



# DHANALAKSHMI SRINIVASAN ENGINEERING COLLEGE (AUTONOMOUS)

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# SKYSIGHTS



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**Dr Katherasan Duraisamy**

Professor & Head  
Department of Aeronautical & Aerospace Engineering

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IV year Aero & Aerospace



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**SEPT  
2025**

## ACKNOWLEDGEMENT

With immense joy and gratitude, the **Department of Aerospace and Aeronautical Engineering** proudly presents this edition of our Newsletter. This achievement would not have been possible without the encouragement, support, and contributions of several distinguished individuals and groups to whom we owe our sincere thanks.

First and foremost, we extend our heartfelt gratitude to our Honourable **Chancellor Ayya** and the **Trust Members** of our esteemed institution. Their visionary leadership, continuous encouragement, and commitment to academic excellence have been the guiding force behind every milestone of our department.

We are deeply grateful to **our Principal, Prof. Dr. D. Shanmugasundaram**, for his constant support and motivation. His encouragement has always inspired us to strive for innovation and excellence, enabling us to bring out this newsletter with pride.

Our sincere thanks go to our **Final Year Coordinator, Dr. Karthiga B**, whose dedicated guidance, timely advice, and encouragement have been instrumental in shaping this edition. Her tireless efforts in coordinating and supporting student activities deserve special recognition.

We also extend our gratitude to our **Head of the Department, Dr. Kathiresan D** for being a source of motivation and guidance. His leadership and constant encouragement have helped us channel our creativity and technical skills into this meaningful publication.

We would like to acknowledge the invaluable role of **our faculty members** and staff, who have always encouraged us to explore, learn, and express ourselves beyond the classroom. Their mentorship and support form the foundation upon which this newsletter stands.

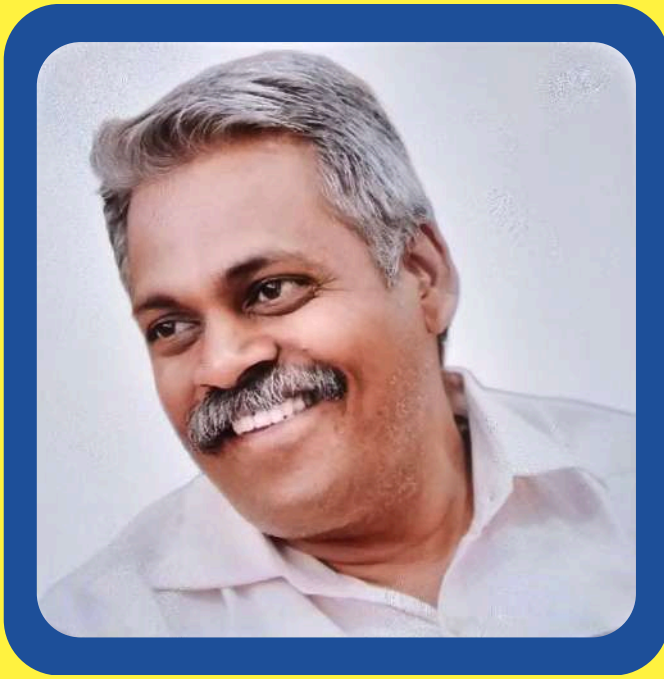
A special note of appreciation is due to **our alumni**, who continue to inspire us with their achievements and contributions. Their valuable inputs and guidance enrich this newsletter, while also motivating current students to aspire higher in their academic and professional journeys.

We wholeheartedly thank **the Editorial Team**, comprising **final-year Aerospace and Aeronautical students**, whose dedication, hard work, and creativity brought this edition to life. From collecting articles and designing layouts to editing and compiling content, their efforts have been commendable.

Last but not least, we extend **our gratitude to the students from other years** and departments who actively contributed articles, ideas, and creative inputs. Their participation added diversity and freshness to this edition.

This newsletter is a reflection of teamwork, passion, and commitment. To everyone who supported us in this journey, we express our deepest gratitude. Together, we will continue to soar higher and uphold the spirit of aerospace and aeronautical engineering.

**“The sky is not the limit; it is just the beginning.”**



Dear Students,

Welcome to a new semester in the Department of Aeronautical & Aerospace Engineering.

As we embark on this academic journey together, I encourage each of you to approach your studies with curiosity, discipline, and a passion for innovation. This field demands both precision and creativity, and we are here to support you every step of the way.

Let this semester be one of growth, discovery, and meaningful progress. Stay committed, collaborate openly, and never hesitate to reach out to your faculty—we're invested in your success.

