore, India, July 9-11, 2018 | 2018 |  |  |
| 20 | Gurpreet Singh Sodhi, Muthukumar P | Effect of eccentricity on the charging of a multi tube Latent Heat Storage System | Presented at 5th International Conference on Computational Methods for Thermal Problems (THERMACOMP – 2018), Indian Institute of Science, Bangalore, July 9-11, 2018 | 2018 |  |  |
| 21 | Mrinal Bhowmik, Muthukumar P, R Anandalakshmi | “Numerical Study on Dehumidification Performance of a Cross-Flow Liquid Desiccant Adiabatic Dehumidifier with Various Halide Salt desiccants” | Presented at 5th International Conference on Computational Methods for Thermal Problems (THERMACOMP – 2018). IISc Bangalore - 9-11 July, 2018 | 2018 |  |  |
| 22 | U.S. Dixit | Keynote in National Conference on Applied Sciences, Sustainable & Evolving Technologies, 63rd Annual Technical Session of Assam Science Society | ASSET 2018, March 9-11, 2018, CIT, Kokrajhar | 2018 |  |  |
| 23 | M. Ravi Sankar | “Nano-finishing of Bio-Implants using Polymer Rheological Abrasive Complex Suspensions” | 4th International Symposium on Advances in Sustainable Polymers (ASP-2018), 8-11 January, 2018, IIT Guwahati, India. | 2018 |  |  |
| 24 | K.K. Gajrani, M. Ravi Sankar | “Cutting Fluid Emissions in Mechanical Machining and its Adverse Effects on Biodiversity” | 21ST ADNAT Convention and International Symposium on Biodiversity and Biobanking (BIODIVERSE 2018), 27−29 January, 2018, IIT Guwahati, India. | 2018 |  |  |
| 25 | R.R. Behera, A.H., L.Pandey,, M. Ravi Sankar, | “Laser Surface Bio-Coating of Functionally Graded TiO2-HAp on Textured Ti Alloy for Enhancing Bioactivity and | Cell Proliferation” 2018. | 2018 |  |  |
| 26 | M. Bhuyan, A. Sarmah, K.K. Gajrani, A. Pandey, T.G. Thulkar, M. Ravi Sankar. | “State of Art on Minimum Quantity Lubrication in Grinding Process” | 8th International Conference of Materials Processing and Characterization (ICMPC), 16−18 March, 2018, GRIET Hyderabad, India | 2018 |  |  |
| 27 | S. Banik, N. Kalita, K.K. Gajrani, R. Kumar, M. Ravi Sankar | “Recent Trends in Laser Assisted Machining of Ceramic Materials” | 8th International Conference of Materials Processing and Characterization (ICMPC), 16−18 March, 2018, GRIET Hyderabad, India | 2018 |  |  |
| 28 | M. Ravi Sankar, V.K. Jain , K.P. Rajurkar, | “Rheological and Nano-finishing Studies of Elastically Dominant Multiple Polymers Blend Based Abrasive Flow Finishing Medium” | 19th CIRP Conference on Electro Physical and Chemical Machining, 23-27 April 2018, Bilbao, Spain, (Accepted). | 2018 |  |  |
| 29 | Avinish Tiwar, Piyush Singh, Pankaj Biswas and Sachin D. Kore, | Friction Stir Welding of AISI 1006 Low Carbon Steel | 1st International Conference on Mechanical Engineering (INCOM 2018), 4- 6 January 2018, Jadavpur University, Jadavpur. | 2018 |  |  |
| 30 | Saurav Suman Pankaj Biswas , Basil Kuriachen , Abhijit Sinha, , | Modelling an arc welded fillet joint for minimum welding induced distorsions | 3rd International Conference on Design, Analysis, Manufacturing and Simulation,ICDAMS 2018,Chennai, INDIA, 6-7 April, 2018. | 2018 |  |  |
| 31 | Kumar M., and Gautam S. S., | Parametric study of ballistic impact using continuum damage mechanics (CDM) model | Second Quadrennial International Conference on Structural Integrity (ICONS 2018), IIT Madras, Chennai, India, December 14th – 17th, 2018. | 2018 |  |  |
| 32 | Sahu A., Thakur, R, Agrawal V., and Gautam S. S. | A comparative study of explicit time integration algorithms for non-linear systems | 1st International Conference on Future Learning Aspects of Mechanical Engineering (FLAME - 2018), Amity University, Noida, October 3rd – 5th , 2018. | 2018 |  |  |
| 33 | Saipraneeth G. and Gautam S. S. | Nonlinear finite element analysis of a gecko spatula adhesion on a rigid substrate | 1st International Conference on Future Learning Aspects of Mechanical Engineering (FLAME - 2018), Amity University, Noida, October 3rd – 5th , 2018 | 2018 |  |  |
| 34 | Bora D., Kumar M., and Gautam S. S. | Simulation of ductile fracture at high velocity impact of cylindrical tubes | 1st International Conference on Future Learning Aspects of Mechanical Engineering (FLAME - 2018), Amity University, Noida, October 3rd – 5th , 2018. | 2018 |  |  |
| 35 | Agrawal V., and Gautam S. S. | An isogeometric based study of mortar contact algorithm for frictionless sliding | 1st International Conference on Future Learning Aspects of Mechanical Engineering (FLAME - 2018), Amity University, Noida, October 3rd – 5th , 2018. | 2018 |  |  |
| 36 | Agrawal. V, and Gautam S. S. | Investigation of contact pressure oscillations with different segment-to-segment based isogeometric contact formulations | 1st International Conference on Numerical Modelling in Engineering, Ghent University, Belgium, August 28th – 29th , 2018. | 2018 |  |  |
| 37 | Agrawal. V, and Gautam S. S. | Comparison of explicit time integration schemes for dynamic problems | 13th World Congress on Computational Mechanics / 2nd Pan American Congress on Computational Mechanics (WCCM 2018)., July 23rd – 27th , 2018.. | 2018 |  |  |
| 38 | Noor, A., and Gautam S. S. | Finite element analysis of effect of surface roughness on particle erosion of ductile material | INCOM 2018 1st International Conference on Mechanical Engineering, Jadavpur University, Kolkata, India, January 4th – 6th, 2018 | 2018 |  |  |
| 39 | Deepak Sharma, Syed Zaheer Basha and Sandula Ajay Kumar, EMO 2019. | Diversity Over Dominance Approach for Many-Objective Optimization On Reference-Points-based Framework” “In: Deb K. et al. (eds) Evolutionary Multi-Criterion Optimization | Lecture Notes in Computer Science, 11411, pp 278 – 290. Springer, Cham |  |  |  |
| 40 | Deepak Sharma, Sukhomay Pal, Aayush Sahay, Puneet Kumar, Gaurav Agarwal, and Katravath Vignesh | “Local Search Heuristics based Genetic Algorithm for Capacitated Vehicle Routing Problem” | 2nd International Conference on Computational Methods in Manufacturing (ICCMM), 8 – 9 March 2019, IIT Guwahati, India. | 2019 |  |  |
| 41 | Riddhiman Saikia and Deepak Sharma | “Hybridizing Evolutionary Multi-Objective Algorithm Using Random Mutations and Local Searches” | in 2nd International Conference on Computational Methods in Manufacturing (ICCMM), 8 – 9 March 2019, IIT Guwahati, India. | 2019 |  |  |
| 42 | Utpal Kiran, Subhajit Sanfui, Shashi Kant Ratnakar, Sachin Singh Gautam, and Deepak Sharma | “Comparative Analysis of GPU-based Solver Libraries for A Sparse Linear System of Equations” | 2nd International Conference on Computational Methods in Manufacturing (ICCMM), 8 – 9 March 2019, IIT Guwahati, India | 2019 |  |  |
| 43 | Subhajit Sanfui and Deepak Sharma | "GPU Acceleration of Local Matrix Generation in FEA by Utilizing Sparsity Pattern" | In 1st International Conference on Mechanical Engineering (INCON 2018), 4–6 January 2018, Jadavpur University, India |  |  |  |
| 44 | P. Paul, K.S.R.K. Murthy and D. Chakraborty | Influence of the notch length on the optimal radial location of strain gage in a single edged notched plate | 1st International Conference of Emerging Trends in Mechanical Engineering (ICETME 2018), 20-22 December, SRIT, Anantapur, Andhra Pradesh. | 2018 |  |  |
| 45 | P. Paul, K.S.R.Krishna Murthy, and Debabrata Chakraborty | Effect of material properties on optimal radial strain gage locations in sharp V-notched configurations | 3rd International Conference on Design, Analysis, Manufacturing & Simulation (ICDAMS-2018), 6–7 April, Saveetha School of Engineering, Chennai. | 2018 |  |  |
| 46 | S. Sajith, K.S.R.K. Murthy, P.S. Robi | Accurate Estimation of Mixed Mode Stress Intensity Factors using Crack Flank Displacements | International Conference on Advances in Material and Manufacturing Engineering (ICAMME-2019), 15-17 March, Kalinga Institute of Industrial Technology, Bhubaneshwar | 2019 |  |  |
| 47 | S. Sajith, K.S.R.K. Murthy, P.S. Robi | Fatigue life prediction under mixed mode loading using equivalent stress intensity factor models | Proceedings of 3rd International Conference of Design, Analysis, Manufacturing & Simulation (ICDAMS 2018). April 6-7, Saveetha University, Chennai, India | 2018 |  |  |
| 48 | S Sajith, KSRK Murthy, PS Robi | Estimation of stress intensity factors from crack flank displacements | 3rd International Conference on Advances in Materials and Manufacturing Applications (IConAMMA 2018) August 16-18, Amrita School of Engineering, Bengaluru, India | 2018 |  |  |
| 49 | K Gopala Krishna, K Yaswanth, B V K Patnaik, D Chakraborty, K S R K Murthy | Finite element FCG simulations of turbine disk | 2nd National Aero Propulsion Conference NAPC-2018Dec 17-19, 2018, IIT Kharagpur, West Bengal | 2018 |  |  |
| 50 | M.K. Hussain and K.S.R.K. Murthy | Numerical examination of sharp V-notches using notch-flank displacement collocation method | International Conference on Advances in Material and Manufacturing Engineering (ICAMME-2019), 15-17 March, Kalinga Institute of Industrial Technology, Bhubaneshwar | 2019 |  |  |
| 51 | M.K. Hussain and K.S.R.K. Murthy | Numerical estimation of notch stress intensity factors of sharp V–notches | Proceedings of 3rd International Conference on Design, Analysis, Manufacturing & Simulation (ICDAMS-2018), 6-7 April, Saveetha School of Engineering, Chennai. | 2018 |  |  |
| 52 | M. K. Hussain and K. S. R. K. Murthy | Comparison of some least-squares methods for evaluation of the notch stress intensities of sharp V-notched configurations | 3rd International Conference on Advances in Materials and Manufacturing Applications (IConAMMA-2018), 16–18 August, Amrita School of Engineering, Bengaluru, India | 2018 |  |  |
| 53 | M.K. Hussain and K.S.R.K. Murthy | Evaluation of notch stress intensities at sharp V-notches using a point substitution method | Second International Conference On Structural Integrity (ICONS-2018), 14-17 December, Indian Institute of Technology Madras, Chennai. | 2018 |  |  |
| 54 | Debabrata Gayen, D. Chakraborty and R. Tiwari | Parametric study on free vibration and instability of a functionally graded cracked shaft in a rotor-disc-bearing system: finite element approach | 3rd International Conference on Design, Analysis, Manufacturing & Simulation (ICDAMS 2018), April 6-7, 2018, Saveetha University, Chennai, India. Paper No. 161 | 2018 |  |  |
| 55 | Kishor Kumar Gajrani, Y. Bishal Singha, Mamilla Ravi Sankar and Uday Shanker Dixit, | Tribological Performance of Graphite, CaF2 and MoS2 Coated Mechanical Micro-Textured Self-Lubricating Cutting Tool Material | CPIE-2018, 27th June 2018, Bangkok. | 2018 |  |  |
| 56 | Kishor Kumar Gajrani, Y. Bishal Singha, Mamilla Ravi Sankar and Uday Shanker Dixit | Tribological Performance of Graphite, CaF2 and MoS2 Coated Mechanical Micro-Textured Self-Lubricating Cutting Tool Material | CPIE-2018, 27th June 2018, Bangkok. | 2018 |  |  |
| 57 | M. Ravi Sankar, Vijay Kumar Jain, K.P. Rajukar, � | "Rheological and Nano-finishing Studies of Elastically Dominant Multiple Polymers Blend Abrasivve Flow Finishing Medium | 19th CIRP Conference on Electro Physical and Chemical Machining, 23-27 April 2018, Bilbao, Spain. | 2018 |  |  |
| 58 | Monami Bhuyan, Arnab Sarmah, Kishor Kumar Gajrani, Ashutosh Pandey, Tushar G. Thulkar, M. Ravi Sankar | "State of Art on Minimum Quantity Lubrication in Grinding Process" | 8th International Conference of Materials Processing and Characterization (ICMPC), 16-18 March, 2018, GRIET, Hyderabad, India. | 2018 |  |  |
