

2026

Department of Mechanical Engineering

Head - Prof. V. P. Chandra Mohan

Milestones of Mechanical Engineering Department

Department History 1959–2024

1. **Oct. 1959** — Started B.Tech in Mechanical Engineering
2. **Aug. 1964** — Started M.E. in Heat Power Engineering
3. **Sep. 1966** — UNESCO sponsored M.Tech in Design & Production of Machine Tools with industrial orientation
4. **Aug. 1970** — M.E. Heat Power converted to M.Tech in Design & Production of I.C. Engines & Gas Turbines
5. **Jun. 1996** — **First accreditation of B.Tech Mechanical Engineering and M.Tech (ICEGT)**
6. **Jul. 2000** — Started M.Tech in Computer Integrated Manufacturing (CIM) and M.Tech Manufacturing Engg.
7. **Mar. 2008** — **Second accreditation of B.Tech Mechanical Engineering and M.Tech (TE & ME)**
8. **Jul. 2008** — Started M.Tech in Automobile Engineering
9. **Dec. 2014** — **Third accreditation of B.Tech in Mechanical Engineering**
10. **Jun. 2017** — Revised curriculum for B.Tech in Mechanical Engineering
11. **Jul. 2021** — Revised curriculum for B.Tech and all M.Tech specializations in view of NEP 2020
12. **Jul. 2021** — Started M.Tech and Ph.D in self-finance mode for all M.Tech specializations
13. **Mar. 2022** — **Latest accreditation of B.Tech Mechanical Engineering [2022–2028]**
14. **Oct. 2022** — **Latest accreditation of M.Tech Manufacturing Engineering [2022–2028]**
15. **Jul. 2024** — Revised curriculum for B.Tech and all M.Tech specializations in view of NEP 2020

Rankings

NATIONAL INSTITUTIONAL RANKING FRAMEWORK

Ranking NIRF-2025

ENGINEERING	OVERALL
28	63

Ranking NIRF-2024

ENGINEERING	OVERALL
21	53

Ranking NIRF-2023

ENGINEERING	OVERALL
21	53

QS WORLD UNIVERSITY RANKINGS

QS Asia University ranking- 2026

771-780

Students

970
Full Time Students

520
Undergraduates

280
Master Students

170
Doctoral Students
FT+PT

Masters/Doctor Degree Programs

- Manufacturing Engineering
- Computer Integrated Manufacturing
- Automobile Engineering
- Thermal Engineering
- Design Engineering

Minor Programs

- Smart Manufacturing
- Thermal Engineering
- Design Engineering
- Computational Mechanics

B.Tech Employment Rate
95.1%

M.Tech Employment Rate
70% (overall)

Employment Companies

BAJAJ, TATA, TATA PROJECTS, HLS ASIA LIMITED, L&T Infotech, THERMAX, SIGMOID, TATA HITACHI, Deloitte., JOHN DEERE, Collins Aerospace, JK TYRE, ABInBev, ADP, Capgemini, ITC Limited, merilytics, NOVARTIS, BlueYonder, IMPACT, ORACLE, HP, BOSCH, L&T, MARUTI SUZUKI, ATHER

Teaching Achievements

DEPARTMENT OF MECHANICAL ENGINEERING

Visiting Professor- National levels teaching



Prof. V Hari Kumar

Visiting Professor, AIT Bangkok
2022



Prof. Velagapudi Vasu

Visiting Professor under
ANRF- ASEAN Project
2026



Prof. G Raghavendra

Visiting Professor under
ANRF- ASEAN Project,
2026

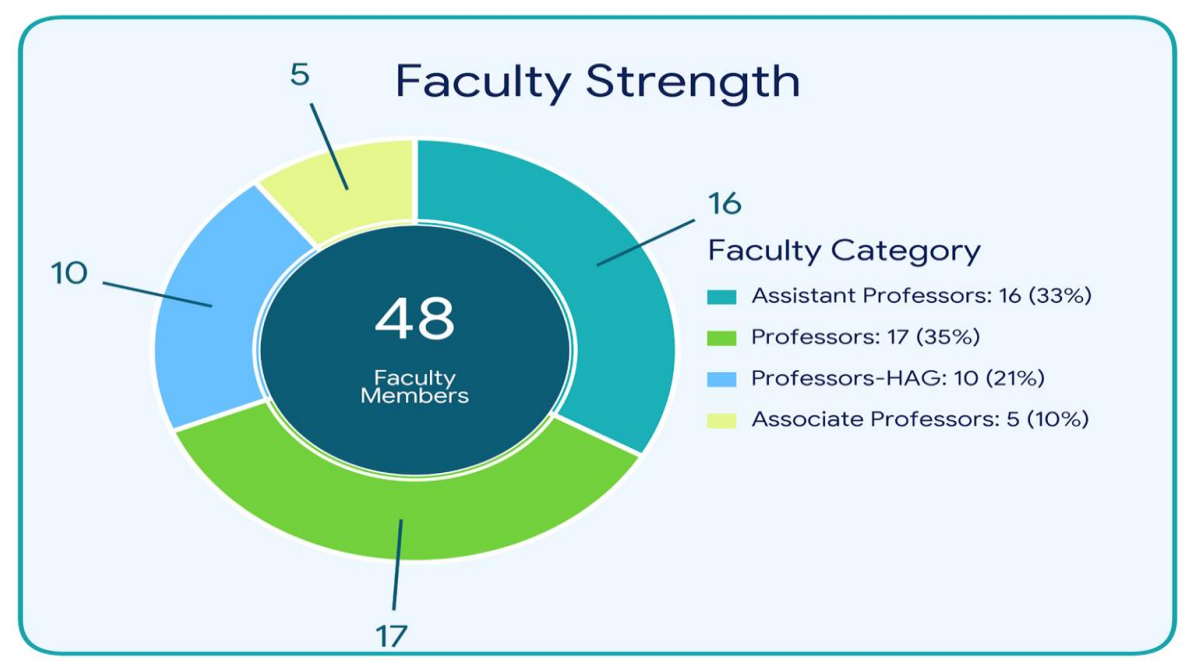


Prof. Manjaiah M

Adjunct Professor at
University of New
Brunswick, Canada
(2026-Continuing)