Wishing you a productive and inspiring semester ahead.

Warm regards,

**Dr Katherasan Duraisamy**  
Professor & Head Department of  
Aeronautical & Aerospace Engineering

## Theme

Skysight is designed to be the official voice of the Department of Aeronautical and Aerospace Engineering — a dynamic platform that connects students, faculty, alumni, and industry. The newsletter aims to:

- Showcase academic and research excellence in aerospace innovation.
- Celebrate achievements of students, faculty, and alumni.
- Document important departmental events and collaborations.
- Empower students with knowledge of career pathways, internships, and leadership opportunities.
- Inspire the community through stories of vision, exploration, and innovation.

**"BEYOND LIMITS, ABOVE HORIZONS"**



## CCM

The Class Committee Meeting for the Final Year Aeronautical and Aerospace students was conducted successfully. The meeting served as an effective platform for interaction between faculty members, student representatives, and class advisors.



## PARENTS CONNECT PROGRAM

The Department successfully organized a Parents Connect Program for the II Year students on 20<sup>th</sup> September. The initiative aimed at strengthening the bond between the institution and parents, fostering open communication, and ensuring a collaborative role in the academic progress of the students.

The event concluded on a positive note, with parents appreciating the efforts taken by the department to maintain continuous engagement and holistic growth of the students.



## WEBMINAR

The Department of Aeronautical and Aerospace Engineering actively participated in a webinar on **Computational Fluid Dynamics (CFD)**, originally conducted for **Mechanical Engineering** students. The session provided an excellent platform for students to **enhance their understanding of CFD concepts, applications, and simulation techniques, bridging knowledge across departments.**



## WEBMINAR

The Department of Aeronautical and Aerospace Engineering hosted an informative webinar on GATE preparation, conducted by experts from **IITians GATE Classes on Wednesday, 24<sup>th</sup> September 2025.** The session was specially designed for third- and final-year students, providing valuable strategies, exam tips, and guidance to excel in the GATE exam.

**IITians GATE CLASSES**  
A Division of IIT Madras Learning Center

### GATE AEROSPACE OPPORTUNITIES WEBINAR

Unlock Your Future in Aerospace Engineering!

Join Our **WEBINAR**

WEDNESDAY <b>24</b> SEPT	STARTS AT <b>11:15</b> AM	SPEAKER <b>DINESH KUMAR</b> IIT Madras
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Don't miss this chance to elevate your **GATE prep and career!**

Follow us on:

For more Information Call Us **+91-97405 01604** Visit us [www.iitiansgateclasses.com](http://www.iitiansgateclasses.com)



# FRESHERS DAY AND REINSTALLATION OF OFFICE BEARERS

The Department of Aeronautical and Aerospace Engineering warmly welcomed its second-year students through a vibrant Freshers' Day celebration held on 2<sup>nd</sup> September 2025. The event was filled with fun activities, cultural performances, and interactive sessions, creating a cheerful atmosphere for the newcomers.



The 3<sup>rd</sup> and 4<sup>th</sup> year students took the lead in organizing the program, ensuring that the 2<sup>nd</sup> year students felt included, motivated, and inspired to begin their journey in the department. The celebration not only marked the start of a new academic chapter but also strengthened the bond of camaraderie within the Aero family.



The Department of Aeronautical and Aerospace Engineering proudly conducted the re-installation ceremony of the ICARUS Association office bearers for the academic year 2025–26. The event marked the official induction of the new leadership team, entrusted with steering the department's student activities and initiatives.



The newly reinstalled office bearers are:

- Chairman – PRIYANKA P
- Vice Chairman I – MINITHRA P
- Vice Chairman II – ELAVARASAN J
- Secretary – ARUL MURUGAN M
- Joint Secretary I – THARUN M
- Joint Secretary II – KAVIN E
- Treasurer – AATHI SKANTHA ROOPAN T
- Joint Treasurer I – MAHA LAKSHMI M
- Joint Treasurer II – ANAMIKA P

# Staff Achievements

## "Faculty Development Program Participation"

We are very happy to share that our faculties were participated in ATAL sponserd FDP(online mode) by E.G.S. Pillay Engineering College Nagapattinam, Department of Mechanical Engineering on Empowering Change: Energy Technologies and Sustainable Development from 1/9/25 to 6/9/25

We thank to Honorable Chancellor Ayya, Management, Principal, VP, CoE & Year Coordinators for their moral support



