Unmanned Ariel Systems (UAS) Lab

In UAS lab a team of enthusiastic undergraduates is working to providing the solutions for urban surveillance needs. The lab serves as a platform for collaboration and mentorship with academicians, and industry professionals. Ph.D., M. Tech, and B. Tech Students have the opportunity to work closely with experienced researchers and faculty members, benefiting from their guidance and expertise. The exposure of students to real-world projects on drone with an objective to develop controlled and concise solutions tailored to the personal needs, in all national and international competitions, enhances students' critical thinking, problem-solving abilities, and overall academic growth. Additionally, the lab fosters a vibrant community of like-minded individuals, promoting knowledge exchange, and brainstorming sessions. Every year recruitment of the new batch of dedicated students is carried out to ensure continuation of work. The students work day and night dedicatedly to learn and design drones from scratch equipped with Artificial Intelligence (AI). The laboratory is equipped with six workstations to provide the necessary infrastructure for conducting research, implementing algorithms, and building practical applications. The lab acts as a collaborative environment, encouraging knowledge sharing and teamwork among individuals with a shared interest in unmanned ariel systems and its surveillance applications. The proud achievements of the UAS team working in UAS Lab are listed as following:

i. **Automation Challenge, TATA UAV Launchpad Makerthon**: UAS DTU achieved 2nd position.

ii. **UAV Flytron 2017:** Team UAS-DTU won the third prize in UAV Flytron organized by PEC, Chandigarh on 25-26 February 2017. The team was awarded a cash prize of Rs. 40000.

iii. **SAE INDIA 2017:** In SAE INDIA Aero Design Challenge UAS DTU achieved 1st position in Regular Class. Also had best Technical Presentation.

iv. **SAE INDIA 2018:** The team secured 1st position overall in both Regular and Micro classes. The competition was held in the presence of officials from DRDO and ISRO.

v. **Drone Olympics 2019:** The team ranked 1st in the Formation Flying category and was awarded a cash prize of Rs.5 Lakh

vi. **UAV Design Challenge PEC 2020:** Our team was successfully able to design and fabricate a Unconventional UAV which was able to meet the required criterion. Our team secured 1st position.

vii.   **AUVSI SUAS 2018:** The team ranked 2nd in the Design amongst a total of 63 teams worldwide with a cash barrel of $1600.

viii.   **AUVSI SUAS 2022:** The team ranked 3rd in Technical Design and 5th in Flight Readiness Review amongst a total of 71 teams worldwide.

ix.   **IAF Mehar Baba Swarm Drone Competition:** The team was Co-Winner of first prize in the competition and was given the title of "Best Communication Architecture". Our team successfully demonstrated a swarm of 25 drones in Pokhran over a range of 50 kms.

UAS-DTU Team Achievements' Glimpses

AUVSI SUAS 2022

AERO INDIA-DRONE OLYMPICS 2019

AUVSI SUAS 2018

Aero Design Challenge 2018

Aero Design Challenge 2018

Pioneer's Maker-thon 2017

SAE India Competition 2023

International Micro Air Vehicles 2023

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