Faculty Strength

Distribution of 48 faculty members across academic designations



Research Directions

Facing the country's major needs, Emphasizing interdisciplinary integration, Refining key research directions, Establishing significant R&D platforms

Production Engineering

- Additive Manufacturing & 3D Printing
- Biomedical Implants
- Smart & Digital Manufacturing
- Advanced Manufacturing, Composites & Super Alloys
- Surface Engineering
- Energy Assisted Manufacturing Processes
- Machine-Learned Material Modelling for EVs
- Mechatronics, MEMS & NEMS

Design Engineering

- Shape & Topology Optimization
- Geometric Modelling for Heterogeneous Objects
- Composites, Tribology, Biomaterials & Bio-glass
- Advanced Materials, Super Alloys & Ceramics
- Dynamics, Measurement & Control

Thermal Engineering

- Thermal Management
- Gas Turbine Blade Cooling
- Fuel Cells & Alternative Sources of Energy
- Microfluids
- CFD, Turbulence & Hypersonic Flows
- I.C. Engines & Automobiles
- Thermal Systems, Alternative Fuels & Emission Control

Emphasize fundamentals, Strengthen advantages, Explore unique features, Promote interdisciplinary integration

Research Directions

Scientific Research

- Scientific Achievements
- Research Highlights

Scientific Achievements

Research outcomes doubled in the past 5 years

589+175

Journals & Conference Papers
Published in last 3 years

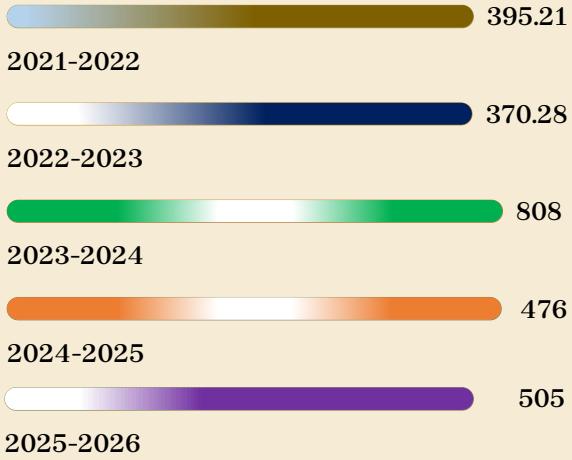
55

Patents
Published in last 5 years

04+31

Books & Book Chapters
Published in last 3 years

Research Projects Funding in Lakhs



Stanford University Global Top 2% Scientists List



Prof. Ch S Prakasha Rao



Prof. R Narasimha Rao



Prof. Adepu Kumar



Prof. V P Chandra Mohan



Prof. P Vamsi Krishna

Research Highlights

Facing the country's major needs, strengthening interdisciplinary integration, refining key research directions, and establishing significant R&D platforms

01

Research Equipment & Capabilities

Advanced facilities supporting additive manufacturing, machining, metrology, thermal and energy systems.

02

Implantable TMJ Device

Patent-driven biomedical implant development combining design, 3D printing and clinical translation.

03

Smart & Digital Manufacturing

Robotics, machine tool dynamics, kinematics and control for Industry 4.0 applications.

04

Sustainable Energy Systems

Fuel cell, Hydrogen Combustion, Energy Storage, Solar dryer.

Emphasize fundamentals, strengthen advantages, explore unique features, promote interdisciplinary integration

Department Equipment & Capabilities

Research Equipment

- Laser Processing Machine
- Laser Assisted Machining
- Wire Arc-Additive Manufacturing
- CMM & Hexagon laser CMM
- UTM & Optical Microscope
- CNC Control Training System
- Planetary Ball Mill
- DMP FLEX 100 Metal Additive Manufacturing Machine
- Ultimaker 3D Printer
- Friction Stir Welding Machine
- FDM Machine
- Tribology Analysis
- Sand/Bead Blaster
- Motorised Micro Motion Stage
- 4-Stroke & 4-cylinder CRDi Engines
- Convection and Compressor Test Rigs































Implantable Temporomandibular Joint Device

Biomedical implant innovation using patient-specific scan models, CAD design, 3D printing and surgical deployment

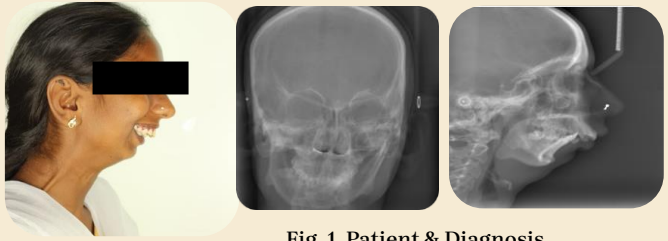


Fig. 1. Patient & Diagnosis

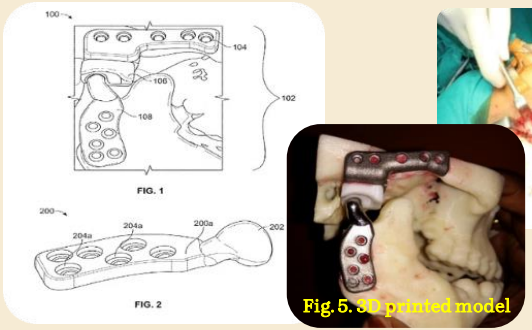


Fig. 4. Exemplary view of the condyle according to an exemplary embodiment of the present disclosure











Fig. 6. Surgery (Implant Fixation)

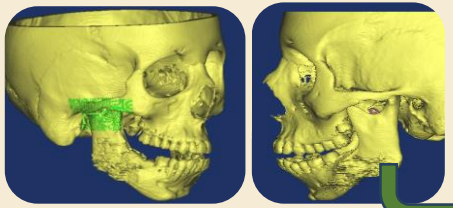


Fig. 2. 3D Scan Model & CAD Design



Fig. 3. Condyle Component (Mandibular Reconstruction)

