



# MANIPAL INSTITUTE OF TECHNOLOGY MANIPAL

(A Constituent Unit of MAHE, MANIPAL)

Annual Newsletter

January 2023 | Vol 5 | Issue 1

## Flying Wheel

### Vision

"Excellence in Education of Aeronautical and Automobile Engineering fortified through Innovation and Teamwork"

### Mission

- **M1:** Educate students professionally to face societal challenges.
- **M2:** Provide a conducive environment for learning, reinforced with the principles of Aeronautical and Automobile Engineering.
- **M3:** Promote Creativity and nurture Teamwork.

### Program

- The Department of Aeronautical and Automobile Engineering offers 2 UG (**Aeronautical Engg. and Automobile Engg.**) and 4 PG (**Avionics, Defence technology, Automobile Engg. and Applied CFD**) courses.
- The Aeronautical Engineering and Automobile Engineering programs of the Department are NBA accredited for 3 years (June 2022-June 2025).



**Department of Aeronautical and Automobile Engineering**

**MANIPAL INSTITUTE OF TECHNOLOGY**

MAHE, Manipal - 576104

0820 2925482 [aeroauto@manipal.edu](mailto:aeroauto@manipal.edu)

<https://manipal.edu/mit/department-faculty/department-list/aeronautical-and-automobile-engineering.html>

## Flying Wheel

## Notable Mentions Faculty



**Dr. Srinivas G**, Assistant Professor-Senior Scale, successfully defended his thesis titled "Evaluation and Enhancement of the performance of axial flow compressor under distorted phenomena in transonic flow conditions" on 11/10/2022.

Guide: Dr. Raghunanandana K, Co-Guide: Dr. Satish Shenoy B

**Dr. Manikandan M**, Assistant Professor-Senior Scale, successfully defended his thesis titled "Design Optimization of Tri-Lobed Lifting-Body Dynastat Airships" on 20 /06/2022.

Guide: Dr. Rajkumar S Pant, Dept. Of Aerospace Engineering, IITB.



**Dr. Manjunath Shetty**, Assistant Professor and **Dr. Chandrakantha Bekal**, Associate Professor have been allotted the MAHE seed grant for their proposal titled "Synthesis, Characterization and optimization nanomaterials As Electrodes for Next Generation Zinc-ion Energy Storage Systems."

**Dr. Mohammad Zuber**, Professor, **Dr. Chandrakat R Kini**, Professor, and **Dr. Chandrakantha Bekal**, Associate Professor, attended a three days study visit to Cranfield University, United Kingdom as a part of APPLY (Master course in Applied Computational Fluid Dynamics), a Master's program funded by Erasmus+ program of European Unions and co-developed by 11 universities across the world.



## Faculty & Student Journal Publications

1. **Sanyam Handa, Srinivas G** "Recent developments of blended wing body aircraft: experimental, numerical and theoretical approaches", Aerospace Systems, Vol no.5, Issue no.2, PP 171–183.
2. **Sankalp SS, Sharma V, Singh A, Salian A S, Srinivas G**, "Computational analyses of tail fin configurations for a sounding rocket", Aerospace Systems, Vol no.5, Issue no.2, PP 233–246.
3. **Archit Bapat, Pramod Balwantrao Salunkhe, Patil, A.V**, "Hall-Effect Thrusters for Deep-Space Missions: A Review", IEEE Transactions on Plasma Sciencethis link is disabled, 2022, 50(2), pp. 189–202.

## Flying Wheel

## Notable Mentions Faculty



**Dr. Thara Reshma I V**, Assistant Professor-Sr. Scale was part of the organizing team of the 24th International Shock Interaction Symposium (SIS 2022) organized by the Department of Aerospace Engineering, IIT Madras, 17-20 October 2022.

Organizing Chair: Prof. G Rajesh, Co-chair: Prof. R Sriram, Department of Aerospace Engineering, IITM.

**Dr. Pramod Balwantrao Salunkhe**, Associate Professor, has organized an Interactive session with IPowerE UK Team and IPowerE student members on 7th May, 2022 and a half day workshop on "Saksham – Energy Conservation" in association with HPCL Bangalore and IPowerE, UK on 10th Feb. 2022.



**Dr. Chetan K N**, Assistant Professor -Sr. Scale, has completed his post-doctoral research associate at Computational Orthopaedics and Rehabilitation Engineering Lab, New Jersey Institute of Technology, Newark, New Jersey, USA from 02/05/2022 to 26/10/2022. The project was funded by National Institute of Health [NIH], United States of America on a research area "Identification of New Biomarkers for Determining Risk of Lower Extremity Fracture during Exoskeleton-Assisted Ambulation: Developing a Personal Rehabilitation Approach to Optimize Function after spinal cord injury".