| 59 | Rasmi Ranjan Behera, Abhsar Hasan, Lalit Mohan Pandey, M. Ravi Sankar, | "Laser Surface Bio-Coating of Functionally Graded TiO2-HAp on Textured Ti Alloy for Enhancing Bioactivity and Cell Profileration” |  |  |  |  |
| 60 | Swarup Banik, Navneet Kalita, Kishor Kumar Gajrani, Ramchandra Kumar, M. Ravi Sankar | "Recent Trends in Laser Assisted Machining of Ceramic Materials" | , 8th International Conference of Materials Processing and Characterization (ICMPC), 16-18 March, 2018, GRIET, Hyderabad, India | 2018 |  |  |
| 61 | Kishor Kumar Gajrani, M. Ravi Sankar, | "Cutting Fluids Emissions in Mechanical Machining and its Adverse Effects on Biodiversity" | 21stADNAT Convention and International Symposium on Biodiversity and Biobanking (BIODIVERSE-2018), 27-29 January, IIT Guwahati, India, 2018 | 2018 |  |  |
| 62 | Kishor Kumar Gajrani, Anupam Kumar, M. Ravi Sankar | "Fabrication of Biodegradable Magnesium Alloy (AZ 31) Thin Wall with Minimum Quantity Environmental Friendly Cutting Fluids" | 21st ADNAT Convention and International Symposium on Biodiversity and Biobanking (BIODIVERSE-2018), 27-29 January, IIT Guwahati, India, 2018. | 2018 |  |  |
| 63 | M. Ravi Sankar | "Nano-finishing of Bio-Implants using Polymer Rheological Abrasive Complex Suspensions" | 4th International Symposium on Advances in Sustainable Polymers (ASP-2018), 8-11 January, 2018, IIT Guwahati, India |  |  |  |
| 64 | Sarita Bharti, S Senthilvelan, | SURFACE DURABILITY OF POLYAMIDE 66 SPUR GEAR UNDER DRY AND OIL LUBRICANT CONDITION | FISITA 2018 Word Auotmotive Congress, 2-5 October 2018, Chennai,India | 2018 |  |  |
| 65 | Adidtya Kumar, Karthick Pandia, S Senthilvelan | BENDING FATIGUE PERFORMANCE OF INJECTION-MOLDED CARBON NANOTUBE REINFORCED POLYPROPYLENE SPUR GEARS | FISITA 2018 Word Auotmotive Congress, 2-5 October 2018, Chennai,India | 2018 |  |  |
| 66 | CD Nath, SM Hazarika | ‘Diagrams’: A Hybrid Visual Information Representation and Reasoning Paradigm Towards Video Analysis | International Conference on Theory and Application of Diagrams, 336-345. |  |  |  |
| 67 | Bikram P Bhuyan, Arindam Karmakar, Shyamanta M Hazarika, | Bounding Stability in Formal Concept Analysis, Advanced Computational and Communication | Paradigms, 2018, pp. 545-552 |  |  |  |
| 68 | KS Narkhede, SM Hazarika | Bionic Reflex Control Strategy for Robotic Finger with Kinematic Constraints | Proceedings of the 6th International Conference on Control, Mechatronics and Automation, AC |  |  |  |
| 69 | Anwesa Barman, Manas Das | Analysis of forces during spot finishing of titanium alloy using novel tool in magnetic field assisted finishing process, | Proceedings of the 13th Manufacturing Science and Engineering Conference MSEC2018, June 18-22, 2018, Texas A&M University, College Station, TX, USA, paper ID MSEC2018-6352. | 2018 |  |  |
| 70 | S. Shyam, B. Mehta and P. K. Mondal | “Thermohydrodynamics of ferrofluidic flow with periodic pulsation under the effect of static and alternating magnetic field-: a numerical study” | Proceedings of the 16th International Heat Transfer Conference, IHTC-16 August 10-15, 2018. | 2018 |  |  |
| 71 | P.V.S.S.Sridhar, Shailesh kumar, Kaushik Pal, Bhaskar Kumar Chakraborthy, Rituraj Bhattacharjee, Subhashis Majumder, Pankaj Biswas, Pinakeshwar Mahanta | Experimental Investigation and Mechanical Characterization of Double Sided Submerged Arc Welding of AISI 304 Austenitic Stainless Steel” | AIMTDR-2018, December 13-15, College of Engineering, Anna University,Chennai | 2018 |  |  |
| 72 | Pardeep Pankaj and Pankaj Biswas | Study of thermally induced residual stress and deformation in the CO2 laser welding of AISI 304 stainless steel thin plates | AIMTDR-2018, December 13-15, College of Engineering, Anna University,Chennai | 2018 |  |  |
| 73 | Pardeep Pankaj and Pankaj Biswas | Dissimilar FSW od DH36 shipbuilding steel and mild steel | AIMTDR-2018, December 13-15, College of Engineering, Anna University,Chennai | 2018 |  |  |
| 74 | Nandan Kanan Das, Arun Kadian, Avinish Tiwari, Pardeep Pankaj and Pankaj Biswas | “Transient Thermal Analysis of Friction stir welding of AA6061” | CPIE-2018, Thiland, Bankok. | 2018 |  |  |
| 75 | Avinish Tiwari, Pardeep Pankaj , Nandan Kanan Das and Pankaj Biswas, | “ Joint Quality Evaluation of Shipbuilding Grade DH36 Steel Using WC-10% Co Alloy Based FSW Tool | AIMTDR 2018, Anna University, Chennai | 2018 |  |  |
| 76 | Kumar Abhishek and Biswas Pankaj | “Effect of Process Parameters of Plasma Arc Preheating on Low Carbon Steel", | International Conference on Computational Methods in Manufacturing March 8-9, IIT Guwahati | 2018 |  |  |
| 77 | Avinish Tiwari, Pardeep Pankaj, Piyush Singh, Pankaj Biswas and Sachin D. Kore | FSW of DH36 shipbuilding grade steel | 5th International Conference on Production and Industrial Engineering (CPIE-2018), 26-29 June Bangkok, Thailand | 2018 |  |  |
| 78 | Sridhar P V S S, Vishnu Nair, Pankaj Biswas, and Pinakeswar Mahanta | Thermomechanical analyses of Single Sided Single pass Submerged arc welding of AISI 304 Austenitic Stainless Steel | ICCMM 2019, Mar 8-9, IIT Guwahati. | 2019 |  |  |
| 79 | Saurav Suman, Avinish Tiwari, Pardeep Pankaj, Pankaj Biswas | Numerical study of welding distortion in saw welded creep strength enhanced ferrite steel joint | International Conference on Recent Innovations and Developments in Mechanical Engineering, Nov-18, NIT Meghalaya. | 2018 |  |  |
| 80 | Saurav Suman, Avinish Tiwari, Pardeep Pankaj, Pankaj Biswas, Basil Kuriachen, Abhijit Sinha | Modelling of welding sequences for minimization of weld induced distortions and residual stresses | AIMTDR, Dec-18, Anna University | 2018 |  |  |
| 81 | Saurav Suman, Pardeep Pankaj, Avinish Tiwari, Pankaj Biswas, Basil Kuriachen, Abhijit Sinha | Effect of pre and post welding processes on the distortion pattern in a SAW welded butt joint of P91 steel plate | AIMTDR, Dec-18 Anna University | 2018 |  |  |
| 82 | Bordoloi D.J. and R. Tiwari | Monitoring of Induction Motor Mechanical and Electrical Faults by Optimum Multiclass-Support Vector Machine Algorithms Using Genetic Algorithm, Proceedings of IFToMM | 10th International Conference on Rotordynamics, September 23-27, 2018, Rio de Janeiro, Brazil. | 2018 |  |  |
| 83 | P. Gangsar and R. Tiwari | Performance Analysis of Support Vector Machine and Wavelet Packet Transform based Fault Diagnostics of Induction Motor at Various Operating Conditions | Proceedings of IFToMM 9th International Conference on Rotordynamics, September 23-27, 2018, Rio de Janeiro, Brazil | 2018 |  |  |
| 84 | J. S. Rapur and R. Tiwari, Multi Fault, | Diagnosis of Centrifugal Pumps with Time, Frequency and Wavelet based Features using Support Vector Machines | Proceedings of IFToMM 9th International Conference on Rotordynamics, September 23-27, 2018, Rio de Janeiro, Brazil. | 2018 |  |  |
| 85 | N. Sarmah and R. Tiwari | Identification of Crack and Internal Damping Parameters using Full Spectrum Responses from a Jeffcott Rotor Integrated with an Active Magnetic Bearing | Proceedings of IFToMM 9th International Conference on Rotordynamics, September 23-27, 2018, Rio de Janeiro, Brazil | 2018 |  |  |
| 86 | Siva Srinivas R. and R. Tiwari | Identification of Coupling Parameters in Flexibly Coupled Jeffcott Rotor Systems with Angular Misalignment and Integrated Through Active Magnetic Bearing, | Proceedings of IFToMM 9th International Conference on Rotordynamics, September 23-27, 2018, Rio de Janeiro, Brazil. | 2018 |  |  |
| 87 | P. Dinesh, M.R. Behera, P.G. Ranjith, N. Muthu | "Application of an efficient numerical model for CO2 sequestration in deep saline aquifers" | in 4th International Conference in Ocean Engineering, IIT Madras, Chennai, India, 2018 | 2018 |  |  |
| 88 | P. Dinesh, M.R. Behera, P.G. Ranjith, N. Muthu | "An Element-Free Galerkin (EFG) Meshfree Method Model for Carbon Sequestration" | 3rd International Conference on Multiphase Flow and Heat Transfer, Budapest, Hungary, 2018 | 2018 |  |  |
| 89 | P. Dinesh, M.R. Behera, P.G. Ranjith, N. Muthu | Multiscale modelling of fracture in wet porous media | 1st International Symposium on In-situ Modification of Deposit Properties for Improving Mining 2018 (IMDPIM2018), Taiyuan, China, 2018. | 2018 |  |  |
| 90 | Saurav Suman, Avinish Tiwari, Pardeep Pankaj, Pankaj Biswas | Numerical study of welding distortion in saw welded creep strength enhanced ferrite steel joint | International Conference on Recent Innovations and Developments in Mechanical Engineering, Nov-18, NIT Meghalaya. | 2018 |  |  |
| 91 | Saurav Suman, Avinish Tiwari, Pardeep Pankaj, Pankaj Biswas, Basil Kuriachen, Abhijit Sinha | Modelling of welding sequences for minimization of weld induced distortions and residual stresses | AIMTDR, Dec-18, Anna University. | 2018 |  |  |
| 92 | Saurav Suman, Pardeep Pankaj, Avinish Tiwari, Pankaj Biswas, Basil Kuriachen, Abhijit Sinha | Effect of pre and post welding processes on the distortion pattern in a SAW welded butt joint of P91 steel plate, | AIMTDR, Dec-18 Anna University | 2018 |  |  |
| 93 | A Mahapatro, P. Mahanta | Effect of Distributor Plate Design on The Hydrodynamics of A Pressurized Circulating Fluidized Bed | International Conference on Sustainable Energy and Environment Sensing,SEES-2018,18-19 June, 2018 at Fitzwilliam College, University of Cambridge, in Cambridge city, United Kingdom | 2018 |  |  |
| 94 | Bhaben Kalita and S. K. Dwivedy | Dynamic Analysis of a Parametrically Excited Golden Muga Silk Embedded Pneumatic Artificial | The 14th International Conference on Vibration Engineering and Technology of Machinery (VETOMAC XIV), Lisbon, Portugal, September 10-13, 2018 | 2018 |  |  |
| 95 | Bhaben Kalita and S. K. Dwivedy | Forced Vibration Analysis of a Silk Fibre Embedded Pneumatic Artificial Muscle | The 6th International Conference on Robot Intelligence Technology and Applications (RITA 2018), Putrajaya, Malaysia, December 16-18, 2018 | 2018 |  |  |
| 96 | S. Mohanty, S. Sikder and S. K Dwivedy | Nonlinear analysis of rotational inertial double tuned mass damper by Harmonic balance method. | First International Conference on Recent Innovations & Developments in Mechanical Engineering (IC-RIDME 2018), NIT Meghalaya, India,November 2018 | 2018 |  |  |
| 97 | S. Mohanty and S. K Dwivedy, | Nonlinear analysis of a hybrid vibration absorber for super-harmonic resonance condition Western Pacific Commission for Acoustics (WESPAC 2018), CSIR-National Physical Laboratory | New Delhi, India,November 2018 | 2018 |  |  |
| 98 | A. Garg and S. K. Dwivedy | Theoretical and Experimental Investigation of ParametricallyExcited Piezoelectric Energy Harvester | The 14th International Conference on VibrationEngineering and Technology of Machinery, VETOMAC XIV 2018, Lisbon, Portugal. DOI: 10.1051/matecconf/201821102009 | 2018 |  |  |
| 99 | Y Gawade, Sudip Shyam, Balkrishna Mehta | Pressure Characteristics of Single Isolated Ferrofluidic Slug under the Influence of External Magnetic Feild | , 7th International and 45th national conference on Fluid Mechanics and Fluid power, Dec 10-12, 2018, IIT Bombay | 2018 |  |  |
| 100 | Sudip Shyam, Balkrishna Mehta and Pranab Mondal | Thermo-hydrodynamics of ferrofluidic flow with periodic pulsation under the effect of static and alternating magnetic field | conference, IHTC 18, Beijing China, August 2018 | 2018 |  |  |
| 101 | Debabrata Chakraborty, Debaleena Chakraborty, and K. S R. K. Murthy | A finite element based procedure for accurate determination of mode I SIF of orthotropic materials based on two parameter strain series | 9th ICCM 2018, August 6-10, 2018, University of Sapienza, Rome, Italy | 2018 |  |  |
