

DEPT. OF
**AERONAUTICAL
ENGINEERING**

*Learning to fly an airplane taught me a way
of thinking, an approach to problem solving
that was applicable and effective.*

Chris Carter



DEPARTMENT OF AERONAUTICAL ENGINEERING

VISION

To be recognized as an innovative leader in Aeronautical Engineering through excellence in education by imparting the values of Research and Development in the upcoming fields of Aeronautics.

MISSION

The Department imparts the technical knowledge, practical skills, entrepreneurial skill to students and the channelized guiding in the varied activities with the aim of transforming the graduates into able engineers of tomorrow.

To develop each student with an ability and passion to learn, and effective implementation with a strong foundation in skills that are relevant to the challenging world.

To provide students with strong concepts of their core subjects and an application oriented overview in their stipulated courses

Message from Head of the Department

It gives me great joy to present the fifth issue of “ALTITUDES”. This internal newsletter is one of the ways in which we can broadcast information on the life of the Department of Aeronautical Engineering. The Department had a successful year with various activities organised by the students and the faculty with respect to academics, co-curricular, extra-curricular as well as research & development. I would like to thank and congratulate all my staff and students for their tireless effort in taking the initiative and bringing out this news letter.

Dr. G Purushotham

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DEPARTMENT ACTIVITIES

ORIENTATION COURSE IN AEROSPACE AND DEFENSE DOMAIN

Orientation Course in Aerospace and Defense Domain was conducted from 24th to 26th February 2020. The workshop started with a technical theory session on Aerodynamics, Aircraft Structures and Materials by **Dr. K Badari Naryana, Former Scientist ISRO**, Senior Consultant at Ornnova Information Technology and services, Bangalore. Mr. Nicky Harris introduced the **software 3D** experience to students, in which he illustrated the part design module of 3D experience (CATIA). Simulation module of 3D Experience was taught by Mr. Mandar. He emphasized on Finite element methods and demonstrated the simulation of few problem in hands on session.

Vayuyana 3.5

The workshop introduced the process of RC Airplane building and flying for 1st year students of MITE. Totally there were 20 teams of 6 members each. Vayuyana 3.5 took off with a formal inauguration program. The theory session included basics of Aerodynamics, Propulsion, Structures. RC Plane kits were distributed to the students.

Technical Talk on Need for Multidisciplinary & Interdisciplinary Approach to Current and Future Engineering and Technology Programs by Dr. K Ramachandra, Scientist and Former Director, Gas Turbine Research Establishment, DRDO, Ministry of Defense, Bangalore.

MITE BAGS BEST PERFORMING COLLEGE OF THE YEAR AWARD AND 4 BEST PROJECT AWARDS IN 43RD KSCST SPP 2019-20

ICT enabled teaching and learning process has been adopted during the pandemic situation to motivate and encourage students to continue their studies without any interruptions by the Department. Various online platforms like Edmodo, Google Classroom, Zoom, Google meet have been effectively used by the Department faculties to impart quality education to students.

DEPARTMENT ACHIVEMENTS

Department of Aeronautical Engineering , MITE Wins KSCST Best Project of the Year Award 2019-20



For the innovative work done by students Mr. Sanjay M V, Mr. Clavin Wilton Sequeira, Ms. T D Teeshma, Ms. Vishalakshi T Bandiwad is awarded with **“BEST PROJECT OF THE YEAR AWARD”** in the State level Project Competition conducted in 43rd Series of Student Project Programme 2019-20, Karnataka State Council for Science and Technology.

Project Title: Design and Modelling of a Vertical Axis Wind Turbine to Extract Wind Energy From Highways to Power Electric Vehicle Charging Stations.

Guide: Mr. Vishwaretha K R, Assistant Professor, Dept. of AE.

Funded project “Agrobox” is being undertaken by students under New Age Innovation Network, MITE.

Student project entitled “ Pollution Control Using Artificial Intelligence Drones” guided by Dr. G Purushotham has received VTU fund.

Student project entitled “ Gesture Controlled UAV Drone” guided by Mr. Sujesh Kumar has received VTU fund.