## Fresh Face of the Department



**Dr. Manish Varun Yadav**, Assistant Professor – Sr. Scale, has research interests in the field of Planar Antenna, Microstrip Antenna, Horn Antenna, Microwave Waveguides.

B.E. (Electronics & Communication Engineering), M.Tech. (Digital Communication), Ph.D. (Planar Antenna).

**Dr. Vijay Tambrallinath**, Assistant Professor-Sr. Scale, has research interests in the field of additive Manufacturing, Polymer Nanocomposites, Metal Matrix Composites, Renewable energy.

B.E. (Automobile Engg.), M. Tech. (Energy System Engineering), Ph.D. (Additive

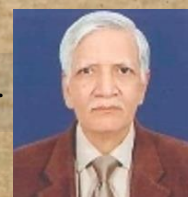


**Mr. Jayashish Kumar Pandey**, Assistant Professor, has research interests in the field of Automobile Engines, Hydrogen fuel for automotive, Alternate Fuels, Alternate energy technology, Hydrogen fuel cell

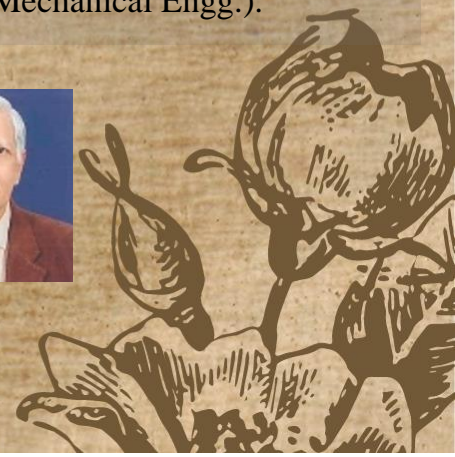
B.E. (Mechanical Engg.), M. Tech. (Thermal Engg.), Ph.D. (Mechanical Engg.).

## Adjunct Faculties of the Department

**Cmde. S L Deshmukh**, NM (Retd.), VP-Sungroup, Gurgaon.



**Dr. Suresh Sampath**, Head of Gas Turbine Systems Engineering & Operations, Cranfield University, UK.



## Flying Wheel

## Notable Mentions Department



The **Team Solar Mobil MIT, MAHE, Manipal** successfully launched the first edition of quarterly newsletter on 21st of September 2022.

Faculty Advisor: **Mr. Umananda K V**, Assistant Professor-Sr. Scale.

Department has organized an interactive session with members of **Cranfield University, UK** to enhance student exchange program and research activity.



Department has organized guest lecture for III, V and VII Sem Aeronautical students by **Cmde. S L Deshmukh** on “Introduction to the armed forces and career opportunities” from 03/10/22 to 11/10/22.

Department has signed MOU with: -

- **Neuwheel Mobility Solutions** along with its constituent unit **Merkel Luft**.
- **Institute of Defense scientists and Technologists (IDST)**, Deemed Academic Institution, recognized by Department of Scientific and Industrial Research (DSIR) of Ministry of science and Technology.
- **The University of TEXAS** at ARLINGTON (“UTA”).
- **FORBES Marshall Pvt. Ltd. PUNE**
- **ELCOM INNIVATIONS Pvt. Ltd. New Delhi.**



The Department of Aeronautical and Automobile Engineering faculty members have published **59 research articles** in various Scopus Indexed journals and also presented in several International Conferences.

## Flying Wheel

## Notable Mentions Department

### Recognition from SAEINDIA BENGALURU SECTION



Department of Aeronautical and Automobile Engineering, Manipal Institute of Technology, MAHE, Manipal is one among the top 5 of SAEINDIA Bengaluru section collegiate clubs.



Department in association with Dept. of Mathematics and Dept. of Mechanical & Manufacturing Engg. had organized an **International conference on Recent Advances in Fluid Mechanics (ICRAFM-2022) on December 04-06, 2022.**



### B. Tech Honors

Department Congratulates the following 2022 B.tech Honors awardees :

1. Mr. Aravind Karthik
2. Mr. Vandan Chinnappa M S
3. Mr. Archit Shashank Bapat
4. Mr. Sai Sankalp Shekar
5. Mr. Aniket Kunal Bhawe



11 Students are currently pursuing B.Tech honors in Aeronautical and Automobile streams.



Department has organized guest lecture on “EV testing and Data analytics” by Mr. Shashank V China, design engineer, Ather Energy, Bangalore, Karnataka on 24 September 2022 for 5th Sem and 7th Sem Auto Engg. Students, Research scholars and Faculties of AAE.