| 102 | Debabrata Gayen, D Chakraborty and Rajiv Tiwari | , Parametric study on free vibration and instability of a functionally graded cracked shaft in a rotor-disc-bearing system: finite element approach | 3rd International Conference on Design, Analysis, Manufacturing & Simulation (ICDAMS 2018), April 6-7, 2018, Saveetha University, Chennai, India. Paper No. 161 | 2018 |  |  |
| 103 | D. Shankar, M. Pandey, D.N. Basu | Coupled-Neutronic-Thermalhydraulic Stability Appraisal of Supercritical Forced Flow Channels Following Lumped Parameter Approach | Proceedings of 16 International Heat Transfer Conference (IHTC-16), Beijing, China, August 10-15, 2018, Paper ID IHTC16-23961. |  |  |  |
| 104 | D. Shankar, M. Pandey, D.N. Basu | Coupled-Neutronic-Thermalhydraulic Stability Appraisal of Supercritical Forced Flow Channels Following Lumped Parameter Approach | Proceedings of 16 International Heat Transfer Conference (IHTC-16), Beijing, China, August 10-15, 2018, Paper ID IHTC16-23961 | 2018 |  |  |
| 105 | D. Hirakh, Mahanta. P | EFFECT of SUPERFICIAL VELOCITY on the HYDRODYNAMIC BEHAVIOUR of a CONICAL FLUIDIZED BED: EXPERIMENTAL and NUMERICAL STUDIES | Proceedings of the 7th International and 45th National Conference on Fluid Mechanics and Fluid Power (FMFP) December 10-12, 2018, IIT Bombay, Mumbai, India, PAPER NO. 826 | 2018 |  |  |
| 106 | Haque N, Singh A, and Saha UK | Particle image velocimetry investigation of fluid flow in fractured porous media | 7th International and 45th National Conference on Fluid Mechanics and Fluid Power, December 10-12, IIT Bombay, Mumbai, India. | 2018 |  |  |
| 107 | Talukdar PK, Rathod UH, Kulkarni V, and Saha UK | Performance evaluation of vented Savonius wind turbines through wind tunnel testing | 7th International and 45th National Conference on Fluid Mechanics and Fluid Power, December 10-12, IIT Bombay, Mumbai, India. | 2018 |  |  |
| 108 | Dabi M and Saha UK | Performance and emission characteristics of a compression ignition engine run on vegetable oil-diesel blends and diethyl ether, | 7th International and 45th National Conference on Fluid Mechanics and Fluid Power, December 10-12, IIT Bombay, Mumbai, India. | 2018 |  |  |
| 109 | Haque N, Singh A, and Saha UK | A noble method for rapid prototyping of porous micromodels applicable to enhanced oil recovery, | International Conference on Recent Advances in Fluid and Thermal Sciences, December 5 – 7, Dubai, UAE | 2018 |  |  |
| 110 | Talukdar PK, Kulkarni V, and Saha UK | Performance characteristics of vertical-axis off-shore Savonius wind and Savonius hydro-kinetic turbines | Paper No. OMAE2018-78497, ASME 37th International Conference on Ocean, Offshore and Arctic Engineering, June 17 – 22, Madrid, Spain | 2018 |  |  |
| 111 | Alom N, Borah B, and Saha UK | An insight into the drag and lift characteristics of modified Bach and Benesh profiles of Savonius wind rotor | 4th International Symposium on Hydrogen Energy, Renewable Energy and Materials (HEREM), June 13 – 14, Bangkok, Thailand | 2018 |  |  |
| 112 | Hotta, S. K., Sahoo, N., Mohanty K., Mahanta, P | Effect of compression ratio on the performance of a constant speed spark ignition engine operating on raw biogas | 2nd International Conference on Sustainable Energy and Environmental Challenges, Jan 01-03, 2018, Indian Institute of Science, Bangalore, India | 2018 |  |  |
| 113 | Hotta, S. K., Sahoo, N., Mohanty K., Mahanta, P | Effect of compression ratio on the performance of a constant speed spark ignition engine operating on raw biogas | 2nd International Conference on Sustainable Energy and Environmental Challenges, Jan 01-03, 2018, Indian Institute of Science, Bangalore, India | 2018 |  |  |
| 114 | Hotta, S. K., Rout, A. K., Sahoo, N., Mohanty K | Effect of compression ratio on the cyclic variability and thermal efficiency of a biogas fueled spark igniton engine | 7th International and 45th National Conference on Fluid Mechanics and Fluid Power, Dec 10-12, 2018, Indian Institute of Technology, Bombay, India | 2018 |  |  |
| 115 | Gunjo, D.G., Mahanta, P | and Robi, P.S., 2019. Designing and Utilizing of the Solar Water Heater for Digestion of Lignocellulosic Biomass.. In Advances in Waste | Management (pp. 91-105). Springer, Singapore | 2019 |  |  |
| 116 | N. Bhardwaj, R. Ganesh Narayanan and U.S. Dixit | Refilling of pinhole in friction stir spot welding using waste chips, | 7th International and 28th All India Manufacturing Technology, Design and Research (AIMTDR) Conference, December 13-15, 2018, Anna University, Chennai. | 2018 |  |  |
| 117 | G.C. Verma, P.M. Pandey and U.S. Dixit, | Experimental investigations to evaluate machining accuracy of ultrasonic assisted milling on thin-walled structures | 7th International and 28th All India Manufacturing Technology, Design and Research (AIMTDR) Conference, December 13-15, 2018, Anna University, Chennai. | 2018 |  |  |
| 118 | F. Chen, J. Zhang, M. Wu, X. Chu and U.S. Dixit | Design of open battery pack interface for electric vehicle personalization | 7th International and 28th All India Manufacturing Technology, Design and Research (AIMTDR) Conference, December 13-15, 2018, Anna University, Chennai. | 2018 |  |  |
| 119 | A. Raj, A. Ch Borsaikia and U.S. Dixit | Manufacturing of autoclaved aerated concrete (AAC): present status and future trends | 7th International and 28th All India Manufacturing Technology, Design and Research (AIMTDR) Conference, December 13-15, 2018, Anna University, Chennai. | 2018 |  |  |
| 120 | A. Bisht, A. Roy, U. S. Dixit, S. Suwas and V.V. Silberschmidt | Small-scale machining simulations | 2nd International Conference on Computational Methods in Manufacturing March 8-9, 2019, IIT Guwahati. | 2019 |  |  |
| 121 | Shranish KAR, Poonam KUMARI | Three Dimensional Bending Solution Of Cylindrical Shell Panel Having Arbitrary Edge Support Conditions Using Extended Kantorovich Method | 10th International Conference on Material for Advanced Technologies, Singapore from 23 to 28 June, 2019 | 2019 |  |  |
| 122 | Agyapal SINGH, Poonam KUMARI, Ehtesham HUSSAIN | Analytical Free Vibration Solution Of Functionally Graded Beam Having Longitudinal Stiffness Variation | 10th International Conference on Material for Advanced Technologies, Singapore from 23 to 28 June, 2019 | 2019 |  |  |
| 123 | Susant Behera, Poonam Kumari | Free Vibration Analysis of Levy-type Hybrid Plates using Three-dimensional Extended Kantorovich Method | Second International Conference On Structural Integrity, ICONS2018, IIT Madras, 14-18 December, 2018 | 2018 |  |  |
| 124 | Ahmed F. and Kalita K | Controllability of Radial Displacement in Bearingless Switched Reluctance Motor with Bridge Configured Winding | August 2018, International symposium on Magnetic Bearings 16 (ISMB16), Beijing, China. | 2018 |  |  |
| 125 | Arnab Kr. De | , A diffuse interface immersed boundary method for complex moving boundary problems | Journal of computational Physics , Vol. 366, 226-251, 2018. | 2018 |  |  |
| 126 | A. K. De, V. Eswaran and P. K. Mishra | Dynamics of plumes in turbulent Rayleigh-Bénard convection | European Journal of Mechanics - B/Fluids , vol. 72, 164-178, 2018 | 2018 |  |  |
| 127 | G. Bolar and S. N. Joshi | An Experimental Investigation on Productivity and Product Quality during Thin-Wall Machining of Aluminum alloy 2024-T351 | 7th International and 28th All India Manufacturing Technology, Design and Research (AIMTDR) Conference, December 13-15, 2018, Anna University, Chennai. | 2018 |  |  |
| 128 | U. Sarma and S. N. Joshi | Effect of Laser Parameters on Laser Induced Plasma Assisted Ablation (LIPAA) of Glass | 7th International and 28th All India Manufacturing Technology, Design and Research (AIMTDR) Conference, December 13-15, 2018, Anna University, Chennai. | 2018 |  |  |
| 129 | S. Das and S N Joshi | Thermal modelling and simulation of crater generation on wire electrode during wire EDM operation | 7th International and 28th All India Manufacturing Technology, Design and Research (AIMTDR) Conference, December 13-15, 2018, Anna University, Chennai. | 2018 |  |  |
| 130 | V. Singh and S N Joshi | Computation of End-Cutting-Edge Wear of Single Point Cutting Tool using Image processing | International Conference on Computational Methods in Manufacturing, March 8-9, 2019, IIT Guwahati | 2019 |  |  |
| 131 | B Barkachary and S N Joshi | Numerical Simulation and Experimental Validation of Nanoindentation of Silicon using Finite Element Method | International Conference on Computational Methods in Manufacturing, March 8-9, 2019, IIT Guwahati | 2019 |  |  |
| 132 | B. Barkachary and S N Joshi | Numerical modeling and simulation of plunge cutting of silicon using finite element method | , International Conference on Recent Innovations & Developments in Mechanical Engineering (IC-RIDME 2018) during November 8-10, 2018, NIT Meghalaya | 2018 |  |  |
| 133 | J. Kumar, S. Das and S N Joshi | Three-dimensional numerical modelling of temperature profiles on the wire electrode during wire electric discharge machining process | ,  International Conference on Recent Innovations & Developments in Mechanical Engineering (IC-RIDME 2018) during November 8-10, 2018, NIT Meghalaya | 2018 |  |  |
| 134 | U. Sarma and S N Joshi | Two-dimensional numerical investigation on the effect of laser parameters during laser indirect machining of glass | , International Conference on Recent Innovations & Developments in Mechanical Engineering (IC-RIDME 2018) during November 8-10, 2018, NIT Meghalaya | 2018 |  |  |
| 135 | A. Iqbal, S. K. Sarma and M. Pandey | . Non-adiabatic Flow Characteristics of Dielectric Fluids in Trapezoidal Microchannel | Proceedings of the 7th International and 45th National Conference on Fluid Mechanics and Fluid Power December 10-12, 2018, IIT Bombay, Mumbai, India | 2018 |  |  |
| 136 | A. Kumar, R. Gupta, A. Iqbal, S. K. Sarma and M. Pandey | µ-PIV Measurement in a Microtube. | Proceedings of the 7th International and 45th National Conference on Fluid Mechanics and Fluid Power December 10-12, 2018, IIT Bombay, Mumbai, India | 2018 |  |  |
| 137 | K. Saikia, D.N. Basu, M. Pandey | Effect of Subcooling on the Instabilities of a Two-Phase Natural Circulation System | Proceedings of the 7th International and 45th National Conference on Fluid Mechanics and Fluid Power December 10-12, 2018, IIT Bombay, Mumbai, India | 2018 |  |  |
| 138 | R. Kumar, M. Pandey | Three Dimensional Simulation of a Condensing Taylor Bubble in a Microchannel | Proceedings of the 7th International and 45th National Conference on Fluid Mechanics and Fluid Power December 10-12, 2018, IIT Bombay, Mumbai, India | 2018 |  |  |
| 139 | S. Ahmed, M. Pandey | Study of Transport Phenomena in the Evaporator of Two-phase Capillary Devices using Thin Film Evaporation Model, | Joint 19th International Heat Pipe Conference and 13th International Heat Pipe Symposium, Pisa, Italy, June 10-14, 2018 | 2018 |  |  |
| 140 | R. Kalule, S.K. Sarma, A. Iqbal, M. Pandey | , A Study on the Onset of Annular Two-Phase Flow in a Microchannel, | 12th International Conference on Thermal Engineering: Theory and ApplicationsFebruary 23-26, 2019, Gandhinagar, India | 2019 |  |  |
| 141 | M.Pandey | Coupled-Neutronic-Thermalhydraulic Stability Appraisal of Supercritical Forced Flow Channels Following Lumped Parameter Approach | Proceedings of the 16th International Heat Transfer Conference, IHTC-16, August 10-15, 2018, Beijing, China | 2018 |  |  |