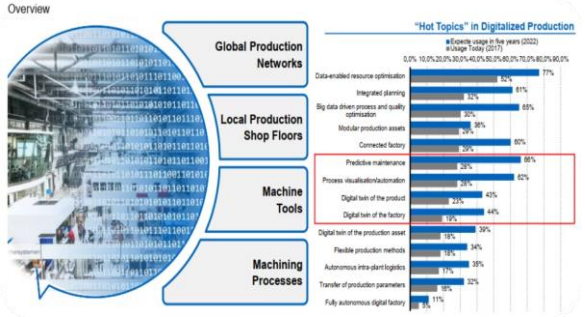


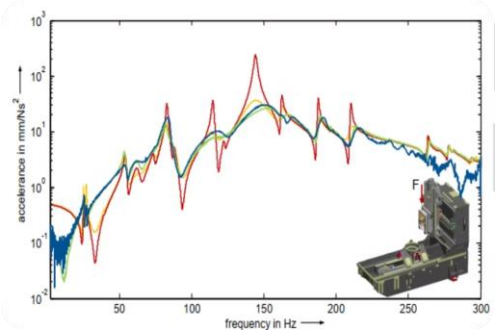


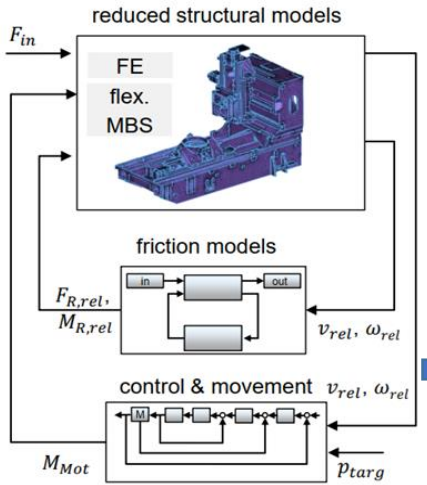
Key Highlight

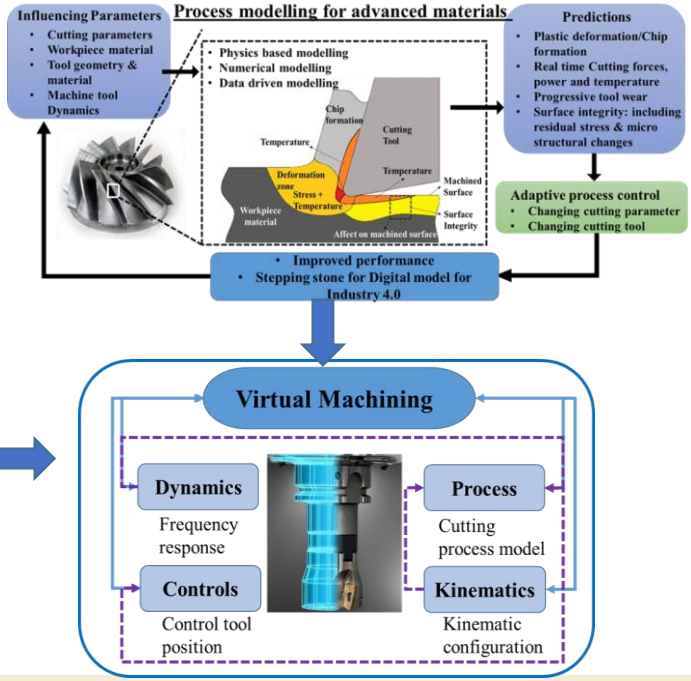
US Patent: US011351033B2
Implantable
Temporomandibular Joint Device

Smart & Digital Manufacturing









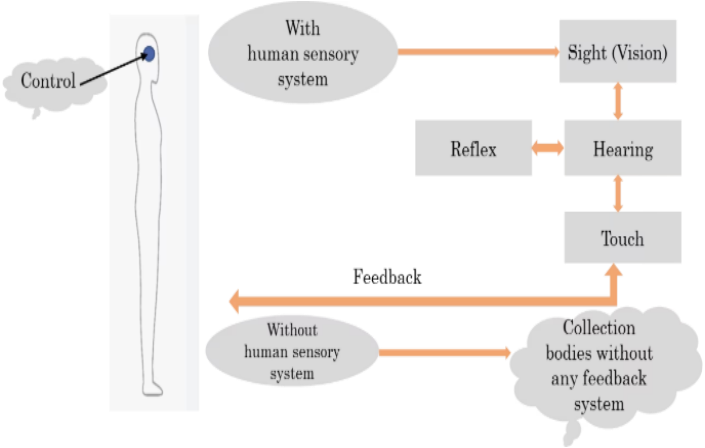
Kinematics & Control
Digital control strategies for intelligent manufacturing systems

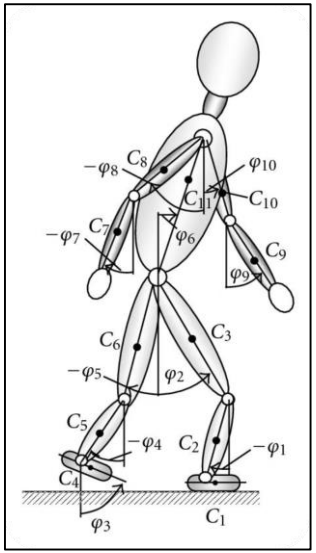
Machine Tool Dynamics
Dynamic response and stability for precision machining

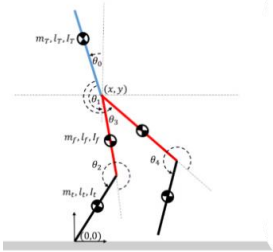
Industry 4.0
Data-driven manufacturing and cyber-physical systems

