



National Institute of Technology Karnataka, Surathkal

Department of Mechanical Engineering



INSTITUTE VISION

To facilitate the transformation of students into good human beings, responsible citizens and competent professionals, focusing on the assimilation, generation and dissemination of knowledge.

INSTITUTE MISSION

- o Impart quality education to meet the needs of profession and society, and achieve excellence in teaching-learning and research.
- o Attract and develop talented and committed human resources, and provide an environment conducive to innovation, creativity, team spirit and entrepreneurial leadership.
- o Facilitate effective interactions among faculty and students, and foster networking with alumni, industries, institutions and other stakeholders.
- o Practice and promote high standards of professional ethics, transparency and accountability.

VISION OF THE DEPARTMENT

Create globally competent mechanical engineers capable of working in an interdisciplinary environment, contributing to society through innovation, entrepreneurship and leadership

MISSION OF THE DEPARTMENT

- M1 Produce Mechanical Engineers with a strong theoretical and practical knowledge to contribute to society with high moral and ethical values
- M2 Nurture students with a global outlook for a sustainable future and sound health.
- M3 Enable to be productive members of interdisciplinary teams, capable of adapting to changing environments of engineering, technology and society.
- M4 Inculcate critical and deep-thinking abilities among students and develop entrepreneurial skills, innovative ideas and leadership qualities.
- M5 Create facilities for continued education, training, research and consultancy

ABOUT THE DEPARTMENT

The department of Mechanical Engineering established in 1960, is the oldest and largest department of NITK, and has traversed the path of knowledge dissemination and generation as well as delivering over 7500 Mechanical Engineering graduates to the Nation. Over these 62 glorious years, it has carved a niche for itself in the key areas of teaching, research, consultancy, administration and community services. The Department prioritize the necessary revamping of Mechanical Engineering education, which is driven primarily by dynamics of technological advances and sustainable development and with the active involvement of industries, alumni, research organizations and other stakeholders. The department offers B.Tech, MTech and PhD. programs and caters to more than 715 B.Tech. students, 150 MTech. students and 110 PhD. Scholars.

PROGRAM EDUCATIONAL OBJECTIVES

- PEO-1 Prepare graduates to have knowledge in mathematics, science and engineering to develop problem-solving skills necessary for career advancement in mechanical and allied disciplines
- PEO-2 Organize graduates to have strong practical and theoretical knowledge in Mechanical Engineering, contributing through interdisciplinary research, innovation, entrepreneurial skills, and leadership to design and develop products
- PEO-3 Inculcate teamwork, communication, interpersonal skills and ethical approach adapting to changing environments of engineering, technology and society
- PEO-4 Impart critical thinking skills with deep concentration to develop initiatives and innovative ideas for R&D, Industry and societal requirements.

Programme Outcomes (POs)

- ❖ **PO1. Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- ❖ **PO 2. Problem analysis:** Identity, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- ❖ **PO 3. Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for public health and safety, and cultural, societal, and environmental considerations.
- ❖ **PO 4. Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- ❖ **PO 5. Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
- ❖ **PO 6. The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- ❖ **PO7. Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- ❖ **PO8. Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- ❖ **PO9. Individual and teamwork:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- ❖ **PO 10. Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
- ❖ **PO 11. Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- ❖ **PO 12. Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Programme Specific Outcomes (PSOs)

- ❖ **PSO1.** Understand and apply the concepts of science and engineering principles to provide solutions to problems associated with mechanical engineering.
- ❖ **PSO 2.** Use experimental methods and computational tools to develop products, workable solutions and processes.