# ACHIEVEMENTS FROM HEAD OF THE DEPARTMENT

We are happy to share that Dr Katherasan Duraisamy presented Trichy Division@SAEISS activity report of August in the 8<sup>th</sup> Management Committee (MC) Meeting on August 30 at Hotel Ramada Plaza, Guindy, Chennai

We are very happy to share that Dr Katherasan Duraisamy elected as Executive Council Member of AeSI(Aeronautical Society of India) Chennai. We thank to our Honorable Chancellor Iyya, Management, Principal, VP, CoE & Year Coordinators for their moral support



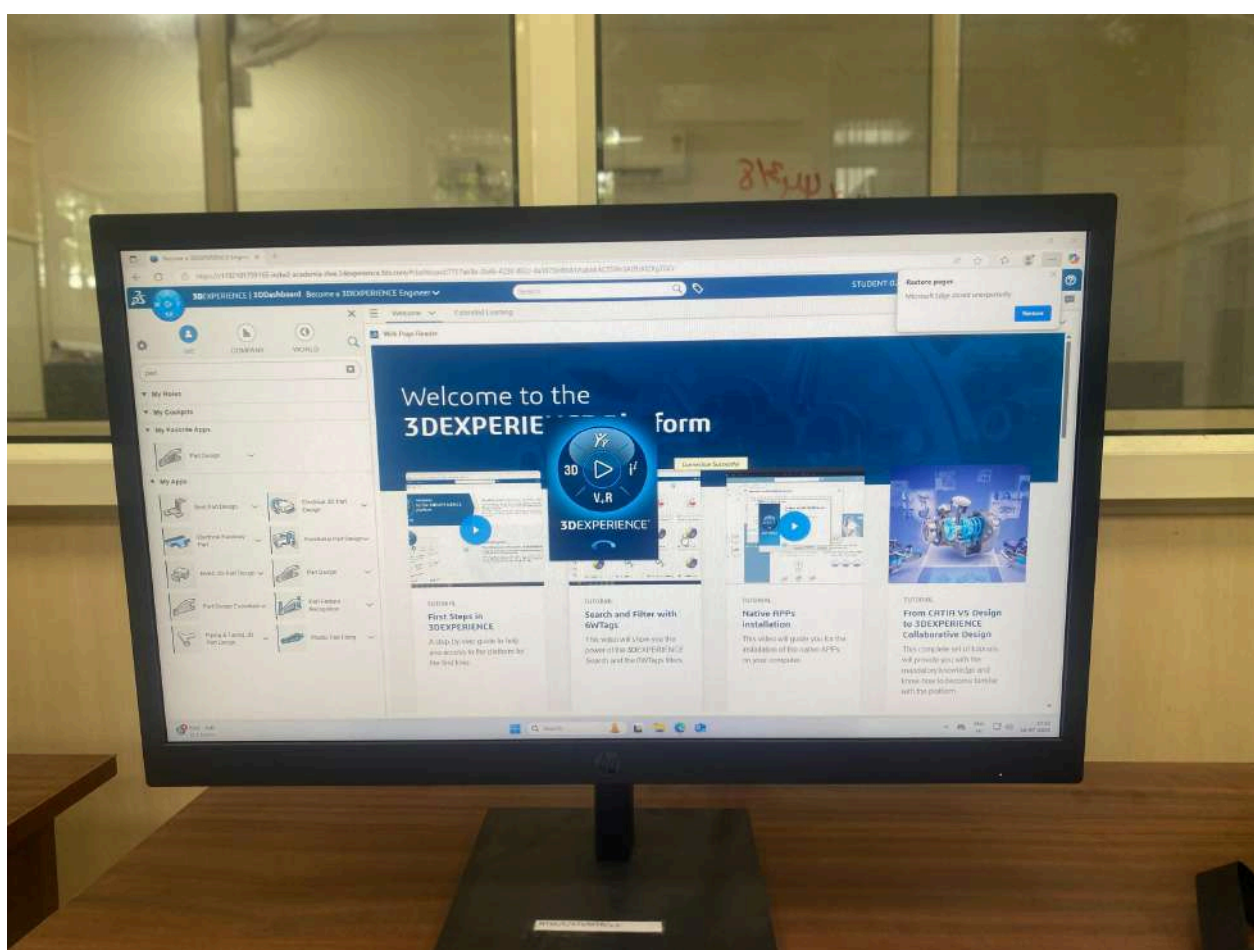
EXECUTIVE COMMITTEE MEMBERS					
S.No	Name	Membership ID	S.No	Name	Membership ID
1	Dr K Asad Ahmed -Professor, IIT, Chennai	AM 1879	10	Mr NIKHIL Ramuro Rao -Executive Director, Boeing/Hexcel, Chennai	M 21119
2	Dr V Aravindhan -Professor, IIT, Chennai	M 17647	11	Dr Rajarathil Das -Assoc. Prof., SAEIS University, Thirupur	M 20964
3	Dr G Balaji -Asst. Prof., Hindustan University, Chennai	AM 7304	12	Dr K Sachithanandan -Asst. Prof., Vellore College, Coimbatore	AM 7303
4	Dr Dinakar M -HOD, Aeronautical, Chennai	M 20971	13	Dr VK Shanmugasundaram -Professor, Anna Engineering College, Chennai	M 21077
5	Mr M Suresh Kumar -Asst. Prof., J. College of Engg., Trichirappalli	M 20988	14	Dr S Subramanian -Professor, SRM University, Chennai	M 18270
6	Dr P N Kalirathinam -Professor, O. P. J.S. University, Chennai	M 18718	15	Mr Sundararam Ramasamy -Founder & MD, Aerospace Engineers United, Salem	C 2018
7	Dr D Katherasan -Professor, Chatterjee Institute of Management, Chennai	G 13560	16	Dr T.A. Sumanthran -Asst. Prof., AEC College, Karaikal	AM 6801
8	Dr Kavin Suresh S -Asst. Prof., SRM Institute of Technology, Chennai	M 20990	17	Dr Suresh Chandra Khandilal -Professor, IIT, Chennai	M 20796
9	Dr. R. Naresan Shankar -Professor, VIT, Chennai	AM 7400	18	Dr G Vinayaga Murthy -Asst. Professor, VIT Chennai	M 19643