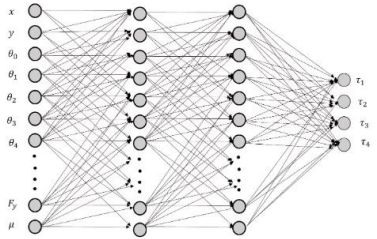
Robotics

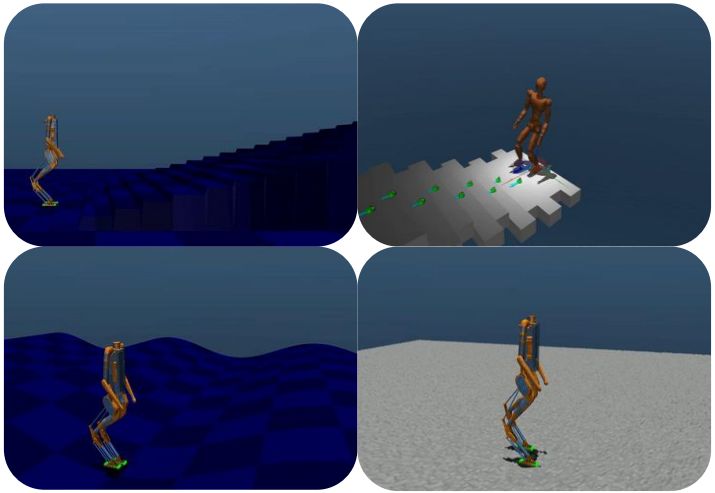
Robotics research integrating mechanisms, sensing, controls and intelligent automation.

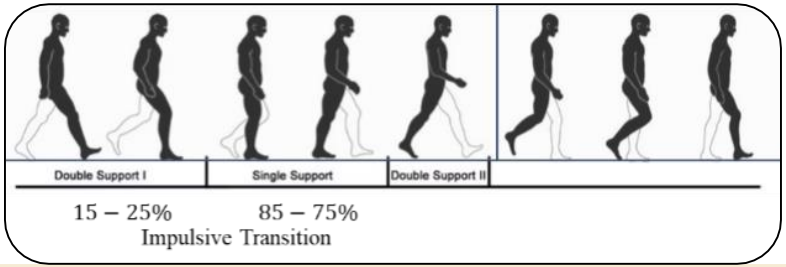






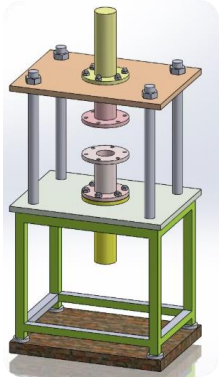


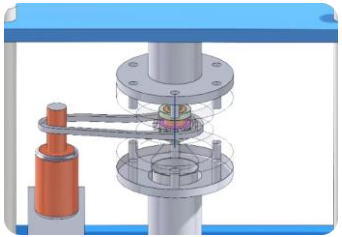




Abrasive Flow Machining for Nano-Finishing Applications

3D Design





Rotary AFM Tooling

Fabricated Abrasive Flow Machine





Secondary tooling to hold medical implant in AFM

Primary tooling to Guide media Passage in AFM to finish implant



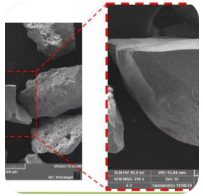
Abrasive media



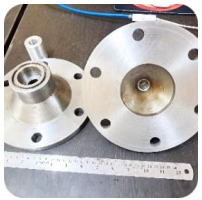


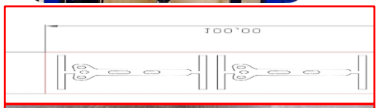


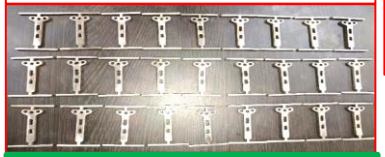






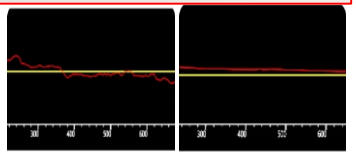


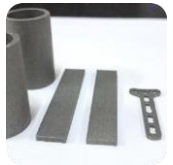






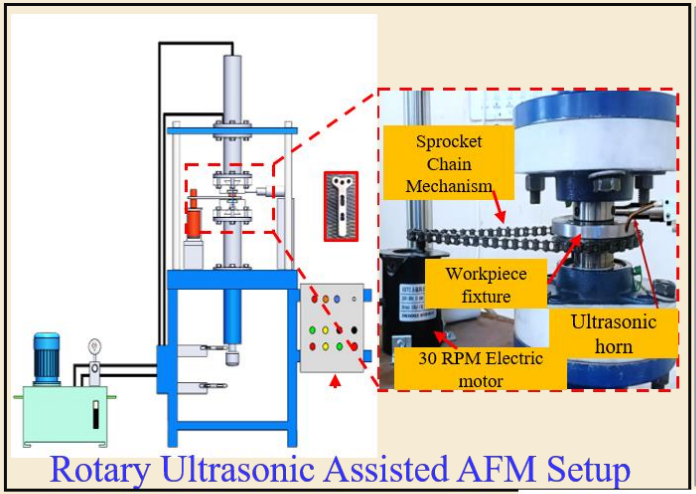




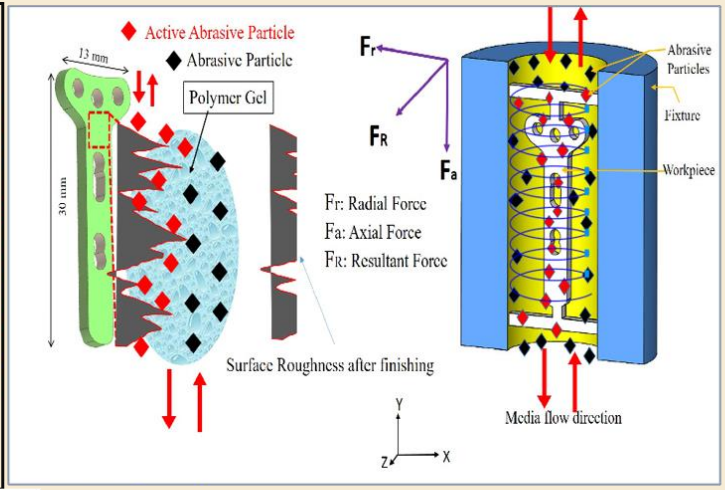


Application: Nano-finishing of complex surfaces and biomedical implants | Dr. Venkatesh Gudipadu | Journals: 30, Patent: 01