Educational Programs offered

Bachelor Program

B. Tech. in Mechanical Engineering Current intake: 174

Masters Program

M. Tech. in Thermal Engineering	Current intake: 18
M. Tech. in Manufacturing Engineering	Current intake: 18
M. Tech. in Mechatronics Engineering	Current intake: 33
M. Tech. in Mechanical Design	Current intake:18
M. Tech. by Research (All streams)	Current intake: 08

Doctoral Program

Current intake: 24

The Department offers a doctoral Program in the following areas of specialization: Renewable Energy, Alternative Fuels, Fuel cells, IC Engines & Combustion, Refrigeration and Air-conditioning, Heat Transfer, Micro/Nanofluids, Computational Fluid Dynamics, Turbomachines, Fracture Mechanics and Fatigue, Stress Analysis, Tribology, Machine Dynamics and Vibration, Condition monitoring, Advanced Materials, Advanced Manufacturing, Mechatronics, E-mobility, MEMS, Nanotechnology, Robotics and Control, Assistive Technologies, Product Design, Structural Acoustics, Polymer Nano-Composites, Precision Manufacturing, Additive Manufacturing, Smart manufacturing, 3D/4D printing, repair and re-manufacturing, Micro/Nano machining, solid-state manufacturing.

FACULTY MEMBERS



Subhash C. Kattimani, (PhD, IIT KGP)
Head of the Department and Professor
Research Interests: Machine Design, Smart Structures, Composite Structures
 ☎: +919343011301
 ✉: subhaskatti@nitk.edu.in



G.C. Mohan Kumar, Ph.D. (IIT Madras)
Professor (Dean F&W)
Research Interests: Mechanical Design Engineering, Biomechanics Green Composites, Experimental & Numerical Stress Analysis.
 ☎: +919480065648
 ✉: mkumargc@nitk.edu.in



Ravikiran Kadoli, Ph.D. (IIT Madras)
Research Interests: Structural mechanics, Mechanics and applications of advanced materials, Fluid-Structure Interaction and other coupled problems like heat and mass transfer, CFD
 ☎: +91-9844400659
 ✉: rkkadoli@nitk.edu.in



K.V. Gangadharan, Ph.D. (IIT Madras)
Professor (CSD)
Research Interests: Vibration and Control Dynamics, FEM, Condition Monitoring, Experimental Methods in Vibration
 ☎: +919448478752
 ✉: kvganga@nitk.edu.in



Srikantha S. Rao, Ph.D.(NITK Surathkal)
Professor
Research Interests: Artificial Intelligence in Manufacturing, CAD/CAM
 ☎: +919448302579
 ✉: ssrcsr@nitk.edu.in



S.M. Kulkarni, Ph.D. (IISc Bangalore)
Professor (Dean R&C)
Research Interests: Mechanisms and Machine Design CAD, Composite Materials, Product Development and MEMS
 ☎: +919449086656
 ✉: smk@nitk.edu.in,



Narendranath S., Ph.D. (IIT Kharagpur)
Professor (Dean SW)
Research Interests: Casting, Machining, Materials
 ☎: +919448793833
 ✉: bayalu@nitk.edu.in



S.M. Murigendrappa, Ph.D. (IIT Bombay)
Professor
Research Interests: Machine Dynamics and Vibrations, Fracture Mechanics and Fatigue, Stress Analysis, Finite Element Method
 ☎: +919343889072
 ✉: smm@nitk.edu.in



Kumar G.N., Ph.D. (IIT Delhi)
Professor
Research Interests: Alternative fuels for IC engines, Simulation of I.C. engines, Heat Transfer
 ☎: +919481848572
 ✉: gnkumar33@nitk.edu.in



Sathyabhama A., Ph.D. (NITK Surathkal)
Professor
Research Interests: Heat transfer, Refrigeration & Air-conditioning, Energy sources, Energy Audit
 ☎: +919448134433
 ✉: sathyabhama@nitk.edu.in



Mervin A. Herbert, Ph.D. (IIT Kharagpur)
Associate Professor
Research Interests: Friction Stir Welding, Semi solid processing of composites, applications of Artificial Neural Network
 ☎: +919481213227
 ✉: merhertoma@nitk.edu.in