# STUDENTS SPOTLIGHT

## Achievements

We are happy to share that our **final year students** have attended a **1-week CAD & CATIA training program** at **NSIC Technical Services Centre, Chennai**.

This experience helped us gain valuable hands-on knowledge and improved our technical skills in design and modeling. A great learning opportunity that boosted both our confidence and creativity



## Internship

The **third-year Aeronautical Engineering students** successfully completed a one-week industrial training program at **Aero Knotz Company, Chennai**, focusing on the design, operation, and applications of drones.

During the program, students gained hands-on experience in drone assembly, flight operations, maintenance, and regulatory aspects. They also explored the **emerging role of drones in defense, surveillance, agriculture, and logistics, broadening their perspective on modern aerospace applications.**

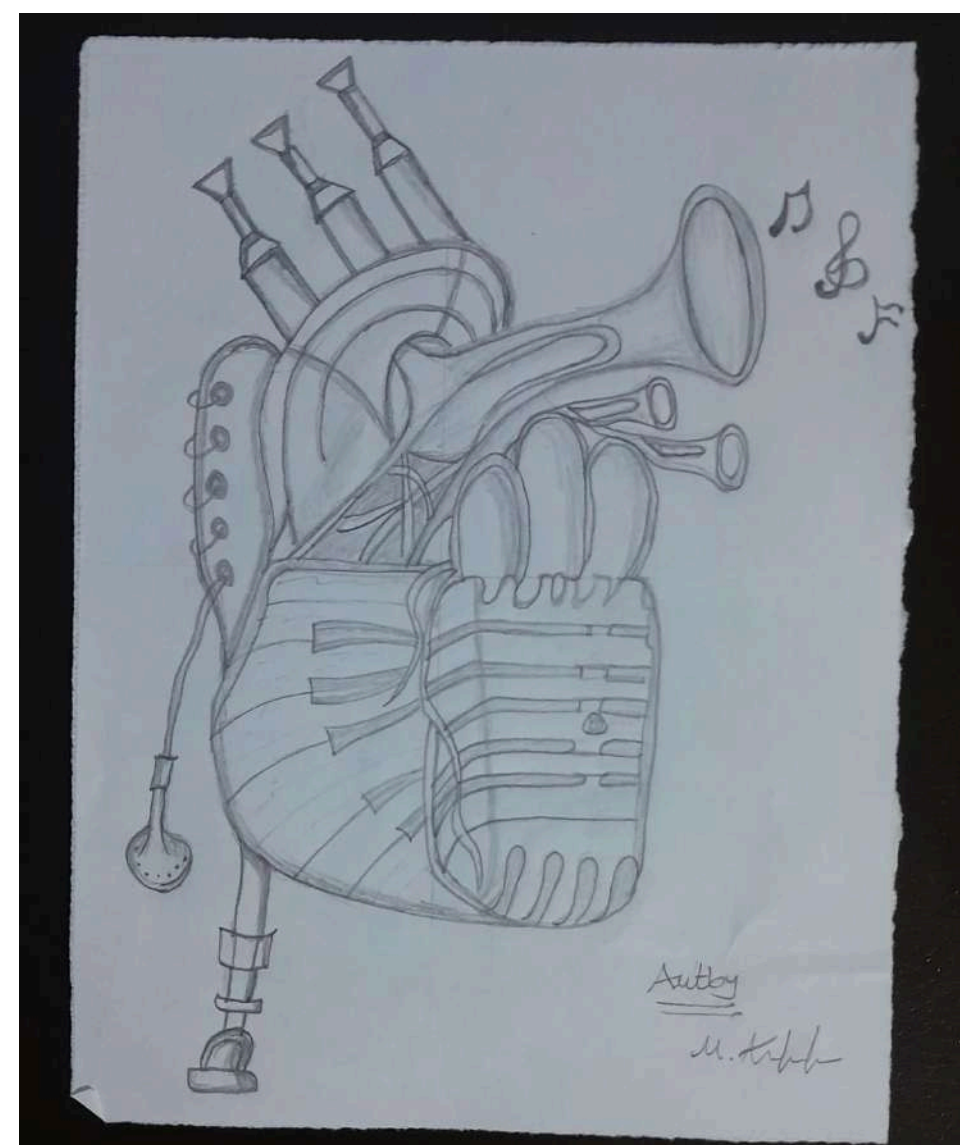
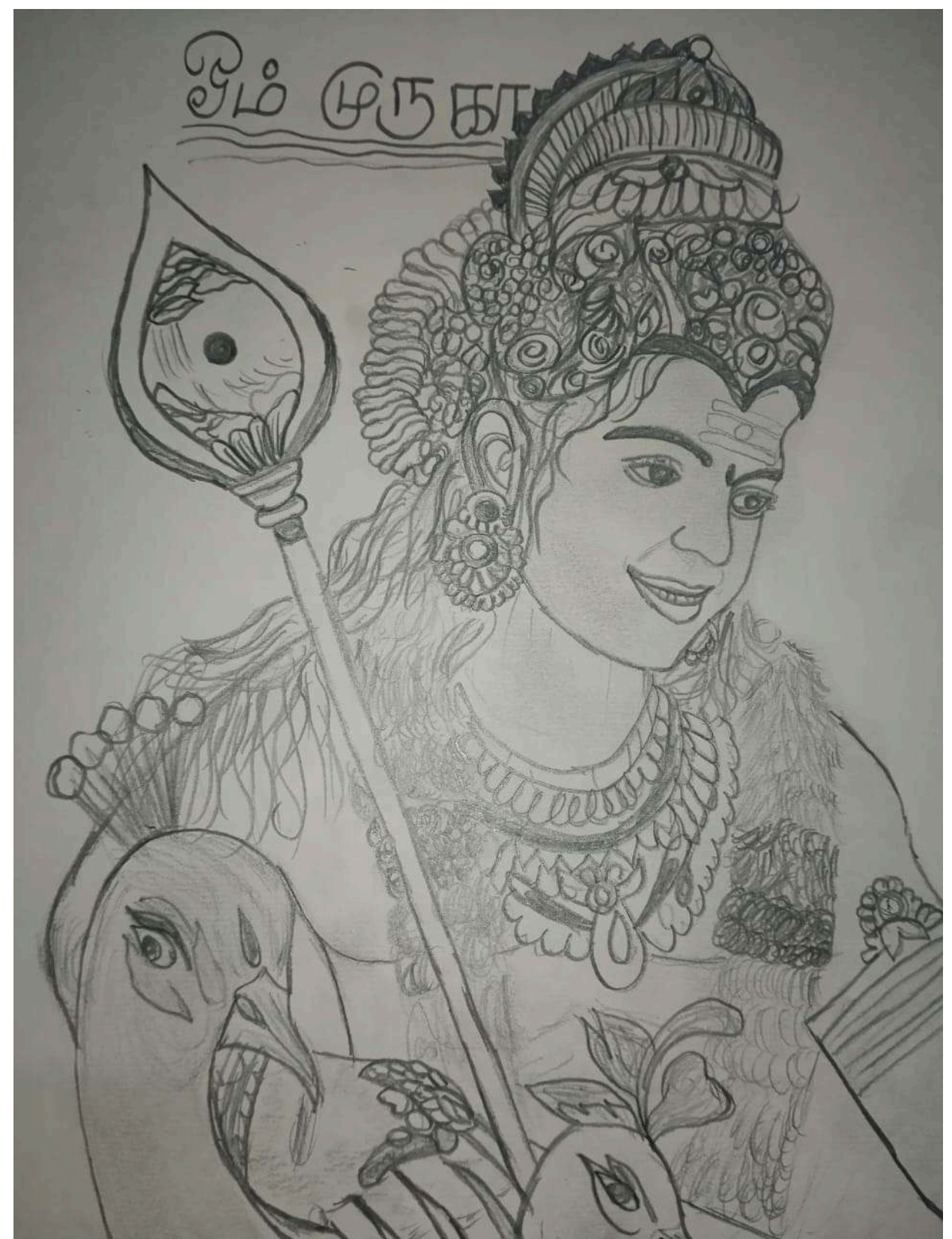