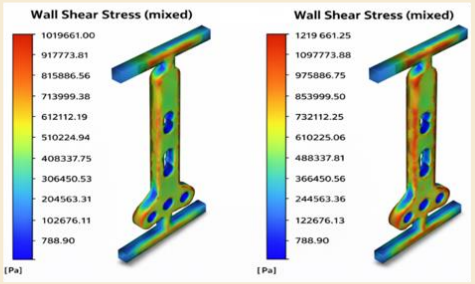
A Microwave drilling of a Different Polymer Composite materials for Aerospace applications- DRDO funding

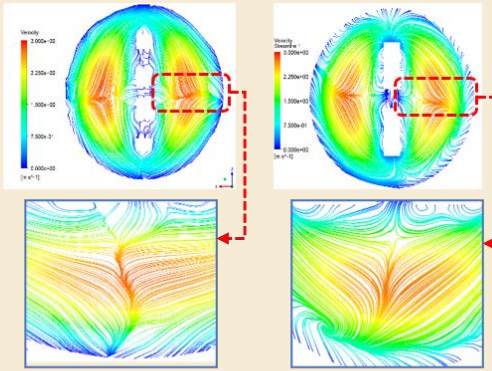


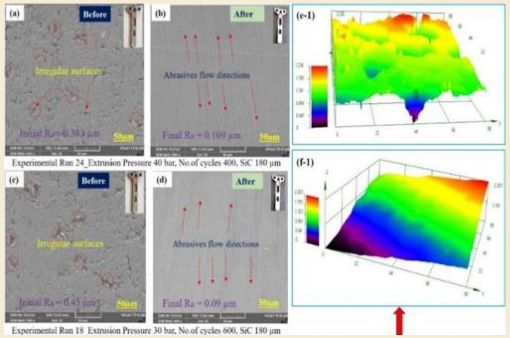
Rotary Ultrasonic Assisted AFM Setup

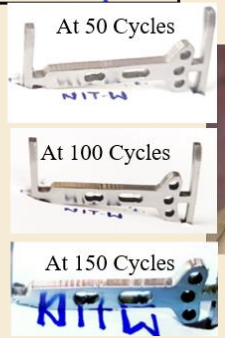


Simulations









Applications



Ra= 0.08 µm





Additive Manufacturing Research-ISRO, DRDO and ANRF Funding

Broad area of research: Metal Additive Manufacturing; Bimetallic Structures; Post Processing of AM parts; Dynamic Deformation