**Book, Book Chapter, etc. (PERIOD: 1 APRIL 2018 – 31 MARCH 2019)**

**Total No. of Books published: 6**

**Total No. of Book Chapters published: 36**

**Format for submission of Book**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Sl. No. | Name of Author/s | Name of Book | Publisher | Volume and Issue No. (If any) | Total Page No. | ISBN | Year of Publication |
| 1 | S.S. Pande and U.S. Dixit (Editors) | Precision Product-Process Design and Optimization: Select Papers from AIMTDR 2016 | Springer, Singapore | 434 |  | 9789811087677 | 2018 |
| 2 | U.S. Dixit and R. Kant (Editors) | Simulations for Design and Manufacturing: Select Papers from AIMTDR 2016 | Springer, Singapore | 292 |  | 9789811085178 | 2018 |
| 3 | U.S. Dixit, S.N. Joshi and J. Paulo Davim (Eds.) | Application of Lasers in Manufacturing: Select Papers from AIMTDR 2016 | Springer, Singapore | 253 |  | 9789811305566 | 2018 |
| 4 | U.S. Dixit and R. Ganesh Narayanan | Strengthening and Joining by Plastic Deformation: Select Papers from AIMTDR 2016 | Springer, Singapore | 246 |  | 978-981-13-0378-4 | 2019 |
| 5 | U Biswas, A Banerjee, S Pal, A Biswas, D Sarkar, S Haldar (Editors) | Advances in Computer, Communication and Control - Proceedings of ETES 2018 | Springer Singapore | 563 |  | 978-981-13-3122-0 | 2019 |
| 6 | P Muthukumar ( Editor) | International Conference on Advanced Functional Materials 2017 (ICAFM’17), | Materials today (Elsevier), Volume 5, Issue 6, Part 2, Pages 14215-14638 (2018), |  |  |  |  |