Our final year student Aathi Skantha Roopan T has showcased his creative talent beyond the world of aeronautics by penning a beautiful poem. His writing reflects imagination, emotion, and artistry, proving that engineering minds can also craft powerful words.

## First crush

**It was a fresh day, fresh morning,  
With an unexpected fresh beginning...  
A pink rose in the garden,  
Beautiful like never before,  
Gorgeous like ever existed.  
Watching it made me pleasant, but  
Rewatching made me mad;  
The Petals were bright,  
The leaves were shiny, glaring in the  
sunlight.  
When the leaves float in the air, I flown  
away, but not far away...  
Days passed, climates changed...  
Petals lost the colour, leaves shaded  
away.  
My absence in the garden may start to  
exist,  
But forever – She is my **FIRST  
CRUSH...****

Second year student Vasanthakumar p and final year student Arul murugan M showcased his artistic talent through detailed drawings, reflecting imagination, precision, and creativity.



## ALUMINI CONNECT

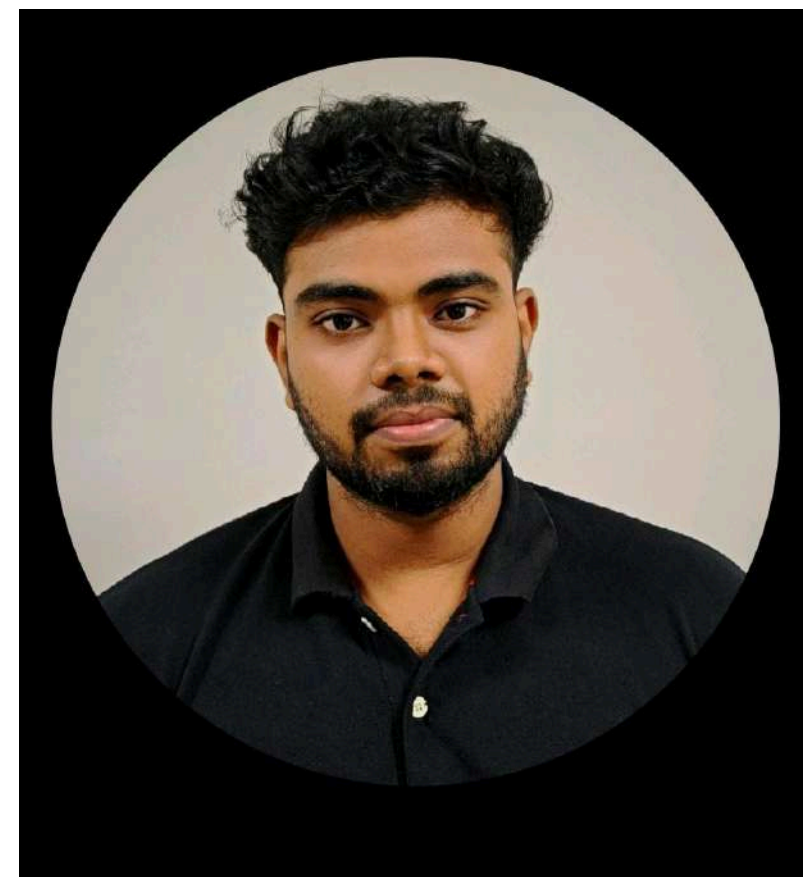


I am **Karthikeyan** and i joined **BE Aerospace engineering at DSEC in 2020**, right in the middle of the Covid lockdown. Most of our early classes were online, but once the college opened, I made some amazing friends and started enjoying college life. Life became more adventurous From making a **model rocket on Independence Day to building a rover for the Project Expo and celebrating our first cultural, Nakshatra**, we created so many memories together.

We went many internships and at our final year we enjoyed to the core. My department always stood out with supportive and friendly staff, which made learning more enjoyable.