Department express sincere thanks to **Mr. Mahesh Chandra**, Deputy Engineer, Dept. AAE, for his valuable contribution and excellent service.



The Economic Times Digital recently concluded the 5th edition of ET Campus Stars (ETCS 5.0) - India's largest hunt for the brightest engineering minds in the country, where 52,000+ budding engineers participated, out of which 91 emerged winners and made it to the prestigious list of ET Campus Stars Class of 2022.



Congratulations to **Mr. Aravind Karthik M.**, Dept. AAE, Manipal Institute of Technology, MAHE, Manipal for making it to the prestigious list of ET Campus Stars Class of 2022.

## Mega ATV Championship

11-14<sup>th</sup> May 2022, Goa, India.

**Team: Manipal Racing Combustion**

**Team Achievements (Rankings obtained by the Team in different streams of the competition):**

**Dynamics Results 2022 (52 participating teams)**

1<sup>st</sup> in Flat Dirt Race

4<sup>th</sup> in Drag Race

7<sup>th</sup> in Endurance Race

5<sup>th</sup> Overall



**Team Manipal Racing – Electric** has been selected as a Brand Ambassador of BAJA SAEINDIA 2023, based on overall performance in the previous seasons with respect to other colleges in the Karnataka state.



## Flying Wheel

## Notable Mentions Students

**Mr. Aravind Karthik**, has been offered an admission into the prestigious Masters in Aerospace Engineering Program at Georgia Tech., North Ave NW, Atlanta, GA, United States.



**Ms. Ditsa Mukherjee**, has been offered an admission into the Double Masters (M.Sc.) in Aerospace Engineering Program at TUM/ISAE-SUPAERO.



### Semester Abroad Program

**Mr. Flaxon Nazareth**, Perusing 7th semester at the University of Sydney.

Area of research: Hybrid rocket engines under the prestigious rocketry team of the University of Sydney-USYD Rocketry Team, University of Sydney, Australia, under the mentorship of Professor, Dr. Matthew Cleary.



### Dual Degree Program



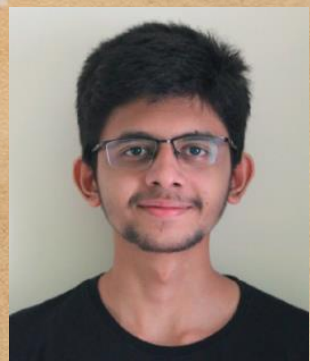
**Mr. Ayush Parakh**, Perusing 8th semester at the DEAKIN University, Australia under the 3+2 integrated program of MIT from June 2022.



**Team AeroMIT** have successfully secured **All India Rank #1** in the SAE INDIA Aerothon 2022, Bangalore from 18th to 19th November 2022.

# Flying Wheel

# Notable Mentions Students



**Mr. Ashwin Disa**, 7<sup>th</sup> Sem Aeronautical Engineering and his team has secured I Place in the Dairy Bike (DB) theme in the e-Yantra Robotics Competition 2021-2022, hosted by IIT Bombay.

**Team Thrust-MIT**, the MIT -Manipal-MAHE's student-led experiential learning project, launched their rocket in the IREC competition Spaceport America Cup 2022.

### Team Achievements:

- 50<sup>th</sup> Overall
- 30<sup>th</sup> in the 10K COTS category
- 4<sup>th</sup> in Barrowman Rankings
- 5 spot awards for technical expertise and a social media award



**Mr. C Karthik Reddy**, Batch of 2022 have made it into the Flying branch (SSC course) of the Indian Air Force.

**Mr. Sahil Kumar**, 7<sup>th</sup> Sem Automobile Engineering, and his teams secured 3rd place in the Dedalus Hackathon, hosted by Manipal Institute of Technology and MCHP on 26-27<sup>th</sup> August 2022.



Department has organized guest lecture on “Future Scope of Aeronautical Engineering” by Awadh Kapoor, Aeronautical Engg. 2015 Alumnus, Commercial Director at Airbus, Digital Transformation Director at Microsoft on 1st October 2022 for 5th Sem and 7th Sem Aero Engg. Students, Research scholars and Faculties of AAE.