Argon Furnace upto 1000 °C



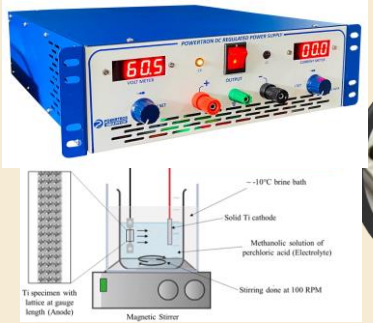
Powder Sieving

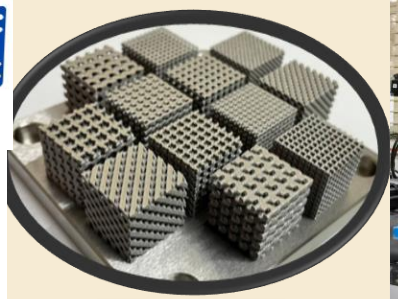


Sand Blasting Machine



Electrochemical anodization





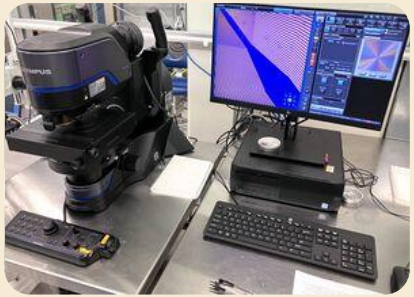
CMT-with Gantry



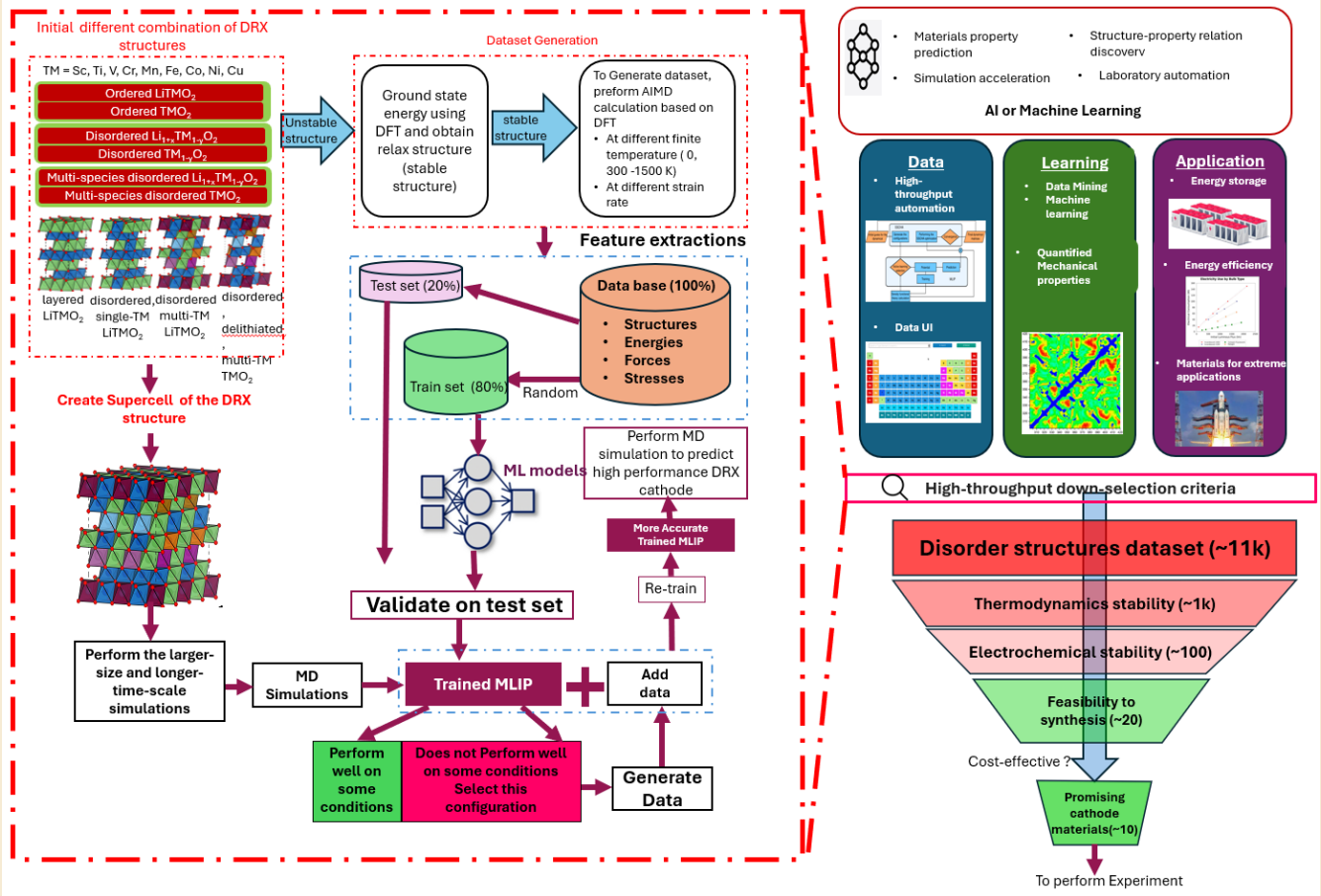
Wire –EDM



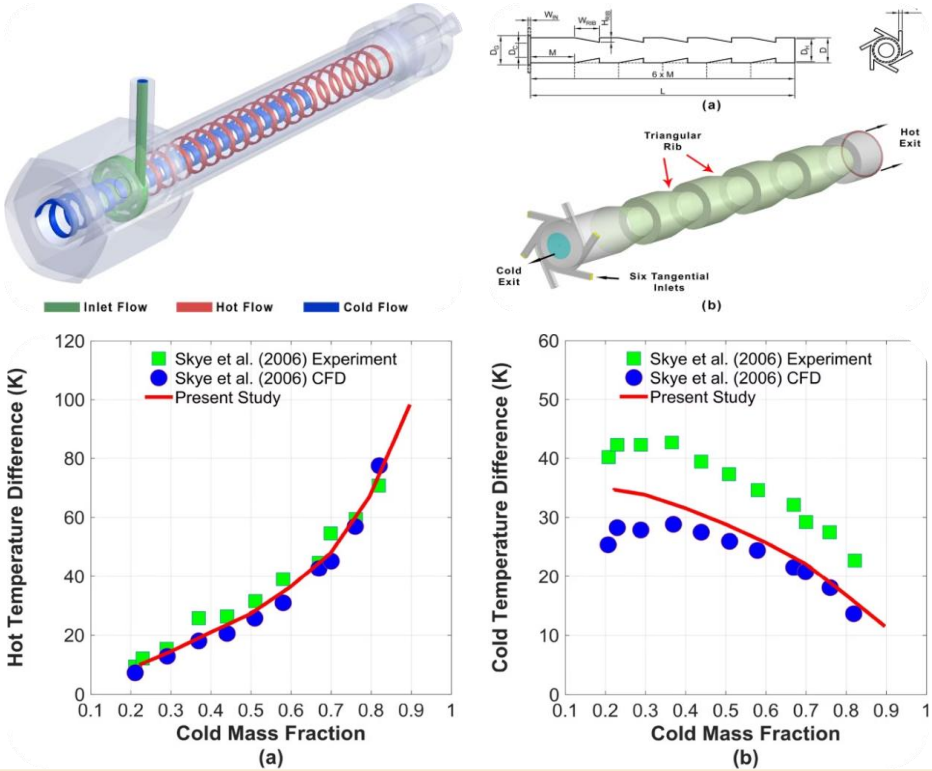
3D Optical profilometer



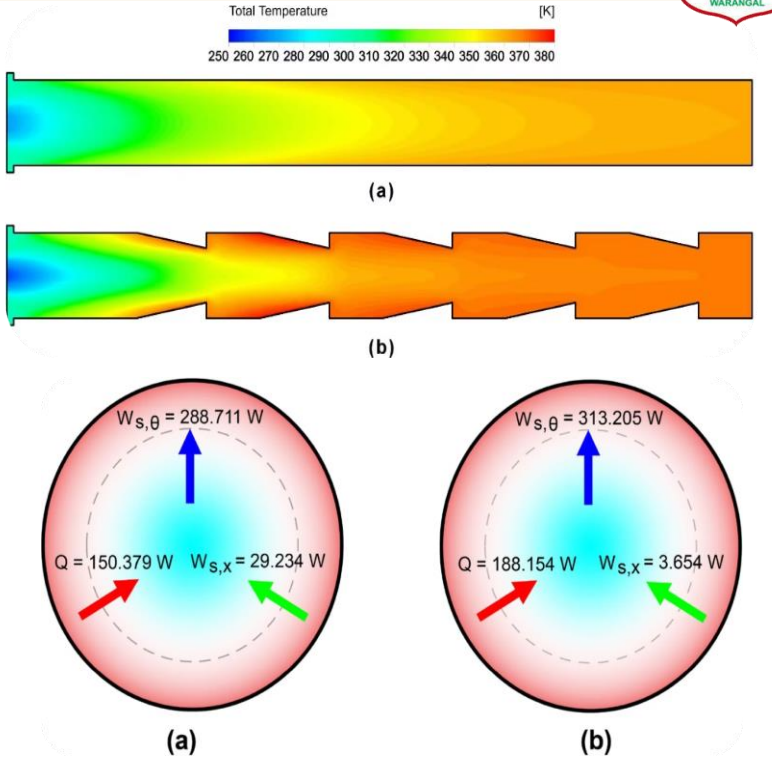
Modelling and simulation lab



Design of Ranque–Hilsch Vortex Tube [RHVT]



