



## **STUDENT AEROMODELLING TEAM**

### **RV COLLEGE OF ENGINEERING ®**

Team Vyoma, the aero-design team of RV College of Engineering. Started in 2007, we are one of the leading student projects in India, having won many national and international competitions and awards such as the NASA Systems Engineering Award.

### **VISION**

To inspire young minds to take up challenging tasks in Unmanned Aerial Vehicle technology through interdisciplinary research and development.

### **MISSION STATEMENT**

- To design, develop and test our RC aircrafts.
- Research & Development Projects: Advancing projects such as the Magnus Plane, exploring novel aerodynamic principles, and Blended Wing Body Optimization, enhancing aircraft efficiency and performance through unconventional airframe designs.
- AIAA DBF & SAE Aero Design Competitions: Competing in globally recognized competitions like AIAA Design/Build/Fly and SAE Aero Design, demonstrating expertise in RC aircraft design, autonomous systems, and payload management.
- To increase the participation of the students of RV College of Engineering in UAVs and Technological development in India.

# TEAM STRUCTURE

AVIONICS

1 AERODYNAMICS

2 MODELLING AND SIMULATION

3 AVIONICS

4 MANUFACTURING

5 PILOTING



## OUR PROJECTS



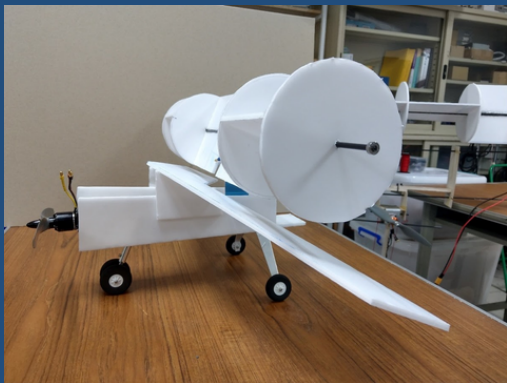
**GNAV System Development and subsequent Autopilot Integration**



**Pulse Jet Engine**



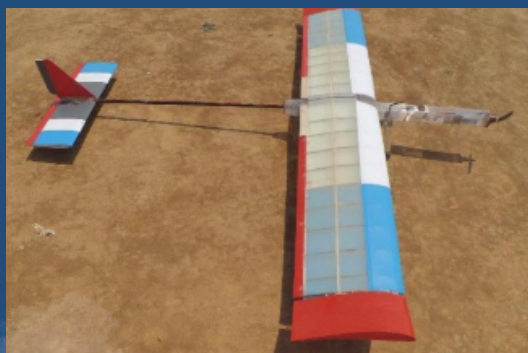
## OUR PROJECTS



**Magnus Plane**



**Blended Body Wing**



**Solarify**

# OUR ACHIEVEMENTS

2013



Partook in SAE Aero-Design East and West on April 2008, 2009, 2011 and 2018 respectively, 2013 being the most successful year. Ranked 8th from over 70 teams. Won the NASA System's Engineering Award. Lightest plane in the history of SAE at 133 grams with a payload capacity of 3 times its weight.



Sandy Magnus  
@Astro\_Sandy

Follow

#AiaaDBF Glasgow succeeds with mission 1. Up now Rashtreeya Vidyalaya College of Eng from Bangalore

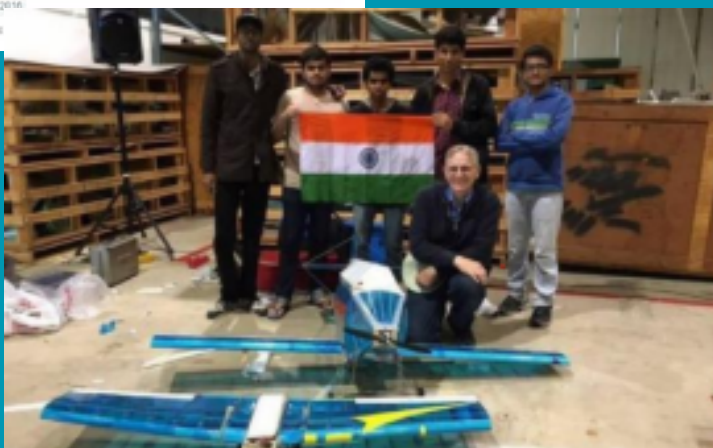


RETWEETED 6

LIKED 19

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2016



Partook in the annual AIAA DBF competition in the years 2016, 2017, 2018, 2019 and 2021. Placed 6th internationally in 2016 for design report and subsequently bagged 1st place internationally in 2017 for project proposal.