Hemantha Kumar, Ph.D. (IIT Madras)
Professor
Research Interests: Dynamics and Vibrations, Vehicle Dynamics, Condition monitoring, Finite Element Method and Product Design
 ☎: +918970375442
 ✉: hemantha@nitk.edu.in



Jeyaraj, Ph.D. (IIT Madras)
Professor
Research Interests: Dynamic Analysis of Polymer Composite Structures, Computational Mechanics, Structural Acoustics
 ☎: +917795858559;
 ✉: jeyaraj@nitk.edu.in



Ramesh M.R., Ph.D. (IIT Roorkee)
Professor
Research Interests: Thermal Spray Coatings, Severe Plastic Deformation, Advanced Materials Characterization, Bio Fuels, FEA, Wear, Erosion, Oxidation & Hot Corrosion
 ☎: +919480540801
 ✉: rameshmr@nitk.edu.in



Srikanth Bontha, Ph.D. (Wright State University)

Professor

Research Interests: Additive Manufacturing, Machinability of Titanium Alloys, Modelling of Manufacturing Processes

☎: +919482606482

✉: srikanth.bontha@nitk.edu.in



Arun M., Ph.D. (University of Greenwich)
Professor

Research Interests: CFD, Turbulence, Heat and Mass transfer, Combustion, Multi-phase flows, Fire Safety Engineering

☎: +917795541824

✉: m.arun1978@nitk.edu.in



P. Navin Karanth, Ph.D. (NITK Surathkal)

Associate Professor

Research Interests: CAD, CAM, CAE, Mechatronics, Hydraulics and Pneumatics

☎: + 919449085052

✉: navinkaranth.p@nitk.edu.in



Anish S., Ph.D. (IIT Madras)

Professor

Research Interests: Turbomachines, CFD, Droplet evaporation, Organic Rankine Cycle, Fluid-structure interactions

☎: +919036317552

✉: anish@nitk.edu.in



H. Shivananda Nayaka, Ph.D. (IIT Roorkee)

Professor

Research Interests: Advanced Manufacturing Engineering, Severe Plastic Deformation, Accumulative Roll Bonding, Magnesium alloys

☎: +919449591543

✉: hsn_mech@nitk.edu.in



Veershetty Gumtapure, M. Tech. (IIT Madras)

Professor (PhD Scholar, IITM)

Research Interests: Renewable energy, Solar Energy Conversion

☎: +919591415911

✉: veersg@nitk.edu.in



Sharnappa Joladarashi, Ph.D. (IIT Madras)

Professor

Research Interests: Mechanical Vibration, Composite Materials, Smart materials and structures, Composite coating

☎: +918884555351

✉: sharnappaj@nitk.edu.in



Sudhakara C. Jambagi, Ph.D. (IIT KGP)

Associate Professor Research Interests:

Modern Manufacturing processes
Thermally sprayed coatings

☎: +919449422408

✉: sudhakar.nitk@nitk.edu.in



Vasudeva M., (PhD, IITB)

Associate Professor

Research Interests: Gasification of Biomass for Power and CHP, Polygeneration, Solid fuel combustion and gasification for small and medium scale applications, Environmental impacts of bioenergy

☎: +919008889796

✉: vasudevmadav@nitk.edu.in



Ranjith M, Ph.D.

Associate Professor

Research Interests: CFD, Fluid-structure interaction, Microfluidics and Solar energy

☎: +918050159645

✉: mranji1@nitk.edu.in



Arumuga Perumal D. (IIT Madras)

Assistant Professor

Research Interests: Lattice Boltzmann method, CFD, Microfluidics/Nanofluidics, NHT, Buff body flow

☎: +91 9159860535

✉: perumal@nitk.edu.in



T. Somasekhara Rao, Ph.D.

Assistant Professor

Research Interests: Product Design, Machines and Mechanism theory

☎: +91 7981338900

✉: ssrao@nitk.edu.in



Poornesh Kumar K. PhD.