**Format for submission of Book Chapter, etc.**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Sl. No. | Name of Author/s | Name of Paper | Name of Book | Publisher | Volume and Issue No. (If any) | Page No. | ISBN | Year and Date of Publication |
| 1 | Sathisha, H.M., Dalal, A. |  | An Unsteady Model to Study the Effects of Porosity and Temperature in All-Vanadium Redox Flow Battery with Mass Transfer and Ion Diffusion | Springer | 2 | 379-396 | 978-981-10-8392-1 | 2018 |
| 2 | Kishor Kumar Gajrani, Mamilla Ravi Sankar |  | Encyclopedia of Renewable and Sustainable Materials | Elsevier |  |  |  | 2018 |
| 3 | Kishor Kumar Gajrani, Y Bishal Singha, Mamilla Ravi Sankar, Uday Shanker Dixit |  | Tribological and Machining Performance of Graphite, CaF2 and MoS2Coated Mechanical Micro-textured Self-Lubricating Cutting Tool | Springer |  |  | Accepted | 2018 |
| 4 | Chandan Kumar, Manas Das, C. P. Paul, B. Singh |  | Experimental study of fiber laser beam welding of 5 mm thick Ti-6Al-4V alloy, Applications of Lasers in Manufacturing | Springer |  |  | 978-981-13-0556-6\_3. | 2018 |
| 5 | D. Sam Dayala Dev, Enni Krisha, Manas Das |  | Novel Finishing Process Development for Precision Complex-Shaped Hemispherical Shell by Bulk Plasma Processing, Precision Product-Processes Design and Optimization | Springer |  |  | 978-981-10-8767-7\_12 | 2018 |
| 6 | Manas Das, U. S. Dixit |  | Advanced Machining Processes, Introduction to Mechanical Engineering | Springer |  | 45-67 | 978-3-319-78488-5\_9 | 2018 |
| 7 | Jana, K., Mahanta, P. and De, S |  | Role of Biomass for Sustainable Energy Solution in India | Springer, Singapore. |  |  |  | 2018 |
| 8 | Mallick, D., Buragohain, B., Mahanta, P. and Moholkar, V.S., |  | Gasification of Mixed Biomass: Analysis Using Equilibrium, Semi-equilibrium, and Kinetic Models | Springer, Singapore. |  | 269-296 |  | 2018 |
| 9 | Mallick, D., Mahanta, P. and Moholkar, V.S |  | Synergistic Effects in Gasification of Coal/Biomass Blends: Analysis and Review | Springer, Singapore. |  | 209-233 |  | 2018 |
| 10 | NK Mishra, P Muthukumar, Snehasish Panigrahy |  | A Review on Clean Combustion Within Porous Media | Springer Nature Singapore Pte Ltd. |  | 223-241 |  | 2018 |
| 11 | Muthukumar P, Hakeem Niyas |  | Materials, Design and Development of Latent Heat Storage Systems for Medium and Large-scale Applications: Issues and Challenges | Elsevier |  | 473-497 |  | 2018 |
| 12 | Avinish Tiwari, Piyush Singh, Pankaj Biswas, and Sachin D. Kore, |  | Friction stir welding of low carbon steel”: Multidisciplinary Industrial Engineering 978-3-319-96967-1, 453805\_1\_En, (10), (2018) (Accepted). |  |  |  |  | 2018 |
| 13 | Avinish Tiwari, Piyush Singh, Pankaj Biswas, and Sachin D. Kore, |  | “Friction stir welding of shipbuilding grade DH36 steel: Multidisciplinary Industrial Engineering (2018)(Accepted). |  |  |  |  | 2018 |
| 14 | Pardeep Pankaj, Rakesh Bhadra, Avinish Tiwari, Pankaj Biswas, and Sachin D. Kore, |  | “Transient thermal analysis of CO2 laser welding of AISI 304 stainless steel thin steel: Lecture Notes on Multidisciplinary Industrial Engineering (2018) |  |  |  |  | 2018 |
| 15 | Pardeep Pankaj, Rakesh Bhadra, Avinish Tiwari, Pankaj Biswas, and Sachin D. Kore, |  | “Dissimilar friction stirs welding of DH36 shipbuilding steel and Mild steel: Lecture Notes on Multidisciplinary Industrial Engineering (2018) xx.xxx (Accepted) |  |  |  |  | 2018 |
| 16 | Nandan Kanan Das, Arun Kadian, Avinish Tiwari, Pardeep Pankaj and Pankaj Biswas, |  | “Transient Thermal Analysis of Friction stir welding of AA6061”: Manufacturing Engineering 978-3-319-96967-1, 453805\_1\_En, (10), (2018) |  |  |  |  | 2018 |
| 17 | K K Basumatary, S K Kakoty and K Kalita |  | Stability Analysis of a Rigid Rotor Supported on Gas Foil Bearings under Different Loading Conditions | Springer, Singapore. |  |  |  | 2018 |
| 18 | S.M. Hazarika and U.S. Dixit |  | Robotics: history, trends and future directions, Introduction to Mechanical Engineering, Edited by J. Paulo Davim | Springer London |  | 213-239 | 978-3-319-78488-5 | 2018 |
| 19 | A Bhowmick, SM Hazarika |  | E-mail spam filtering: a review of techniques and trends | Springer | Lecture Notes in Electrical Engineering Vo. 443. |  |  | 2018 |
| 20 | Devarshi Kashyap, Charan Mukundan and S.Kanagaraj |  | Manufacturing and characterization of shape memory polymers and composites | CRC press |  | 43-73 | 9.7815E+12 | 2018 |
| 21 | Bolar G. and Joshi S. N |  | Numerical Modeling and Experimental Validation of Machining of Low-Rigidity Thin-Wall Parts". In: Pande S. S. and Dixit U. S. eds. Precision Product-Process Design and Optimization. Springer, pp. 99-122. |  |  |  |  | 2018 |
| 22 | Kant R. and Joshi S. N. |  | A Numerical Investigation into the Effect of Forced Convection Cooling on the Performance of Multi-scan Laser Bending Process". In: Dixit U. S., Joshi S. N. and Davim J. P. eds. Application of Lasers in Manufacturing. Springer, pp. 21-43. |  |  |  |  | 2018 |
| 23 | P. S. Robi, Sukhomay Pal, and Biswajit Parida |  | Recent Trends and Advances in Friction Stir Welding and Friction Stir Processing of Metals | CRC Press |  | 715-751 | 9.78114E+12 | 2018 |
| 24 | Varun Sharma, Pulak M. Pandey, Uday S. Dixit, Anish Roy, Vadim V. Silberschmidt, |  | Ultrasonic assisted turning: a comparative study of surface integrity, in Precision Product-Process Design and Optimization: Select Papers from AIMTDR 2016, | Springer Singapore |  | 337-360 | 9.78981E+12 | 2018 |
| 25 | T.K. Gogoi and U.S. Dixit |  | Basics and applications of thermal engineering, Introduction to Mechanical Engineering, Edited by J. Paulo Davim | Springer London |  | 137-178 | 978-3-319-78488-5 | 2018 |
| 26 | S.M. Hazarika and U.S. Dixit |  | Robotics: history, trends and future directions, Introduction to Mechanical Engineering, Edited by J. Paulo Davim | Springer London |  | 213-239 | 978-3-319-78488-5 | 2018 |
| 27 | M. Das and U.S. Dixit |  | Advanced machining processes, Introduction to Mechanical Engineering, Edited by J. Paulo Davim, | Springer London |  | 269-296 | 978-3-319-78488-5 | 2018 |
| 28 | Achinta Sarkar, Maryom Dabi and Ujjwal K. Saha |  | Supplementing the energy need of diesel engines in Indian transport and power sectors | Springer |  | 26 | 978-981-10-7508-7 | 2018 |
| 29 | Deb, S., Kalita, K., & Mahanta, P |  | Distribution Network Planning in presence of Electric Vehicle Charging station loads. In Smart Power Distribution Systems | Elsevier |  |  | 9.78013E+12 | 2018 |
| 30 | M. Hazarika, U.S. Dixit and J. Paulo Davim |  | History of production and industrial engineering through contributions of stalwarts, Manufacturing Engineering Education | Chandos Publishing |  | 29 | 978-0-08-101247-5 | 2019 |
| 31 | K K Basumatary and K Kalita |  | Stability Analysis of a Rigid Rotor supported on Gas Foil Bearings under Different Loading Conditions | Springer | Machines, Mechanism and Robotics. Lecture Notes in Mechanical Engineering | pp 61-71 | ISBN(Online) 978-981-10-8597-0, ISBN(Print) 978-981-10-8596-3 | 2018 |
| 32 | Ashutosh Kumar |  | A Variable Viscosity Technique for the Analysis of Static and Dynamic Performance Parameters of Three-Lobe Fluid Film Bearing Operating with TiO2-Based Nanolubricant | Springer Singapore | Manufacturing Engineering Select Proceedings of CPIE 2018 | pp 1-16 | ISBN 978-981-13-6287-3 | 2019 |
| 33 | Hakeem N, Muthukumar P |  | Springer Proceedings in Energy, DOI 10.1007/978-981-10-4576-9\_2 | Springer | Springer Proceedings in Energy |  | DOI 10.1007/978-981-10-4576-9\_2 |  |
| 34 | Chilaka RCR, Hakeem N, Likhendra P and Muthukumar P |  | Springer Proceedings in Energy, DOI 10.1007/978-981-10-4576-9\_16. | Springer | Springer Proceedings in Energy, |  | DOI 10.1007/978-981-10-4576-9\_16. |  |
| 35 | Niraj Kumar Mishra, Snehasish Panigrahy, Muthukumar P. |  | Springer Nature Singapore Pvt Ltds., Book ISBN: 978-981-10-7184-3, pp 209/224. | Springer |  |  | Book ISBN: 978-981-10-7184-3, pp 209/224. |  |
| 36 | Muthukumar P, Hakeem Niyas |  | Elsevier, 2018 |  |  |  |  |  |

1. **Conferences/Workshops/Symposia Attended: International, National**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name of Faculty | Name of Conf./Workshop | Place | Date | International/National |