# OUR ACHIEVEMENTS

2017



**Team Vyoma debuted in 9th International Micro Aerial Vehicle Conference & Competition at Toulouse, France and placed 7th among 15 international teams**



## And the Winners Are... Award-Winning Innovations from the 2017 IDEA Competition

When it comes to autonomous aerial vehicles—the sky is the limit! With that in mind, AIAA and Drone World Expo have once again come together to present the IDEA Competition, encouraging new ideas that connect the UAS-related R&D and end-user communities. The objective of the competition is to provide a platform for sharing ideas and research related to the design, utilization, and applications of autonomous aerial systems.

The competition took place throughout the summer and the winners have been selected to present their work at DWE!

**Winner: Manu M. Pallai, Undergraduate student, Electronics and Communication, Rashtriya Vidyalaya College of Engineering**  
Bhumi is an afforestation initiative using drones. The focus is on minimizing human intervention and maximizing plant health and reach across the lands. This project will result in saving endangered and endemic plant species.

**Winner: Frederik Dunschen**  
The experimental drone concept "rollCopter" is to build a drone that has the agility of a 3D model helicopter using simpler mechanics. This is done by seeing the main rotor of a helicopter as a flying object on its own, resulting in a drone that is agile but simple, fast but energy efficient, and not just cool but useful.

**Winner: Joao Pedro Alves**

### SPEAKERS

**Joao Pedro Alves**



**Frederik Dunschen**

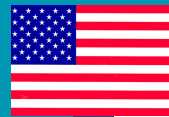


**Manu Pallai**  
Undergraduate Student, Electronics and Communication, Rashtriya Vidyalaya College of Engineering

### MODERATOR



**Tom Irvine**  
Managing Director, Content Development, AIAA - American Institute of Aeronautics and Astronautics



2017

**AIAA**  
SHAPING THE FUTURE OF AEROSPACE

**IDEA '17**

**Submitted 2 papers, both papers placed top 10 internationally and thus qualified for finals. Project Bhumi, our paper based on afforestation initiative, made it to top 3 in the world and the same was presented at IDEA in the USA.**

2017



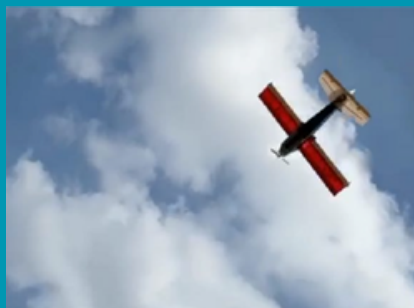
**Only Non Commercial and Student team to exhibit at ISRO World Space Biz-2010**

# OUR ACHIEVEMENTS

2023



Secured a position in the top 20 out of 600 teams after successfully qualifying in Round 2 of the Boeing National Aeromodelling Competition.



2024



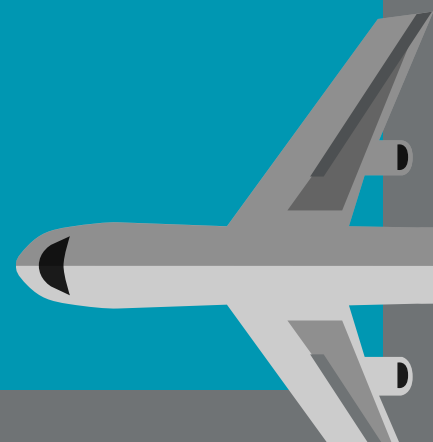
IIT BOMBAY

Two teams of Team Vyoma made into the top 30 finalists in this competition where 220 teams participated

2024



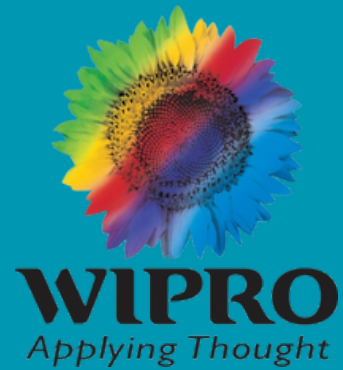
Conferred with "Best Overall Performer Award" out of 75+ teams.







## OUR PARTNERS



# CONTACT US



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We invite you to join us on this exciting journey of innovation and discovery. Follow us on our social media platforms and visit our website for regular updates, event announcements, and technical insights. Together, let's engineer the future of flight!