In my 3rd year, I attended a workshop at MIT Chennai where I met one of our alumni, and her guidance inspired me to prepare for PG. I **cleared TANCET** and got a seat in **M.E. Aerospace Technology at MIT**. Looking back, I feel grateful for all the fun, learning, and support I had at DSEC.

**Aim high, be active in every group activities, never settle less!**



I am **Muhammad Abdullah K** an Aerospace Engineer driven by a deep passion for design, analysis, and research in cutting-edge aerospace technologies. My expertise spans Computational Fluid Dynamics (CFD), thermal analysis, structural engineering, and advanced design tools like CATIA V5, Fusion 360, and Ansys. I specialize in solving complex engineering challenges and contributing to innovative aerospace initiatives.

Currently, I am a Project Associate at AeroIn Space Tech Pvt. Ltd, where I lead and contribute to R&D efforts for Small Lift Launch Vehicles (SLLVs). By combining technical proficiency, creative problem-solving, and a collaborative mindset, I strive to advance aerospace engineering and deliver impactful results.

Previously, I worked at Wings of Aero in dual roles as a Technical Content Writer and Technical Trainer. As a content writer, I authored insightful review articles on CFD-related topics, demonstrating my ability to articulate complex engineering concepts. In my role as a trainer, I conducted workshops on the Space Technology and educated students at schools and colleges, igniting a passion for aerospace among the next generation of engineers

## CONCEPT OF THE MONTH

### Aerodynamic Forces on an Aircraft

When an aircraft moves through air, four main aerodynamic forces act on it:

1. **Lift** – the upward force that keeps the aircraft in the air.
2. **Weight (Gravity)** – the downward force pulling it towards Earth.
3. **Thrust** – the forward force produced by engines/propellers.
4. **Drag** – the resistance force opposing motion through the air.

## DRAG

Drag is the aerodynamic force that opposes an aircraft's motion through the air. It acts in the opposite direction of thrust, making it harder for the aircraft to move forward. Without drag, an aircraft could fly endlessly once accelerated—but in reality, every surface and shape experiences air resistance.

## How DRAG is Generated

When an aircraft moves through the atmosphere, its surfaces collide with air molecules. These molecules:

1. Stick to the surface (viscosity effect) → creates skin friction drag.
2. Get displaced around the shape → creates form drag (pressure difference).
3. Interact at joints (wings & fuselage) → causes interference drag.
4. Result from lift generation → forms induced drag, due to wingtip vortices.

Thus, drag is the price an aircraft pays for moving through the air

## Types of DRAG

### 1. Parasitic Drag

- Form drag – due to blunt shapes.
- Skin friction drag – due to roughness of the surface.
- Interference drag – due to junctions like wing-body connection.