# Flying Wheel

## Notable Mentions Students



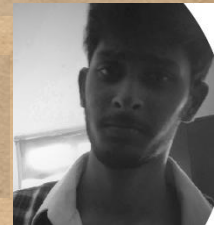
**Mr. Archit Bapat**, has been offered an admission into the prestigious Masters in Aerospace Engineering Program at Georgia Tech., North Ave NW, Atlanta, GA, United States.



**Mr. Pranay Verma**, has been offered an admission into the prestigious Masters in Automotive Engineering Program at Clemson University's Graduate School, Greenville, South Carolina.



**Mr. Rishabh Suri**, has been offered an admission into the prestigious Masters in Motorsport Engineering Program at Oxford Brookes (Oxford Campus).



**Mr. Sumedh Nama**, has been offered an admission into the prestigious Masters in Mechanical Engineering Program at Arizona State University, Ira.

## Student & Faculty Conference Publications

1. **Jayaram P, Pandey A, Srinivas G**, " Mechanical Design and Analysis of CNT Modified Carbon Fibre Composite Pressure Vessel" AIAA AVIATION 2022 Forum, 2022, AIAA 2022-4038.
2. **Syed Mohammad Musharraf, Srinivas G**, "Performance Evaluation of Hypersonic Flow Past Blunt Bodies with Aerospikes Using Numerical Techniques" Presented during 01st and 02nd July 2022 at the International Conference on Sustainable materials, Manufacturing, and Industrial Engineering (ICSMMIE-2022).
3. **Vanshika Gupta, Srinivas G**, " Performance Evaluation of Blended Wing Body Aircraft Using Numerical Techniques" Presented on 01st and 02nd July 2022 at the International Conference on Sustainable materials, Manufacturing, and Industrial Engineering (ICSMMIE-2022).
4. **Shekhar Pathak, Sameer Agarwal, Sohith Kakumanu, Siddharth Sudhakar, Srinivas G**, "Design and Implementation of Flight Computer for Sounding Rockets - S3FC" presented on 01st to 03rd Dec 2022 at the International Conference on Electronics Communication and Aerospace Technology (ICECA-2022).

**You don't have to be great to START, but you have to start to be GREAT**



# \*\* Editorial Board \*\*

Flying Wheel

## Mentor

Dr. (Cdr) Anil Rana  
Professor & Director, MIT

## Chairman

Dr. Dayananda Pai K  
Professor & Head, AAE

## Editor in Chief

Dr. Mahesha G T

## Sub Editors

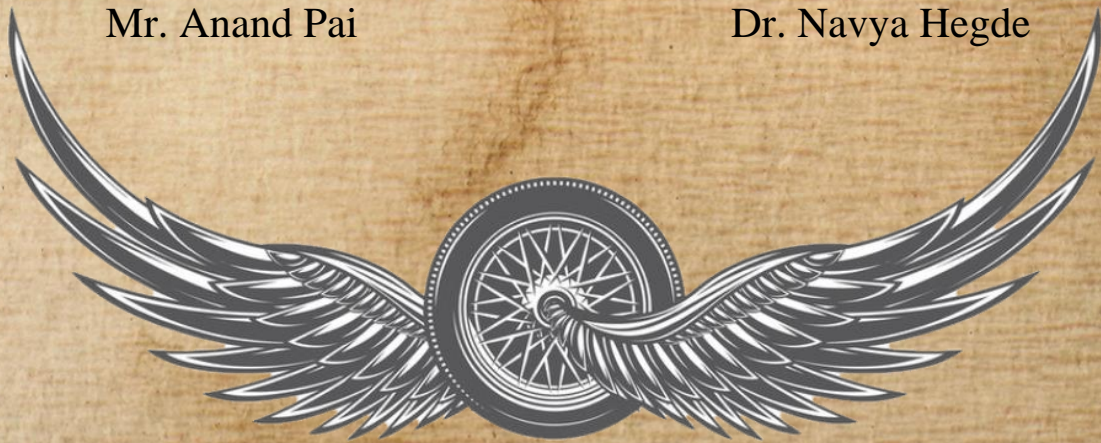
Dr. Sriharsha Hegde

Dr. Ravishankar Baliga B

Dr. Padmaraj N H

Mr. Anand Pai

Dr. Navya Hegde



**Department of Aeronautical and Automobile Engineering**

**MANIPAL INSTITUTE OF TECHNOLOGY**

**MAHE, Manipal - 576104**

☎ 820 2925482    ✉ [aeroauto@manipal.edu](mailto:aeroauto@manipal.edu)

<https://manipal.edu/mit/department-faculty/department-list/aeronautical-and-automobile-engineering.html>