1. **Invited Lectures of Faculty: In India, Abroad (Please do not repeat entries from Sl. No. 10)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name of Faculty | Name of Lecture | Name of Inst./Org. | Place | Date |
| Amaresh Dalal | Numerical Simulations of Two-Chamber Microbial Fuel Cell | Invited Lecture, National ILan University, Taiwan | ILan, Taiwan | 8th March, 2019 |
| Amaresh Dalal | Anupravaha: Development of a General Purpose CFD Solver | Invited Lecture, NIT Meghalaya | Shillong, Meghalaya, India | 19th December, 2018 |
| Amaresh Dalal | Lessons from AnuPravaha: Towards a General Purpose Computational Framework on Hybrid Unstructured Meshes for Multiphysics Applications | Keynote Lecture, 4th International Conference on Computational Methods for Thermal Problems, July 9-11, 2018, Indian Institute of Science, Bangalore | Bangalore, India | 11th July, 2018 |
| Amaresh Dalal | Lessons from Anupravaha: Towards a General Purpose Computational Framework on Hybrid Unstructured Meshes for Multi-Physics Applications | TEQIP, Dibrugarh University | Dibrugarh, India | 26th May, 2018 |
| Amaresh Dalal | Drop Impact on a Liquid Pool | TEQIP, Dibrugarh University | Dibrugarh, India | 25th May, 2018 |
| U.S. Dixit | Manufacturing, Friction | Institute of Engineering and Technology, Dibrugarh University | Dibrugarh, India | 27th March, 2018 |
| Sukhomay Pal | Sensor based weld defects detection system in friction stir welding | 1st International Conference on Emerging Trends on Engineering and Science (ETES:2018) | Asansol, West Bengal | 24th March, 2018 |
| S Kanagaraj | Synthesis and characterization of ceria based solid solution as a radical scavenger in cochlear implants | Madras University | Chennai | 16th March, 2018 |
| Ujjwal K. Saha | Understanding Aerospace Engineering (6 Lectures) | Dibrugarh University | Dibrugarh | 26th March, 2018 |
| Ujjwal K. Saha | Aeronautics for Beginners (One-day Workshop) | IIIT Bhagalpur, Bihar | Bhagalpur | 13th April, 2018 |
| S. K. Dwivedy | Recent Advances in Dynamic Analysis of Flexible Robotic Manipulators | workshop on Recent Advances in Mechatronics and Robotics | NIT Meghalaya | 22nd – 24th March, 2018 |
| S. K. Dwivedy |  | NIT Silchar |  |  |
| P Muthukumar | Green energy Technologies | NIT Jamshedpur | NIT Jamshedpur | 9th March |
| P Muthukumar | Green Hydrogen – A future Energy Career | 12th Int Conf on Thermal Engineering: Theory and Applications, February 23-26, 2019, | Gandhinagar, India | 26th February, 2019 |
| P Muthukumar | Development and testing of large scale metal hydride based hydrogen storage device for automobile and stationary applications | Indian Oil Corporation | Delhi | 7th December, 2018 |
| P Muthukumar | Green Energy Technologies: A summary of Research Activates on Hydrogen and Thermal Energy Storage Systems carried out at IIT Guwahati |  | USA | 27th April, 2018 |
| P Muthukumar | Thermal Energy Storage Systems for Concentrated Solar Thermal Power Plant Applications | Wichita state University, USA | USA | 24th April, 2018 |
| P Muthukumar | Hydrogen - A Future Green Energy Carrier | Wichita state University, USA | USA | 27th March, 2018 |
| U.S. Dixit | laser forming and coating | National Seminar on Advanced Research in Mechanical Engineering (NSARME-2018), at NIT Manipur |  | 4th - 5th April, 2018 |
| U.S. Dixit | Elasticity | TEQUIP at Institute of Engineering and Technology, Dibrugarh University, | Dibrugarh | 24th May, 2018. |
| U.S. Dixit | Modelling of Manufacturing Processes: A Historical Perspective, | at CPIE 2018 in Bangkok | Bangkok | 27th June, 2018 |
| U.S. Dixit | “Lasers Based Manufacturing” | NERIST Nirjuli | Itanagar | 17th September, 2018 |
| U.S. Dixit | How Can We Use Soft Computing in Design and Manufacturing?” | Shantou University | China | 16th October, 2018 |
| U.S. Dixit | Sustainable Machining Processes | IIT Guwahati (TEQUIP) | IIT Guwahati | 22nd – 24th October, 2018 |
| U.S. Dixit | Soft Computing Applications in Design and Manufacturing | NIT Patna | Patna | 4th June, 2018 |
| G. Biswas | Different Regimes of Pool Boiling | I2CNER Annual Symposium on Challenges in Thermal Science and Engineering, Towards a Sustainable Society | Kyushu University | 31st January – 2nd February |
| G. Biswas | Bubble Dynamics in Various Regimes of Boiling | Fifth International; Conference in Thermal Problems 2018 | IISc Bangalore | 9th – 11th July |
| G. Biswas | Dynamics of Vapor Bubbles in Film and Nucleate Boiling | Advanced Measurements and Multiscale CFD Simulations for Intensification of Multiphase Flow Processes, Indo-German Symposium, | IIT Delhi | 3rd – 5th October |
| P. K. Mondal | Recent Advances in Heat and Fluid Flow | Govt. College of Engineering and Textile Technology, Berhampore | West Bengal | 18th – 22nd October |
| P. K. Mondal | Microscale multiphase transport | TEQIP, NIT Arunachal Pradesh | Arunachal Pradesh, India | 9th March, 2018 |
| Shrikrishna N Joshi | Industry 4.0, | National Productivity Week - 2018 | Bongaigaon Refinery | Indian Oil Corporation Limited (IOCL), Bongaigaon, Assam, India. |  |
| Shrikrishna N Joshi | ED based surface alloying | TEQIP3 MPST 2018 | NIT Silchar | 1st October, 2018 |
| Shrikrishna N Joshi | Laser based forming | TEQIP3 MPST 2018 | NIT Silchar | 2nd October, 2018 |
| Shrikrishna N Joshi | Sensors used in manufacturing automation | TEQIP3 lecture series | NIT Arunachal Pradesh | 1st November, 2018 |
| Shrikrishna N Joshi | Laser micro-bending | TEQIP3 lecture series | NIT Arunachal Pradesh |  |
| S K Dwivedy |  | TEQIP Lecture | NIT Silchar |  |
| S K Dwivedy |  | TEQIP Lecture | NIT Meghalaya |  |
| S K Dwivedy | Introduction to linear and nonlinear vibration Analysis of Mechanical Systems: Theory and Hands on Practice Session | TEQIP Lecture | IIT Guwahati | 4th December, 2018 |
| S K Dwivedy | Nonlinear Dynamic Analysis of Smart piezoelectric and Magneto-Rheological Elastomer based Structures | National Workshop on Emerging Applications of Nonlinear Dynamics and Chaos in Science and Engineering | IIT Jodhpur | 14th December, 2018 |
| Rajiv Tiwari | Vibration Analysis of Rotating Components Using Modern Tools | TEQIP 3 | Jorhat Engineering College | 7th – 8th September |
| Rajiv Tiwari | Condition Monitoring of Rotating Machineries Based on Vibrations | TEQIP Lecture | IIT Guwahati | 4th – 8th December |
| S K Kakoty | Society and Technology | Prof A K Padmapati Memorial Lecture | Ban Theatre, Tezpur | 8th December |
| Pankaj Biswas | 4-lectures on Welding Symbols and Joint Design, Physics of welding, Advanced Welding Research (Invited talk ) | Assam Engineering College (28th August) |  |  |
| Pankaj Biswas | 2-lectures on Vibration and Noise Analysis using Ansys (Invited talk ) | TEQIP-III- Short-term courses, IIT Guwahati on Vibration and Noise Analysis of Mechanical Systems, from 04-08 Dec, 2018, |  |  |
| Pankaj Biswas | 2-Lectures on Nomenclature of Butt welds and Fillet welds | Short Term Certificate Course in Welding Technology from Oct 3 to Oct 14, 2018 at ME workshop.(10th October) |  |  |
| Pankaj Biswas | 3-Lectures on SMAW consumables, types, identification | Short Term Certificate Course in Welding Technology from Oct 3 to Oct 14, 2018 at ME workshop.(7th October) |  |  |
| Pankaj Biswas | 3-lectures on Basics of welding and, Physics of welding, Metal transfer in welding (Invited talk ) | "TEQIP-III- Short-term courses, IIT Guwahati on Advances in Welding Research and Technology |  |  |
| Pankaj Biswas | Classification of Welding and Joints (Invited talk ) | ,from 26-30 Nov, 2018," |  |  |
| Satyajit Panda | "Passive damping of thin-walled structures through the design of viscoelastic composites | Workshop on basic welding technology, IIT Guwahati (July 2018) | NIT Jalandhar, India | 22nd December |
| Nelson Muthu | Analytical and Experimental Studies on Detection of Longitudinal, L and Inverted T Cracks in Isotropic and Bi-material Beams Based on Changes in Natural Frequencies | TEQIP Lecture - Vibration and Noise Analysis of Mechanical Systems | IIT Guwahati | 4th December, 2018 |
| Nelson Muthu | Connecting Doctors, Researchers and Entrepreneurs  for Indigenous Medical Device Innovation | QIP - Short Term Course  On  “Current Status and Requirements of Biomedical Devices | IIT Guwahati | 25th March, 2019 |

1. **Visitors From Other Institutes / Universities / Organisations / Invited Lectures**

(**Only distinguished visitors invited by appropriate authority**)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Name of Inst./Univ./Org. | Purpose/ Name of Lecture | Date | Remarks |
| Prof. Atul Sharma | IIT Bombay, India | To conduct PhD Viva Voce | 15th November, 2018 |  |
| Prof. Partha P. Mukherjee | Purdue University, USA | To Deliver Departmental Lecture | 27th July, 2018 |  |
| Professor Narendra Dahotre | University Distinguished Research Professor of the Department of Materials Science and Engineering, University of North Texas (UNT) | To Deliver Departmental Lecture | 25th October, 2018 |  |
| Professor K. Ramamurthi | Former Scientist, ISRO and Former Professor, IIT Madras | To Deliver Departmental Lecture | 29th October, 2018 |  |
| Dr. Damodara Reddy | Institute of High Performance Computing (IHPC), A-STAR Singapore | To Deliver Departmental Lecture | 12th November, 2018 |  |
| Prof. A. M. Rajendran | University of Mississippi, Oxford, USA | Departmental seminar cum faculty interaction | 9th October, 2018 |  |
| Mr. Umashankar | Center for Simulation Excellence (CSE), Simulia, Bengaluru | Colloboration | 4th May, 2018 |  |

1. **Seminars/Workshops/Conferences/Short-Term Courses Organised**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Sl. No. | Name of Faculty (Convener/ Co-ordinator, etc.) | Name of Sem./Wor./Con. | Funded By | Date | International/ National | No. of participants |
| 1 | P Muthukumar | ISHRAE-AICTE Five Day Refresher Course on Refrigeration and Air Conditioning |  | 2nd – 6th July, 2018 |  |  |
| 2 | P Muthukumar | TEQIP III Short therm course on “Energy Efficient and Green Energy Technologies”- IIT Guwahati |  | 26th – 30th November, 2018 |  |  |
| 3 | U.S. Dixit and M. R. Sankar | TEQIP III Short therm course on “Sustainable Machining Processes”- IIT Guwahati |  | 22th – 26th October, 2018 |  |  |
| 4 | S K Dwivedy | TEQIP III Short Term Course on Vibration and Noise Analysis of Mechanical Systems |  | 4th – 8th December, 2018 |  |  |
| 5 | S K Kakoty and Karuna Kalita | SERB School on Noise and Vibration |  |  |  |  |
| 6 | P. C. Kalita, S. Pal and D. Sharma | Training Program on Marketing Management |  | 24th – 28th September, 2018 |  |  |
| 7 | Panakj Biswas & S. Pal | TEQIP III Short therm course on “Advances in welding research and technology”- IIT Guwahati |  | 26th – 30th November, 2018 |  |  |
| 8 | S. M. Hazarika | TEQIP III Short Term Course on Fundamentals of Robotics and Artificial Intelligence |  | 4th – 8th  February, 2019 |  |  |
| 9 | S. M. Hazarika | Workshop on Artificial Intelligence, Robotics & Machine Learning under AICTE Teaching And Learning (ATAL) Academy |  | 22nd – 26th February, 2019 |  |  |