Assistant Professor

Research Interests: Applied solid Mechanics, Fuels cells and Li-ion battery systems, functional polymers

☎: +91 9740938897

✉: kpkoorata@nitk.edu.in



Parthasarathy P, Ph.D.

Assistant Professor

Research Interests: Fluid flow and heat transfer in porous media, Radiative heat transfer, Solar fuels and porous media injectors

☎: +91 9487781983

✉: parthasarathy@nitk.edu.in



Saurabh Chandraker, PhD.

Assistant Professor

Research Interests: Rotordynamics, Composites, High Entropy materials and Tribology

☎ : +91 9981640044

✉ : schandraker@nitk.edu.in



Mruthynjaya Swamy K. B. PhD.

Assistant Professor

Research Interests Microfabrication, Packaging and testing of MEMS devices. Process development of probe-assisted Nano-Lithography Technique.

☎ : +919483006499

✉ : swamy_kbm@nitk.edu.in



Arun Kumar S., Ph.D. (NITK Surathkal)

Assistant Professor

Research Interests: Friction Stir Welding/ Processing, Additive friction stir deposition, micromachining, Machinability study, Artificial intelligence.

☎ : +919731652895

✉ : akshettigar@nitk.edu.in



Ranjeet Kumar Sahu, Ph.D. (IITM)

Assistant Professor

Research Interests: Micro-Nano Machining, Nano material synthesis and characterisation, Precision engineering, advanced welding, additive manufacturing

☎ : +91 9182679250

✉ : ranjeetsahu.j@nitk.edu.in



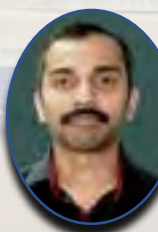
A. S. S. Balan, Ph.D. (IITM)

Assistant Professor

Research Interests: Precision machining, repair and remanufacturing, Surface Engineering, Additive Manufacturing and Condition Monitoring

☎ : +91 9789941487

✉ : balan@nitk.edu.in



P. S. Suvin, Ph.D. (IISc)

Assistant Professor

Research Interests: Tribology, Additive Manufacturing, Machining and Green Lubricants

☎ : +91 8762785431

✉ : suvin@nitk.edu.in



Khyati Verma, Ph.D. (IITD)

Assistant Professor

Research Interests: Impact Biomechanics, Head Trauma, Mechanical Behaviour of soft tissues under impact tissue biomechanics,

☎ : +91 9711843988

✉ : kverma@nitk.edu.in



Mervin Joe Thomas, Ph.D. (NIT Calicut)

Assistant Professor

Research Interests: Robotics, Mechanism Synthesis, Kinematics, Dynamics and Control of Robotic Systems

☎ : +91 9605014054

✉ : mervinthomas@nitk.edu.in



Deepak Kumar, Ph.D. (IIT Madras)

Assistant Professor

Research Interests: Wing Morphing, Corrugated Structures,

☎ : +91 8242473864

✉ : dksharma@nitk.edu.in



Abhilash Singh, Ph.D. (IIT Roorkee)

Assistant Professor

Research Interests: Brain Injury Biomechanics, Road Traffic Accidents, Sports Injury

☎ : +918242473653

✉ : asingh@nitk.edu.in



Neha Choudhary, Ph.D. (IIT Roorkee)

Assistant Professor

Research Interests: Additive Manufacturing Sustainability, Polymer Processing, Hybrid Manufacturing

☎ : +918004745362

✉ : nchoudhary@nitk.edu.in



Atul Singh Rajput, Ph.D. (IITGuwahati)

Assistant Professor

Research Interests: Additive Manufacturing Post-Processing of Additively Manufactured Parts, Topology Optimization

☎ : +91 9641298836

✉ : atulsingh@nitk.edu.in



Raghuram S, Ph.D. (IISc)