STUDENT ACHIVEMENTS

Students from 2nd and 3rd year Aeronautical Engineering has participated and secured place in the event **Drone Delivery Challenge**, at Inter Collegiate National Level Technical Fest VERTECHX 10.0 , MVJ College of Engineering on 9th & 10th March 2020.

- 2nd place secured by Gaurilaxmi G Purusha & Kavyashree P.
- 3rd Place Secured by Manoj Kumar B N, Mohd Zahur Ashraf, Roland Fernandes & Javeed A.



Mr. Madhukiran, 3rd year student has participated in the Republic Day Parade 2020 held at New Delhi .

A webinar on “Aerospace Technical Publication Overview” conducted in association with BridgeNow Academy, Bangalore on 11th June 2020 by Mr. Ansari H

Rahul Subramanya Balimane (4MT16AE041) and Rithick (4MT16AE040) have presented a paper entitled “Performance Evaluation of a Spherical double hole and Spherical five hole Flow Analyzer for Subsonic Flow” at National Conference on Recent Advances in Materials, Manufacturing and Thermal Sciences organized by Department of Mechanical Engineering, Sree Budha College of Engineering Pattoor , Alappuzha , Kerala (18th June 2020).

The below listed students have presented papers at **3rd International Conference on Frontiers in Automobile & Mechanical Engineering (FAME 2020)** organized by School of Mechanical Engineering, Sathyabama Institute of Science and Technology, Chennai in association with Universiti Putra Malaysia (UPM), Malaysia and Universiti Malaysia Pahang (UMP), Malaysia (7th -9th Aug 2020).

- Arpith Jain, Clavin Anton Rodrigues, Glenn Shannon D'souza and Pooja - **“Gestures Controlled UAV Drone”**.
- Arpith Jain, Clavin Anton Rodrigues, Glenn Shannon D'souza and Pooja N - **“Gesture Control UAV Drone using Radio Frequency”**.
- Arpitha Holla C, Manoj Kumar M, K S Nirahankar and Akhil Sivan - **“Pollution Control using Artificial Intelligence Drones”**.
- Poornachandra S Goudar, Abdul Rehman Patel, Syed Shoed Wazeer, Tulaskar Sanjana - **“Computational Analysis on Hybrid Composite Material”**.
- Priyanka Lokesh, Rakshith T M, Vijetha B S, Rahul Balimane - **“Synthesis and Characterisation of Hydrogen Fuel from biowaste Recovery**.
- Clavin Wilton Sequeria, Nithyashree U - **“Aerodynamic Design, Analysis, Fabrication and Testing of a claw yaw sphere for subsonic flow”**.
- Rajput Yash, Muhammad Raafid, Mithul Das - **“Design and Development of flying car for green transportation”**.
- Dane Hubert saldanha- **“Fabrication, Analysis and testing of sandwich composite for an UAV Wing”**

FACULTY ACHIEVEMENTS

A. Faculty Publications

Faculty Name	Paper Title	Journal Name
Dr. G.Purushotham	Micro-Structural evolution analysis and assessment of Tribological behavior of Nickel alloy reinforced with SiO ₂ and Al ₂ O ₃ hybrid metal matrix composites	International Journal of Mechanical and Production Engineering Research & Developments (IJMPERD)
	Effect of SiO ₂ and Al ₂ O ₃ on mechanical properties of ASTM A 494 M Grade Nickel alloy hybrid metal matrix composites	Journal of Mechanical Engineering Research & Developments (JMERD)
	Comparative study of signal processing techniques for the diagnosis of fault in belt drives	International Journal of Mechanical and Production Engineering Research & Developments (IJMPERD)
Akhila Rupesh	Performance Evaluation of a Two Hole and Five Hole Flow Analyzer for Subsonic Flow	International Journal of Advanced Science and Technology
Shivaji Lamani	Study of free vibration characteristics of hybrid polymer composite	International Journal of Mechanical and Production Engineering Research and Development (IJMPERD)
Sujesh Kumar	Comparative Study of Signal Processing Techniques for the Diagnosis of Fault in Belt Drives	International Journal of Mechanical and Production Engineering Research and Development (IJMPERD)
	Fault detection in bearings using advanced signal processing technique	International Journal of Mechanical and Production Engineering Research and Development (IJMPERD)
Ajith Kumar	Study of free vibration characteristics of hybrid polymer composite	International Journal of Mechanical and Production Engineering Research and Development (IJMPERD)
	Fault detection in bearings using advanced signal processing technique	International Journal of Mechanical and Production Engineering Research and Development (IJMPERD)
	Tribological properties of Cissus quadrangularis stem fiber reinforced isophthalic polyester composites	Materials Today: Proceedings
Vishwaretha K R	Strudy of free vibration characteristics of hybrid polymer composite	International Journal of Mechanical and Production Engineering Research and Development (IJMPERD)