**A brief report on the major NATIONAL and INTERNATIONAL events with photographs may also be given separately in addition to the format given above.**

1. **Patents:**

**No. of Patents Applied with details 15**

**No. of Patents Granted with details …………………………….**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Sl. No. | Name of Faculty and co researcher | Name | Date Applied/Granted | Application No. | Remarks |
| 1 | Vimal Katiyar, M. Ravi Sankar, Arbind Prasad | Process for the preparation of resorbable polymeric composite U type bone staple |  |  |  |
| 2 | Vimal Katiyar, M. Ravi Sankar, Arbind Prasad | Process for the preparation of polymer based Cancellous screws and pins |  |  |  |
| 3 | Vimal Katiyar, M. Ravi Sankar, Arbind Prasad | Resorbable cortical screw |  |  |  |
| 4 | Vimal Katiyar, M. Ravi Sankar, Arbind Prasad | Resorbable polymer composite bone plate |  |  |  |
| 5 | Avilash Sahu, S K Dwivedy, P.S. Robi | Underwater vehicle |  |  |  |
| 6 | Nandan Kanan Das and Pankaj Biswas, | “Design and development of JIG & FIXTURE for fabrication of cylindrical pin profile of FSW tool of tungsten carbide material using Wire EDM. |  | Ref. No. 240P1901 |  |
| 7 | U.S. Dixit, A.Ch. Borsaikia, A. Raj | Autoclaved aerated concrete(aac) block unit comprising in-built anchorage/frog on surface for enhancement of bonding and lateral/shear strength in masonry wall system |  | patent 201831028883 |  |
| 8 | Juan Chowdhury, Gaurav Kumar, Karuna Kalita, Sashindra K Kakoty | Linear Switched Reluctance Actuator for Powerloom |  | 201731045107 |  |
| 9 | Juan Chowdhury, Gaurav Kumar, Karuna Kalita, Sashindra K Kakoty | High Force Density Quad Air Gap Switched Reluctance Motor |  | 201731045006 |  |
| 10 | Gaurav Kumar, Karuna Kalita, Kari Tammi, Seamus D Garvey, WKS Khoo | Generation of Selective Pole Pair Field and Selective Frequency Transverse Force in Bridge Configured Winding Electrical Machines |  | 201831000913 |  |
| 11 | Mishra SC, Pantangi VK. | Porous Radiant Burner for Domestic LPG Cooking Device with Improved Thermal Efficiency and Reduced Emissions of CO and NOx. Patent Number |  | E-2/548/2013-KOL |  |
| 12 | Mishra SC, Niraj Kumar Mishra | Self-Aspirated LPG Domestic Cooking Stove with a Two-Layer Porous Radiant Burner, |  | Indian Patent No: 543/KOL/2015 |  |
| 13 | Mishra SC, Niraj Kumar Mishra and Snehasish Panigrahi | . Medium-Scale Self-Aspirated Improved Air Entrainment LPG Cooking Stove with a Two-Layer Porous Radiant Burner, |  | Indian Patent No: 201631015526 dated on 4th May 2016 |  |
| 14 | Mishra SC, G.S. Sinha, M Sharma, N Mishra, P. Mahanta, | Self-Aspirated Pressurized Kerosene Cooking Stove with a Porous Radiant Burner, |  | Application No: 201631037245 dated on 31st October 2016. |  |
| 15 | G.S. Sinha, L K Kaushik M Sharma, N Shanmuga Priya, S Kanagaraj | Self-Aspirated Pressurized Kerosene Cooking Stove with a Porous Radiant Burner with Nanoparticles blended. |  | Application No: 201831003156 (TEMP/E-1/3419/2018-KOL) dated on 27th Jan 2018 |  |

1. **Awards and honours (Only awards/honours at national/international level from reputed organisations)**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name of Faculty | Name of Award | Name of Institute/ Organization/ Foundation bestowing the award | Reason for award | Form of Award (Citation/ Medal/ Cash etc) |
| U,S, Dixit | Guest of honor | Technical festival of NIT Agartala |  | Cerificate |
| U,S, Dixit | Chief Guest | International Conference on Advances and Soft Computing Applications in Design and Manufacturing, 4-6 June, 2018 at NIT Patna |  |  |
| Gautam Biswas | Honorary Doctorate | Aristotle University of Thessaloniki, Greece on Nov 02, 2018 |  |  |
| S K Kakoty | Education Leadership Award | Business School Affaire & Dewang Mehta National Education Awards |  | Certificate |
| U.S. Dixit | Best paper award | AIMTDR | Paper quality adjudged best: G.C. Verma, P.M. Pandey and U.S. Dixit, Experimental investigations to evaluate machining accuracy of ultrasonic assisted milling on thin-walled structures, 7th International and 28th All India Manufacturing Technology, Design and Research (AIMTDR) Conference, December 13-15, 2018, Anna University, Chennai. | Cerificate and free e-books from Springer |
| P Muthukumar | Best Paper Award by PhD student Mr  Mrinal Bhowmik | IISc Bangalore at THERMACOMP conference | Best paper award | Certificate and medal |
| M. Pandey | Session Chair | Joint 19th International Heat Pipe Conference and 13th International Heat Pipe Symposium, Pisa, Italy, June 10-14, 2018 |  |  |

1. **Students’ Achievements:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Name of Faculty** | **Name of Award** | **Name of Institute/ Organization/ Foundation bestowing the award** | **Reason for award (Name of Paper, if applicable)** | **Form of Award (Citation/ Medal/ Cash etc)** |
| Amaresh Dalal | Best Paper Award (to student Bhaskarjyoti Sarma) | 7th International and 45th National Conference on Fluid Mechanics and Fluid Power | Sarma, B., Basu, D. N., and Dalal, A., 2018, “Universal Scaling Laws in Drop-on-demand Generation from A Yarn”, Paper No. FMFP2018-467, Proceedings of the 7th International and 45th National Conference on Fluid Mechanics and Fluid Power, December 10-12, 2018, Indian Institute of Technology Bombay, Mumbai, India. | Citation |
| Amaresh Dalal | Best Oral Presentation Award for the Session (to student Hiranya Deka) | International Conference on Recent Innovations and Developments in Mechanical Engineering | Deka, H., Biswas, G., and Dalal, A., 2018, “A Coupled Level Set and Volume-of-fluid Method for Modelling Two-phase Flows”, Paper No. IC-RIDME18: 194, International Conference on Recent Innovations and Developments in Mechanical Engineering, National Institute of Technology Meghalaya, Shillong, India, November 8-10, 2018. | Citation |
| Amaresh Dalal | Best Oral Presentation Award for the Session (to student Subrat Kotoky) | International Conference on Recent Innovations and Developments in Mechanical Engineering | Kotoky, S., Dalal, A., and Natarajan, G., 2018, “The Role of Particle Diameter on the Fluidization Behavior in a Bubbling Gas-Solid Fluidized Bed”, Paper No. IC-RIDME18: 203, International Conference on Recent Innovations and Developments in Mechanical Engineering, National Institute of Technology Meghalaya, Shillong, India, November 8-10, 2018. | Citation |
| P MUTHUKUMAR | Best paper award | IISc Bangalore, India | Mrinal Bhowmik, P. Muthukumar, R Anandalakshmi “Numerical Study on Dehumidification Performance of a Cross-Flow Liquid Desiccant Adiabatic Dehumidifier with Various Halide Salt desiccants” 5th International Conference on Computational Methods for Thermal Problems, .” |  |
| M R Sankar | Best poster award (1st) | Research Conclave' 2018, Indian Institute of Technology Guwahati, India | Kishor Kumar Gajrani,Y. Bishal Singha, Mamilla Ravi Sankar, Comparative Tribological Performance of Graphite, CaF2 and MoS2 Coated Mechanical Micro-Textured Cutting Tool Material during Dry Sliding Test. |  |
| M R Sankar | Best poster award (2nd) | Research Conclave' 2018, Indian Institute of Technology Guwahati, India | Rasmi Ranjan Behera, A. Das, D. Pamu, L.M. Pandey, Mamilla Ravi Sankar, Calcium Phosphate Coating on Ti-6Al-4V alloy using RF magnetron Sputtering Process. |  |
| S Senthilvelan | Outstanding Paper Award | FISITA 2018 Word Auotmotive Congress | Aditya Kumar, Karthick Pandia, S Senthilvelan BENDING FATIGUE PERFORMANCE OF INJECTION-MOLDED CARBON NANOTUBE REINFORCED POLYPROPYLENE SPUR GEARS |  |
| Sachin Singh Gautam | 2nd Best Presentation Award (to student D. Bora) | 2nd International Conference on Structural Integrity and Exhibition 2018 | Ductile fracture in tube impact problem using a Lode angle dependent failure criterion by D. Bora, M. Kumar and Sachin Singh Gautam | Certificate and Cash prize of 2500 Rs |
| Sachin Singh Gautam | Best Paper Award (to student Vishal Agrawal) | 1st International Conference on Future Learning Aspects of Mechanical Engineering (FLAME - 2018), Amity University, Noida, | An isogeometric based study of mortar contact algorithm for frictionless sliding by Vishal Agrawal and Sachin Singh Gautam |  |
| Sanghamitra Das | Best poster award | Recent Innovations and Developments in Mechanical Engineering (IC-RIDME-2018) November 8-10, 2018 at NIT Meghalaya. |  | Three-Dimensional Numerical Modelling of Temperature Profiles on the Wire Electrode During Wire Electric Discharge Machining Process |
| S Kanagaraj | International Travel Award | DST International travel award committee | To attend  International Conference on Materials Science and Manufacturing Engineering (MSME 2018), 8-10 Nov, 2018, Novotel Paris Centre Tour Eiffel, Paris, France | Certificated and Medal |
| P MUTHUKUMAR | Best paper award for Mr Mrinal Bhowmik | IISC Bangalore, India - THERMACOMP – 2018 | Best Paper and Presentation |  |
| P MUTHUKUMAR | International Travel Award for Mr Nithin Narmada | To attend and present a paper at 10th International Conference on Applied Energy (ICAE2018), 22-25 August 2018, Hong Kong. | To attend 10th International Conference on Applied Energy (ICAE2018), 22-25 August 2018, Hong Kong. |  |
| KSRK Murthy | Best Paper Award (to student Sajith S) | 3rd International Conference on Design, Analysis, Manufacturing & Simulation (ICDAMS-2018), 6-7 April, Chennai |  | Certificate |