Assistant Professor

Research Interests: Transitional and, Turbulent Flows, Aerodynamics

☎ : +91 9611149076

✉ : raghurams@nitk.edu.in



Pavan Pandit, Ph.D. (IIT Madras)

Assistant Professor

Research Interests: Conventional and unconventional machining, Micromachining

☎ : +91 8971443128

✉ : pavanp@nitk.edu.in



Sanjeevi Nakka, Ph.D. (IIT Gandhinagar)

Assistant Professor

Research Interests: wearable & Rehabilitation Robotics

☎ : +91 9902273630

✉ : sanjeevinakka@nitk.edu.in

Supporting Staffs



Mr. Shivashankar
I/C. Carpentry & SM Shop



Mr. A Jayanth
I/C. Fuels Lab



Mr. Mahesh B.K
I/C. CAD/CAM Lab.



Mr. Chandrashekar M K
I/C. IC engine Lab



Mr. Shashikantha
I/C. Fitting Lab



Mrs. Vijaya
Office Secretary



Mrs. Shubhavathi
Office Secretary



Mr. Avinash D
I/C. Heat transfer
Lab



Mr. Guruprasad K
CAD/CAM Lab



Mr. Guruprasad
Machine Shop



Mr. Mahaveera
Fitting Shop



Mr. Mahesh Anchan
Carpentry Shop



Mr. Nishan K
Machine Shop



Mr. Pradeep
Machine Shop



Mr. Raghuram S
Metrology Lab



Mr. Sudhakar Naik
Fitting Shop



Mr. Vinay
IC engine Lab



Mr. Vishal
Fuels Lab



Mr. Yashpal
Fuels Lab



Mr. Yathin
IC engine



Mr. Nithyananda
Office Staff



Mr. Ashok



Mrs. Nethravathi



Mr. Prabhakar



Mrs. Appi



Mr. Dinesh Kotian



Mr. Dhiraj Kumar



Mr. Jaswin J Suvarna



Mrs. Vanitha Devadiga

Current Research Areas of the Department

Emission Studies on Engines, Combustion of premixed flames, Micro Channels Flow, Nanofluids, Computational Fluid Dynamics, Alternate Refrigerants and Alternate Refrigeration Methods, Alternate Fuels, Renewable Energy Systems, Smart Materials, Piezoelectric and Magneto-Rheological Devices, MEMS, Nano Materials and Precision Engineering, Advanced Manufacturing, Machining Processes, Process Modelling Based on Numerical, Artificial Intelligence Techniques and Solidification Processing, Characterization, Tribological Studies and Processing of Composites, Vehicle Dynamics, Condition Monitoring, Fracture Mechanics, Assistive Technologies, Rotor dynamics, Additive Manufacturing, Smart Manufacturing, Impact Biomechanics, Robotics, Path planning, Application of the IOTs in the Manufacturing domain

Major Facilities



Wire EDM



Microwave furnace



Universal Testing Machine



Optical Microscope



Vacuum Arc melting setup



Dynamic testing Machine



Heat radiator



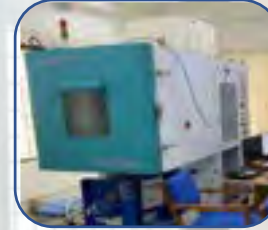
Automated Manufacturing System



KUKA Robot



Table Top CNC



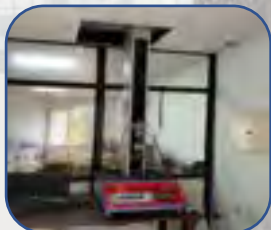
Climate testing machine



Refrigeration testing Center



Furnace



UTM- 2kN

Polymer composite – Preparation and testing



CNC Milling Center



CNC Turning Center



Caption Lathe



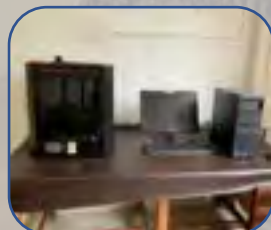
Lathe



Milling Machine



Drilling Machine



3D Polymer printer



Sectional view of UD truck



BMW engine



High-Performance Work stations



MMM 4 stroke diesel engine



Single Cylinder 4-stroke engine



Kirloskar Oil engine

Major Facilities



Ruston Horizontal C.I. engine



Research engine test setup



Morse Test



V.C. ratio computerized C.I engine



Reciprocating air compressor SS.