### 2. Induced Drag

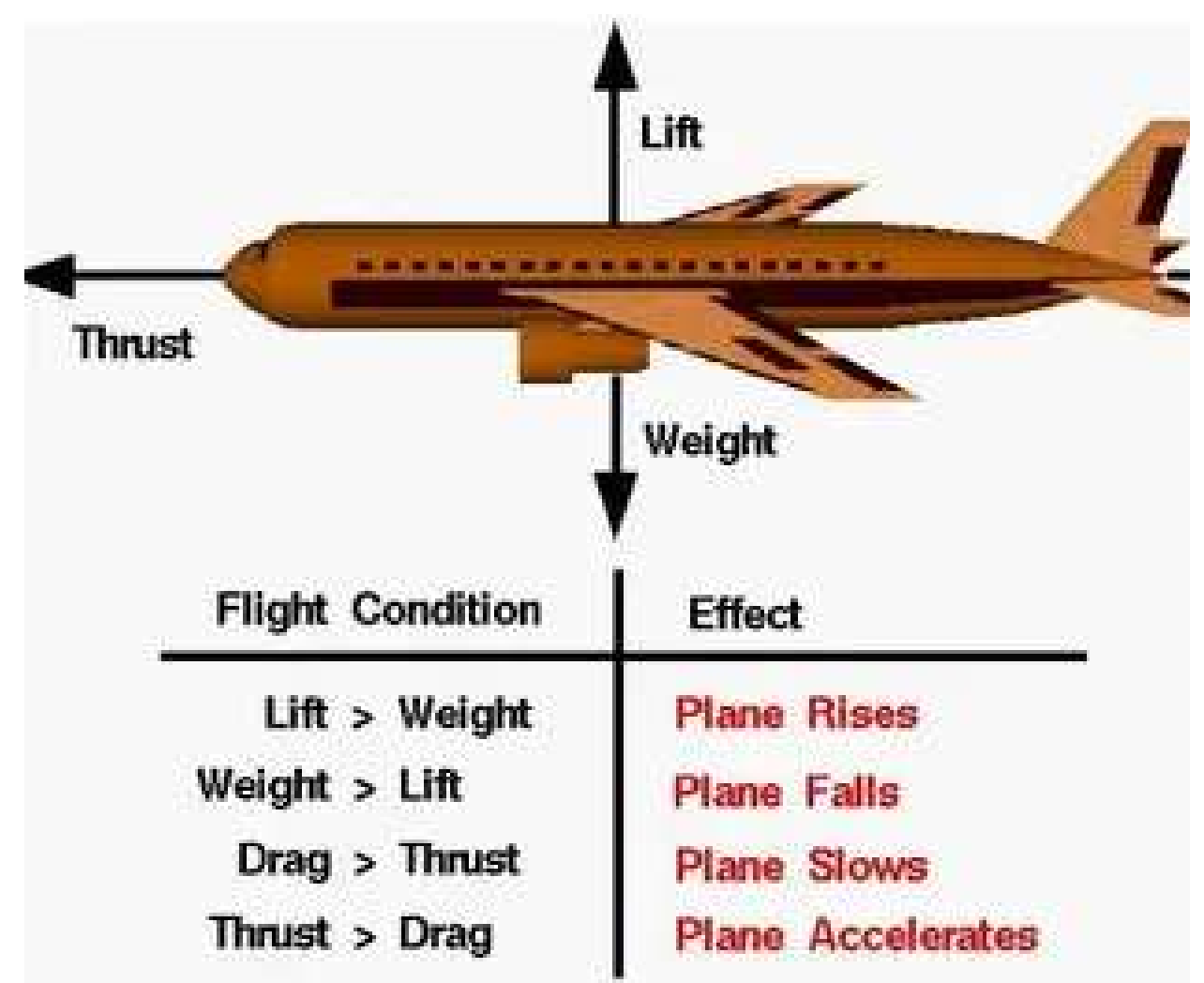
- Generated as a by-product of lift.
- Stronger at low speeds (takeoff & landing).

### 3. Wave Drag

- Appears in supersonic flight due to shock waves.

## Factors Affecting DRAG

1. Speed (Velocity): Higher speed increases drag exponentially (since drag  $\propto V^2$ ).
2. Shape of the Aircraft: Streamlined shapes reduce form drag.
3. Surface Smoothness: Rough surfaces increase skin friction drag.
4. Angle of Attack (AoA): Higher AoA increases lift but also raises induced drag.
5. Altitude (Air Density): Lower density at high altitudes reduces drag.
6. Wing Design: Winglets reduce induced drag by controlling vortices.



## FUN HANGER

### DID YOU KNOW?

- The Wright brothers' first flight (1903) lasted only 12 seconds and covered 120 feet—shorter than the wingspan of a Boeing 747!



- The fastest aircraft ever built, the Lockheed SR-71 Blackbird, could fly faster than a bullet (Mach 3.3).



- The word “aviation” comes from the Latin word avis, meaning bird.
- Astronauts in the ISS see 16 sunrises and sunsets every day

### FUN FACTS

- The black box on aircraft is actually orange, so it can be found easily after accidents.
- A jumbo jet uses about 1 gallon of fuel per second while cruising.
- The Airbus A380 has over 300 miles of wiring inside its body

### QUICK RIDDLE

I can fly without wings,  
I can cry without eyes.  
Whenever I go, darkness  
flies.

What am I?

Answer: ☁ clouds

## India signs ₹62,370 crore deal for 97 Tejas Mk-1A jets

The Indian government finalised a contract with HAL to procure 97 Tejas Mk-1A aircraft (68 fighters, 29 twin-seaters). This deal is a strong push toward “Make in India” in defense aviation.



## Farewell to MiG-21

After serving since the 1960s (in wars from 1965, 1971, Kargil, Balakot), the IAF is officially retiring the iconic MiG-21 jets. The final flight and ceremony occur on 26 September 2025



## Agnikul Cosmos opens large-format additive manufacturing facility

UIndian firm Agnikul Cosmos inaugurated its new large-format metal 3D printing facility. It can print aerospace / rocket-system parts up to ~1 meter in size, covering the whole chain from design to finishing.



## DGCA wants stronger oversight amid booming aviation market

India's DGCA chief called for increased staffing and stricter safety oversight as commercial flights grow rapidly and new airlines emerge. Safety lapses and investigations following recent accidents have amplified the need.