1. **Any Other (Special Mention)**
2. **Faculty Members (In alphabetical order according to surname)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Sl. No. | Name | Name of the University/Institute/Org  PhD degree received from | Designation | Areas of Interest | **Date of joining** **(Not Internal Promotion)** for the faculty members who **joined during the reporting year** |
| 1 | Bag, Swarup | IIT Bombay | Associate Professor | Fusion welding processes, Finite element method, Laser micro joining, Heat transfer and fluid flow in fusion welding, Residual stress and distortion, Recrystallization in hot metal forming process, Optimization in manufacturing process | 2011 |
| 2 | Bandopadhya, Dibakar | IIT Kanpur | Associate Professor | Active materials, Artificial muscle materials, Smart structures, Robotics and mechanism, Composites, MEMS, Bio inspired design | 2008 |
| 3 | Banerjee, Atanu | IIT Kanpur | Associate Professor | Complaint Mechanism, Shape memory alloy, Bio-memetic devices | 2010 |
| 4 | Basireddy, Sandeep Reddy | IISc Bangalore | Assistant Professor | Nonlinear Dynamics of Mechanical Systems, Robotics and Control, Applied Dynamics | 2018 |
| 5 | Basu, Dipankar Narayan | IIT Kharagpur | Associate Professor | Nuclear Thermalhydraulics, Supercritical Natural Circulation Loops, Domestic Air-conditioning, Computational Fluid Dynamics and Heat Transfer | 2012 |
| 6 | Biswas, Pankaj | IIT Kharagpur | Associate Professor | Manufacturing and Design: Computational weld mechanics, Solid state welding, Soft computing modeling of welding processes, FEM, Line heating | 2011 |
| 7 | Biswas, Gautam | IIT  Kharagpur | J C Bose National Fellow and Director of the Institute; Professor | Computational Fluid Dynamics, Convective Heat Transfer, Turbulence, Boiling Heat Transfer, Heat Transfer Augmentation, Turbomachinery | 2013 |
| 8 | Chakraborty, Debabrata | IIT Kharagpur | Professor | FRP, Composites, FEM, Fracture Mechanics and Design | 1999 |
| 9 | Dalal, Amaresh | IIT Kanpur | Associate Professor | Computational Fluid Dynamics, Heat Transfer, Structured Grid Techniques in Curvilinear Coordinates, Finite Volume Methods and Unstructured Grid Techniques, Natural and Mixed Convection Flows, Electrochemical Energy Conversion and Storage | 2010 |
| 10 | Das, Manas | IIT Kanpur | Associate Professor | Advanced Finishing and Nano-finishing Processes, Non-traditional Machining Processes, Machining of Advanced Engineering Materials, Micromanufacturing, Micromachining, Tribology, Laser Welding | 2012 |
| 11 | Dass, Anoop K. | IISc  Bangalore | Professor | Computational Fluid Dynamics and Turbomachines | 1996 |
| 12 | De, Arnab Kumar | IIT Kanpur | Associate Professor | Numerical Methods in Fluid Flow and Heat Transfer, Convection, Turbulence | 2009 |
| 13 | Dixit, Uday S. | IIT Kanpur | Professor | Design and Manufacturing : FEM, Neural Network and Fuzzy Set Application; Mechatronics | 1998 |
| 14 | Dwivedy, Santosha K. | IIT Kharagpur | Professor & HOD | Non-linear Dynamics, Design and Robotics, vibrations | 1999 |
| 15 | Gautam, Sachin S. | IIT Kanpur | Assistant Professor | Design and Manufacturing : Nonlinear Finite Element Analysis, Computational Contact Impact Analysis, Adhesion, Rough Surfaces, Time Integration Schemes, Mixed Time Integration Schemes, Plasticity, Ductile Fracture, Continuum Damage Mechanics | 2013 |
| 16 | Hazarika, Shyamanta M. | University of Leeds, England | Professor | Robotics, Cognitive Systems, Knowledge Representation and Reasoning | 2017 |
| 17 | Joshi, Shrikrishna N. | IIT Bombay | Associate Professor | Micro fabrication: Laser micro forming, Micro machining: Micro electric discharge machining (EDM), Web based manufacturing, Process modeling and optimization of advanced manufacturing processes, Application of soft computing techniques in manufacturing | 2010 |
| 18 | Kakoty, Sashindra K. | IIT Kharagpur | Professor & Dean, Infrastructure, Planning and Management | Tribology, Duct Acoustics, Mechanical System Design, Rural Technology | 2000 |
| 19 | Kalita, Karuna | University of  Nottingham | Associate Professor | Rotordynamics, Coupled Dynamics of Electro-Mechanical Systems, Vibration | 2010 |
| 20 | Kanagaraj, S. | IIT Kharagpur | Professor | Biomaterials, Carbon nanotubes based nanocomposites, Nanofluids, Materials characterization | 2008 |
| 21 | Kapil, Sajan | IIT Bombay | Assistant Professor | Rapid Manufacturing (3D Printing), Welding/Cladding Processes, CNC, Manufacturing Automation | 2018 |
| 22 | Khanikar, Prasenjit | North Carolina State University | Assistant Professor | Microstructural Materials Modeling, Micro-mechanics, Dislocation Density Based Crystal Plasticity, Deformation and Failure Mechanisms of Metallic Materials, Finite Element Method, Dynamic Behavior of Materials, Fracture Mechanics, Aluminum Alloys, Microstructural Characterization | 2015 |
| 23 | Kore, Sachin D. | IIT Bombay | Associate Professor | Experimental and numerical study of electromagnetic pulse processing, Solid state welding, Joining of similar, dissimilar and lightweight metals like Al, Steel, Al-Li, and Mg | 2009 |
| 24 | Kulkarni, Vinayak | IISc Bangalore | Associate Professor | High enthalpy flows, scramjet engine, experimental, aerodynamics, measurement science, CFD simulations | 2008 |
| 25 | Kumar, Bhaskar | IIT Kanpur | Assistant Professor | Hydrodynamic Stability, Bluff Body Flows, Computational Fluid Dynamics | 2015 |
| 26 | Kumari, Poonam | IIT Delhi | Associate Professor | Theory of plates and shells, Computational mechanics, Smart structures | 2013 |
| 27 | Madhusudhana, Gavara | IISc  Bangalore | Assistant Professor | Computational Fluid Dynamics, Heat Transfer, Cooling of Electronics, Multi-phase flows, Cooling at Micro/Mini scales, Turbulent Fluid Flow and Heat transfer | 2012 |
| 28 | Mahanta, Pinakeswar | IIT Guwahati | Professor | Thermal Radiation with Participating Media, Fluidization, Energy Conservation and Renewable Energy | 2001 |
| 29 | Mehta, Balkrishna | IIT Kanpur | Assistant Professor | Experimental investigation of heat transfer in two-phase flow in mini/micro systems, Heat pipes, Thermosyphons, Heat transfer investigation of ferrofluids in presence of magnetic field, InfraRed thermography for temperature measurements. | 2015 |
| 30 | Mondal, Pranab Kumar | IIT Kharagpur | Assistant Professor | Microfluidics, Electrokinetics, Two Phase Transport, Microscale Transport of Heat, Flow Through Porous Media. | 2015 |
| 31 | Murthy, K. S. R. Krishna | IIT  Kharagpur | Professor | Finite Element Methods, Error Estimation and Fracture Mechanics | 2002 |
| 32 | Muthu, Nelson | IIT Bombay and Monash University | Assistant Professor | Meshfree Methods, FEM, Fracture Mechanics, Composites, Structural Health Monitoring, Medical Device Innovation | 2017 |
| 33 | Muthukumar, P. | IIT Madras | Professor | Coupled heat and mass transfer analysis; Metal hydride based thermal machines, Conventional and Non-conventional refrigeration systems | 2006 |
| 34 | Nandy, Arup | IISc Bangalore | Assistant Professor | Finite Element Development and Analysis in Structure, Acoustics, Electromagnetics, Structural acoustic interaction, Magnetohydrodynamics, MEMS; Optimization | 2017 |
| 35 | Narayanan, Ganesh R. | IIT Bombay | Associate Professor | Material Forming and Joining | 2007 |
| 36 | Natarajan, Ganesh | IISc Bangalore | Associate Professor | Computational Fluid dynamics, Grid Adaptation, Error Estimation, Immersed Boundary methods, Parallel computing, Biofluid dynamics | 2011 |
| 37 | Pal, Sukhomay | IIT Kharagpur | Associate Professor | Welding Process Monitoring and Control, Tool Condition Monitoring, Non-Conventional Machining Process Application of Artificial Neural Network, Genetic Algorithms and Fuzzy logic in manufacturing | 2010 |
| 38 | Panda, Satyajit | IIT Kharagpur | Associate Professor | Composite materials, Nonlinear vibrations, Smart materials and structures, FEM, Functionally Graded materials and structures, Micromechanics. | 2009 |
| 39 | Pandey, Manmohan | IIT Kanpur | Professor | Dynamics and Control of Fluid-Thermal Systems, Nuclear Reactor Thermal-Hydraulics | 2000 |
| 40 | Robi, P. S. | IIT Bombay | Professor | Coating, Fracture Mechanics, Materials Processing, Metal Matrix composite, Metal Casting, P/M Processing | 1997 |
| 41 | Saha, Ujjwal K. | IIT Bombay | Professor | Propulsion, Turbomachinery, Wind Energy Conversion, Internal Combustion Engines | 2000 |
| 42 | Sahasrabudhe, Anil D. | IISc Bangalore | Professor (On deputation as  Chairman of the All India  Council for Technical  Education) | Vibration and Noise, Condition Monitoring, CAD/CAM | 1995 |
| 43 | Sahoo, Niranjan | IISc  Bangalore | Professor | Fluid and Thermal Engineering, Aerodynamics, Gas Dynamics, Instrumentation, Measurements and Experiments in Fluid | 2004 |
| 44 | Sankar, Ravi M. | IIT Kanpur | Assistant Professor | Machining & Advanced Machining Processes, MEMS &  NEMS, Sustainable Machining, Micromanufacturing,  Composite Materials, Online monitoring of  Manufacturing Processes, Tribology, Precision  Engineering | 2012 |
| 45 | Senthilvelan, S. | IIT Madras | Professor | Composites, Fatigue, Wear and Failure Analysis | 2006 |
| 46 | Sharma, Deepak | IIT Kanpur | Associate Professor | Optimal Design: Modeling and Computation,  Engineering Design and Optimization, Genetic  Algorithms, Multi-objective Optimization | 2012 |
| 47 | Tiwari, Rajiv | IIT Kanpur | Professor | Rotor Dynamics, Vibrations, Identifi cation in  Mechanical Systems, Rolling Element Bearing Design  and Analysis, Application of Active Magnetic Bearings  in Rotors, Vibrations based Condition Monitoring of  Industrial Rotating Machines | 1997 |