HT parallel flow exchanger



Blower test



XXXX



BOSCH Computerised Engine test bench



Flash and Fire Point Tester



Bomb Calorimeter



Say Bolt Viscometer



Flash Point



Red Wood Viscometer



Boys Gas Calorimeter



Dynamic Testing Machine



Dead-weight Pressure gauge



Radial Drilling Machine



Wood Turn Lathe



Work Bench



Electro-Hydraulics Setup



Electro-Pneumatics setup

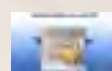


Programmable Logic Controller



Variable frequency drive

Computer-Aided Design/Manufacturing Lab (available software)



Central research facility



5-Axis CNC Machining vertical center



Friction stir processing (FSP) system



Hybrid Micromachining with EDM



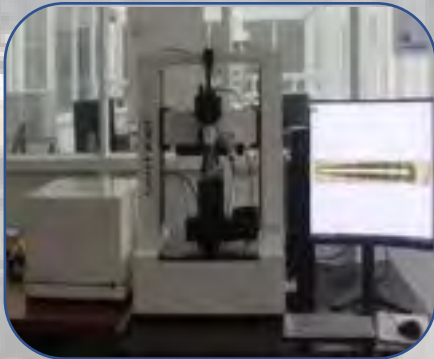
Metal 3D Printer



Fatigue testing Machine



Liquid Nitrogen Plant



Scratch Test



Multi-purpose Impact testing Machine with SHPB



Impact test Machine



HVAF/HVOF Coating Facility



3D Scanner



Ball milling unit



Hollow Fiber Spin System



FESEM (Carl Zeiss)



X-ray Diffraction

R&D PROJECTS (ONGOING AND SANCTIONED)