FACULTY ACHIVEMENTS

B. Faculty Development Programme

Faculty Name	Title of the FDPs
Dr. G.Purushotham	Impact of Internet of Things (IoT) on future of Aerospace and Defense sectors
	Steps in Robotic Process Automation
	COIVD-19 Webinar Series May-2020
	Orientation course in Aerospace & Defense domain
Sujesh Kumar	Entrepreneurship for Academicians
	Finite Element Analysis Practice and MATLAB
	Tools and Techniques for Data Analysis in Academic Research
	The Space Scientists - "Astronomical Time Keeping: A Primer"
	The Space Scientists - "Astronomy Exploring Time and Space"
	Machine Learning Challenges and Research Opportunities
	ICT Tools for effective Teaching
Akhila Rupesh	Applied Aerodynamics
	Finite Element Analysis Practice and MATLAB
	Role of Light Weight Material Design & Processing for Aerospace & Spacecraft Application .
	Supply Chain Management: Challenges and Strategies
	Industry 4.0 and Smart Manufacturing: Opportunities and Challenges
Ajith Kumar	Computer Aided Design and Manufacturing (CAD/CAM)
	NBA and NAAC Accreditation Process
Adarsh Krishnamurthy	Impact of Internet of Things (IoT) on future of Aerospace and Defense sectors
	Tools and Techniques for Data Analysis in Academic Research
	Finite Element Analysis Practice and MATLAB

Faculty Name	Title of the FDPs
Vishwaretha K R	Finite Element Analysis Practice and MATLAB
	Research Methodology -A Detailed Research Process
	Technological Advances in Power Switching Converts for Renewable Energy Sources and Fuel Cells Technology for E-Vehicles
	Tools and Techniques for Data Analysis in Academic Research
Shivaji Lamani	Impact of Internet of Things (IoT) on future of Aerospace and Defense sectors
	Finite Element Analysis Practice and MATLAB
	Technological Advances in Power Switching Converts for Renewable Energy Sources and Fuel Cells Technology for E-Vehicles
	Tools and Techniques for Data Analysis in Academic Research
	Research Methodology -A Detailed Research Process
Praneeth H R	Engineering Analysis for Thermofluids Research Challenge using Ansys
	Technological Advances in Power Switching Converts for Renewable Energy Sources and Fuel Cells Technology for E-Vehicles
	Emerging Engineering Materials
	Role of Light Weight Material Design & Processing for Aerospace and Space Applications: A Novel Approach by Machine Learning & IOT using Python Programming
	One day Online Workshop on "Planning and Organising Research Using Scopus and Mendley

EDITORIAL COMMITTEE

Chief - Editor

Dr. G Purushotham

Head, Dept. of Aeronautical Engineering

Editor

Akhila Rupesh

Assistant Professor, Dept. of Aeronautical Engineering

Designer

Prajwal D'sa

Final Year Student, Dept. of Aeronautical Engineering

Department of Aeronautical Engineering

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Invent Solutions

Mangalore Institute of Technology & Engineering (MITE)

Mijar, Moodbidri, Mangalore, Karnataka. Ph: 08258-262695 to 99

E-mail: info@mite.ac.in MITEedu Website: www.mite.ac.in

Rajalaxmi Education Trust

Souza Arcade, Balmatta Road, Mangalore, Karnataka. Ph: 0824-2441581, 2441582

Fax: 0824-2441581 E-mail: info@ret.ac.in