Comparison of (a) Hot temperature difference (b) Cold temperature difference at different Cold mass fractions

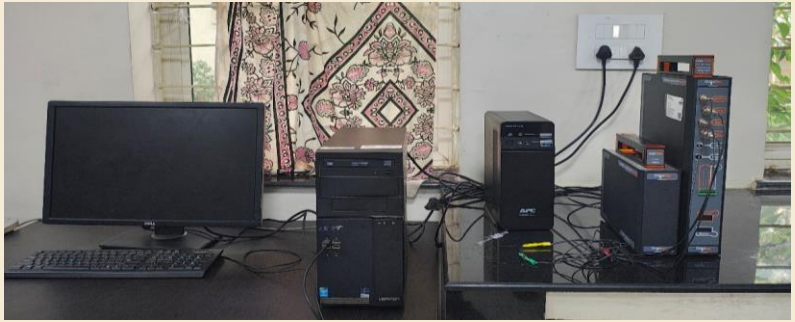


Schematic of the energy transfer along the dividing streamline for the (a) base design (b) ribbed design.

Laser Processing Laboratory

Broad area of research: Tribology; Surface Texturing; Lubrication; Nano-lubricant; Surface Coatings; Composites; Laser Ablation

Electrochemical Workstation



Nd:YAG Laser



Notable results: By using the facilities - PhD Completed: 02 Ongoing PhD: 02. The lab has produced 7 SCI journal publications, 2 Scopus-indexed journal articles, 5 conference papers, and 1 book chapter

Surface Roughness Tester



PH Meter



BOD Incubator



Motorized XYZ Stage



Applied Heat Transfer Lab (Research Lab)

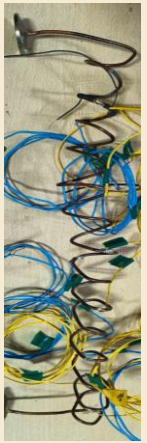
- Research area – Experimental studies on heat transfer enhancement in channels for the applications of heat exchangers, solar air heaters, Pulsating Heat Pipe etc.
- Ongoing project – 1 (ANRF - CRG, Rs. 24,860,00/-)
- Number of Ph.D students – 2
- Number of journal papers since 2024 - 5