1. Design and development of Supercritical carbon dioxide based naturally circulated solar thermal collector, PI: Dr. Ajay Kumar Yadav; Co-PI: Dr. M. R. Ramesh, Funding amount: 23.81 Lakh, SERB, Duration: 3 years (2022-25).
2. Development Of Cost Effective Radiofrequency Ablation System And Magnetic Hyperthermia Equipment For Thermal Therapies Of Cancerous Tumors, Dr. Ajay Kumar Yadav, Prof. Laxminidhi T, Prof. Sripathi U Acharya, Prof. B. S Rao (MAHE), Prof. P. U Saxena (KMC), SERB, 48.94Lakhs, 8/03/ 2019- 07/03/2023.
3. Experimental Characterization And Numerical Modelling Of Delamination Growth In Fiber Reinforced Polymer Laminated Composites Under Cyclic Loading, Dr. S Kattimani & Prof. S.M. Murigendrappa, SERB, 26.28Lakhs, 24/03/2017 -24/03/2020.
4. An Experimental And Theoretical Investigation On Narrow Thermal Hysteresis Of Cu-Al-Be Based Sma Actuator For Vibration Isolation, Prof. S.M. Murigendrappa & Dr. S Kattimani, SERB, 16Lakhs, .
5. Active Vibration Control Of Laminated Composite Sandwich Plates In Hygrothermal Environment Using 1-3 Piezoelectric Composites, Dr. S Kattimani, SERB, 40.9Lakhs, 26/03/2018 - 26/03/2021.
6. Investigation On Radiolucent Composite Sandwich Materials For Biomedical Imaging Systems Under Hygrothermal Environment, Dr. S Kattimani, DST- ASEAN -India Collaboration, 41Lakhs, 2020-2022 (Approved).
7. Experimental Investigation On Pulsating Synthetic Jet Micromixers To Determine The Injection Dynamics Of Insulin In Hydrogels For Subcutaneous Drug Delivery, Dr. Arumuga Perumal D, SERB, 32.6Lakhs, 01 August 2017-31 July 2020.
8. An Investigation In To The Effects Of Induced Helicity In The Carotid Bifurcated Arteries On Patient Specific Models, Dr. Anish S and Dr. Mrityunjay Doddamani, SERB, 16.15Lakhs, 26/2/2020 to 25/2/2023.
9. Improvement In The Properties Of Thermally Sprayed Hydroxyapatite Bio-Ceramic Coating Reinforced With Nanostructured Materials, Dr Sudhakar C Jambagi, SERB, 38.4Lakhs, 18/3/2019 to 17/3/2022.
10. Experimental And Numerical Investigation Of Effect Of Leading Edge Protuberances On The Performance Of Wind Turbine Blade, Dr. Sathyabhama A, SERB, 66Lakhs, May 2016 to March 2020.
11. Ultrafine Grain Refinement Through Low Plasticity Burnishing On Waam Of Mgalloy For Aerospace And Automotive Applications, Dr.A.S.S.BALAN, SYST-SEED, 16.09Lakhs, Jan 2020 to Jan 2023.
12. Experimental Technique To Induce Surface Grain Refinement Through Laser Shock Peening On Ecap Processed Mg. Alloy, Dr. H Shivananda Nayaka, SERB, 41.02Lakhs, May 2019 to May 2022.
13. Design Of Magneto Rheological Damper For Vehicular Applications, Indian PI: Prof. C.Sujatha, IIT Madras ; Indian Co-PI: Dr. Hemantha Kumar, NITK Surathkal International PI: Prof. Muthukumaran Packirisamy ; International Co-PI: Prof. Ramin Sedaghati, Concordia University, Canada, MHRD, 60.35Lakhs, 2019-2021.
14. Development Of Cost Effective Magneto-Rheological (Mr) Fluid Damper In Two Wheelers And Four Wheelers Automobile To Improve Ride Comfort And Stability, PI: Dr. Hemantha Kumar, Co- PI: Prof. C.Sujatha, Dept. of Mechanical Engineering, IIT Madras, Prof. K.V.Gangadharan, Dept. of Mechanical Engineering, NITK, Dr. Sharnappa J., Dept. of Mechanical Engineering, NITK, Dr. Mohd.Rizwan Rahman, Dept. of Material and Metallurgy Engg. NITK, Dr. Sheron F. Dept. of Electrical and Electronics Engg. NITK, Dr. Sandesh S. Senior Manager, Ashok Leyland Ltd. Chennai, Mr. Rajasekharan, Scientific Advisor, Rambal Ltd. Chennai., MHRD & Ministry of Road Transport and Highways, 355Lakhs, 2017-2020.
