SHIKHAR PUROHIT

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EDUCATION

B. Tech in Aerospace Engineering

UPES | 2008-2012

Aerodynamics
Propulsion
Flight Mechanics
Orbital Mechanics
Aircraft Structures
Computational Fluid Dynamics
Low Speed Wind Tunnel

M.E. in Space Engineering & Rocketry

BIT Mesra | 2012-2014

High Speed Flows
Rocket Aerodynamics
Advanced Numerical Methods
Space Dynamics
Supersonic Wind Tunnel

Ph. D in Aerospace Engineering

UPES | 2015 – present

Research Methodology
Flight Dynamics and Control
Mathematical Modeling of Dynamic Systems
Introduction to UAVs

EXPERIENCE

Teaching

UPES | 2015-2019

Orbital Mechanics
Space Science and Space Environment
Supersonic Aerodynamics
Engineering Mechanics
Introduction to Aerospace Engineering

Research

UPES | 2008-2012

Performance Envelope Study
Computational Fluid Dynamics
Missile Aerodynamics
Blimp

BIT Mesra | 2012-2014

Supersonic Flow Field Analysis
Computational Fluid Dynamics

UPES | 2015-present

Hybrid Airship
Low Speed Wind Tunnel Testing
Aircraft Performance
Mathematical Modeling and Simulation

ACCOLADES

GATE 2011 AIR 449 (Gen)
National Aerospace Olympiad winner

PUBLICATIONS

Conferences

1. Multibody dynamics of winged hybrid airship payload delivery system.
   DOI - 10.2514/6.2020-3200 |

2. Study of lighter than air wind turbine system and feasibility test of wind turbine before mounting it on an aerostat.
   DOI - 10.2514/6.2019-2980 |

3. Modeling and simulation of turning flight of winged airship-payload system using 9-DOF multibody model.
   DOI - 10.2514/6.2022-3422 |

4. Modeling and simulation of high altitude winged airship-payload system using 9-DOF multibody model.
   DOI - 10.2514/6.2023-2209 |

PROJECTS

Funded

1. Lighter than air wind turbine platform
   UPES | completed
2. Winged hybrid airship prototype development and ground testing
   UPES | ongoing

Other

1. Wind tunnel testing of winged hybrid airship model for various configurations
   UPES | completed
2. Wind profile observation
   UPES | Completed

ABOUT ME

I have a passion for teaching and research. While teaching undergrads for four and a half years, I developed my course planning & execution, lecture presentation, and class management skills. I also led multiple student teams as a mentor in various competitions and am proud of my students who not only won but even published the work.

As a researcher for 8 years now, I have honed project planning, development, and execution capabilities with an aim to meet the objectives effectively. Research also developed within me an inherent trait to remain up to date with latest innovations and an aptitude to apply them as well.