Root blower



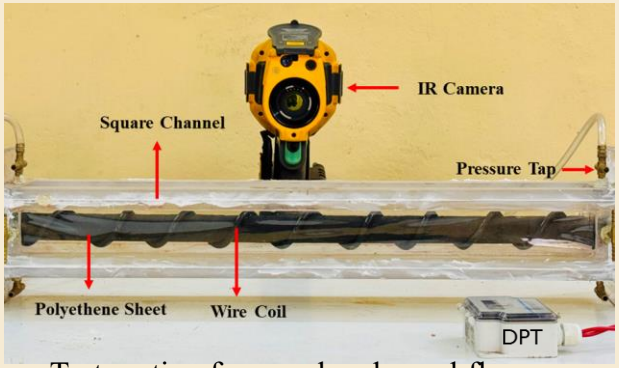
Centrifugal blower



Coil Type PHP



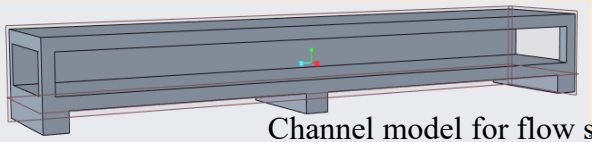
Vacuum Pump



Test section for annular channel flow



AC Power supply

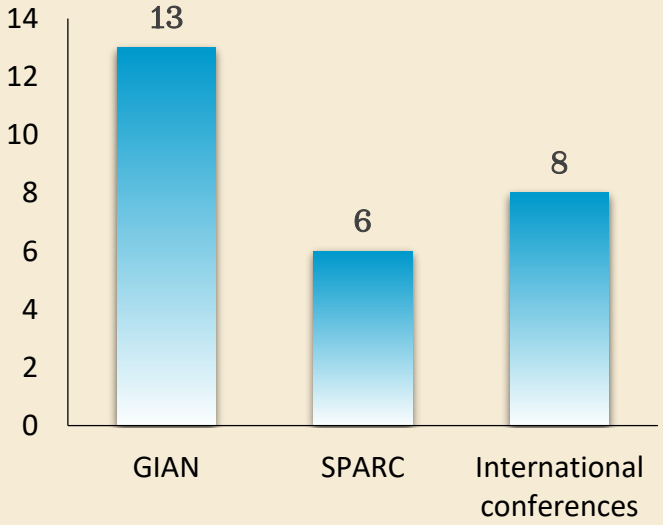


Channel model for flow studies

Internationalized Teaching

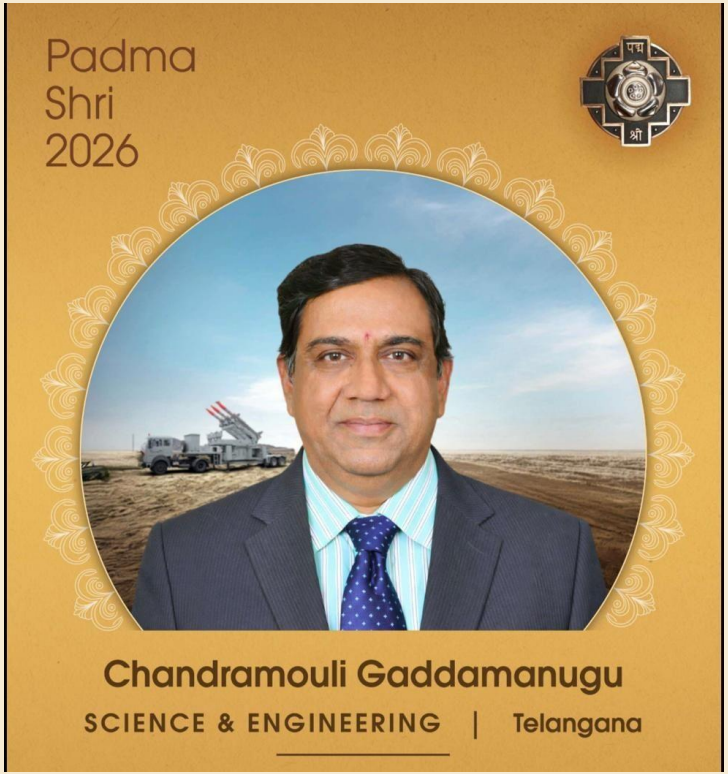






Distinct Alumnus Of The Department



Dr. Chandramouli Gaddamanugu

B.Tech [Mechanical Engineering(1976-81)]

‘Padma Sri’ Award 2026 in Science and Engineering category

- Former Outstanding Scientist (Scientist H), at DRDO
- Project Director – Akash Missile System
- Programme Director - Defence Research and Development Laboratory (D.R.D.L.), Hyderabad.

Distinct Alumnus Of The Department

Academia



Dr. P. Seshu
Former, Director, IIT Dharwad



Dr. P. V. Rao
Professor, IIT Delhi



Dr. M. Ramgopal
Professor, IIT Kharagpur



Dr. Kishore Pochiraju
Professor, Stevens Institute of Technology, USA



Prof. Anand Swamynathan
Goizueta Business School, Emory University, Atlanta, Georgia



Dr. Vrishank Raghav
Associate Professor, Auburn University, USA



Dr. Gokul Pathikonda
Assistant Professor, Arizona State University, USA



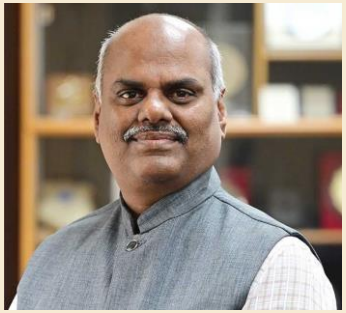
Dr. Vadlamani Nagabhushana Rao
Assistant Professor, IIT Madras

Distinct Alumnus Of The Department

Research Organizations and Corporate Sector



Shri. Rajendra Prasad
M.Tech - Design [1994]
Chief Information and Asset Engineering Officer, Accenture, USA



Dr. S. V. Ramana Murty
M.Tech [1993]
Director, Gas Turbine Research Establishment (GTRE)



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B.Tech [1981]
Scientist 'G', DRDL - DRDO, Hyderabad



Shri. Parijat Mukherjee
B.Tech [2001]
Executive Director - Technology, Wells Fargo



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B.Tech [1980]
Vice President (Engineering Services), SS and Comp Private Limited, New Delhi



Narasimharao Tolety
B.Tech [1977]
Director & CEO, Harmony Ecotech Private Limited, Hyderabad



Krishna Rao Guntuku
B.Tech [1983]
Director- Material Management RCI, DRDO



Venkata Ramana R
B.Tech [1984]
Senior General Manager - Commercial, RKM Powergen Pvt Limited



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B.Tech [1981]
Former Project Director Akash, DRDO



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B.Tech [1983]
Former CGM & Head Maintenance (Rajahmundry Asset, ONGC)

Distinct Alumnus Of The Department

Research and Development Organizations



Shri. S P Gupta
Principal Advisor (Coordination), ITI Limited



Shri. P S Subramanyam
Program Director Light Combat Aircraft, DRDL (Retd.)



Dr. V. Venkateswara Rao
Outstanding Scientist & Director ARDE (DRDO), Pune



Dr. Jaiteerth R Joshi
Project Director, DRDL, Hyderabad



Shri. Dwarakanath P
Chairman and Managing Director (Retd), BEML LIMITED



Dr. Sudhir Kumar Mishra. CEO & MD, BrahMos Aerospace

IAS/IPS/IFS



Shri. V V. Laxmi Narayana



Shri. Krishna Prasad Tenneti
Former DGP,



Shri. Surendra Babu
Former ACP, Hyderabad



Shri. Venkata Rama Sastry P,
Additional Director General, BSF, New Delhi



K. Dinesh Kumar, Managing Director, AP State Fibernet LTD

Distinct Alumnus Of The Department

Entrepreneurs



Shri. Vijaya Mantha
Managing Director, Trewport Technologies



Shri. Radheshyam Mamidi
Founder & CEO, Natsoft Asia Pvt. Ltd.



Shri. Rahul Reddy Edla
Co-Founder & CBO, Epick Bikes



Shri. Aradh Vemula
CEO & Co-Founder, Epick Bikes



Shri. Rajaraman Swami
Founder & Managing Director, Excel Corp



Shri. Sathish Visanagiri
Founder & CEO, Reckonsys Tech Labs Pvt. Ltd.



Shri. Vasant Roy
Managing Director, EFCO Maschinenbau India Pvt. Ltd.



Shri. Piyush Joshi
Co-Founder & CEO, Qubotics



Shri. Amit Chacko Thomas
Founder, Game On Sports Management Pvt. Ltd.



Mohammed Jaleel Pasha
Managing Director, JAPS PVT Limited Hyderabad

Distinct Alumnus Of The Department

Politics



Mrs. Padma Kuppa [1st Woman B.Tech ME Student], Member of the Michigan House of Representatives from the 41st district



Shri. S.P.Y. Reddy (late)
Former M.P., Entrepreneur, Nandi pipes



Shri. Krishna Prasad Tenneti
M.P., Lok Sabha [Bapatla, AP]



Shri. V. V. Lakshminarayana
Jai Bharat National party

Arts & Culture



Shri. Ramajogaiah Sastry
Leading Telugu Film Lyricist



Shri. Madhura Sreedhar Reddy
Film Director- Producer- Writer



Shri. Biswanath Rath
Indian Film Director and Producer

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