15. Experimental Investigation Of Passive, Semi-Active And Active Vibration Control Of Composite Sandwich Structure, PI: Dr. Sharnappa Joladarashi Co-PI: Dr. Hemantha Kumar, DST, 51.5Lakhs, 2017-2020.
16. Investigations On The Dynamic Behaviour Of Bacterial Helical Flagellar Filaments Under Axial Flow, Dr. Ranjith M, DST-SERB, 21.46Lakhs, 2017-2020.
17. Design, Analysis And Demonstration Of The Porous Injector Concept For Throttling Of Liquid Rocket Engine., Dr. Parthasarathy P, ISRO, , 2019-2021.
18. Design And Testing Of Robust, High Efficient, Low Polluting Lpg Porous Burners For Household Applications., Dr. Parthasarathy P and Dr. Arun M, DST-SYST, , 2020-2023.
19. Development Of Composite Filament For Light Weight 3D Printed Components, PI - Dr. Mrityunjay Doddamani, Co-PI's - Dr. Srikanth Bontha, Dr. Vamsi Krishna Balla, DST-TSDP, TDT, GoI, 33.03Lakhs, 2017-2020.
20. Pre-Operative Damage Assessment In Orthopedic Surgery Using 3D Printing To Minimize Healing Time, Dr. Mrityunjay Doddamani, VGST, GoK, 5Lakhs, 2017-18.
21. Cost-Effective Enhanced Insulating Foams For Cold Storage Application, Dr. Mrityunjay Doddamani, ISHRAE, 30.62Lakhs, 2020-2023.
22. Additive Manufacturing Of Novel Structural Foam Composites For Durability And Damage Tolerance, PI: Dr. Mrityunjay Doddamani (NITK), Dr. Pavana Prabhakar (UW-Madison, USA); Co-PI's Dr. Suhasini Gururaja (IISc), Prof. Gustavo Parra-Montesinos (UW-Madison, USA), SPARC, MHRD, GoI, 86.49Lakhs, 2019-2021.
23. Development Of Brushless Dc (Bldc) Motors For An Automotive Power Window Application, Dr. K V Gnagadharan (PI) + Mr. Srinivas (Co PI) . Ms/ Aditya Auto , Dept. of Heavy Industries , 375Lakhs, 2020-2022.
24. Design Of Oil Skimming Application With Super Hydrophobic Sponge, Dr. Pruthviraj U (PI) App Mech , Dr. K V Gangadharan (CO.PI), MRPL , 44Lakhs, 2019-2021.
25. Tpm - Fame India Scheme - "Switched Reluctance Motor & Controller For 2W & 3W", 2018-2021Dr. K V Gnagadharan (PI) , Co Pis Dr. Jeyaraj , Dr. Navin Karanth,Dr. Venkitesh Perumal (EE), Dr. Suresh Y, (EE) , Dr. Krishnan C (EE) + Mr. Srinivas . Ms/ Aditya Auto , Dept. of Heavy Industries , 1700Lakhs, 2018-2021.
26. Virtual Lab Phase Iii, Dr. K V Gangadharan(PI) , Dr. Pruthviraj(AppMech), Dr. Mohit T (CS), NMEICT(MHRD), 100Lakhs, 2017-2021.
27. Origins Of Yielding In Polymer Electrolyte Membranes, KK Poornesh, DST-SERB, 50Lakhs, 2019-2022.
28. Interface Characteristics Of Membrane Electrode Assemblies, KK Poornesh, DST, 35Lakhs, 2018-2022.
29. Analytical And Numerical Investigations Of Mixed Convection Through Wire Mesh Porous Structure Filled In a Channel, Dr. N. Gnanasekaran, DST-SERB, 21Lakhs, 2019-2022.

Placement



ExxonMobil



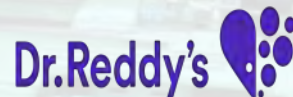
SIEMENS



Garrett
ADVANCING MOTION



CATERPILLAR™



SuperProcure
making registration efficient



Industry collaboration

IFB Goa, NMPT, NMPT, Wonderla Kochin, Wonderla Bangalore, Wonderla Hyderabad, OMPL, Classic Fussion, Hi Tech Batteries, IKP knowledge park, BRIC Hackathon, MRPL, INVENCIO, Rambal India Ltd. Ashok Leyland Ltd. Arya Technocrats Belgaum, AUM Techno Spray, Bosch, UD truck India.....

Contact:

Dr. Subhaschandra Kattimani

Professor and Head

Department of Mechanical Engineering

National Institute of Technology Karnataka, Surathkal

Post Srinivasnagar, Mangalore – 575025, Karnataka, INDIA

☎ : +91-824-2473049

: +91-824-2474058

✉ : hodmechanical@nitk.edu.in