



# SPACETECH



## Patents filed since 2023

This collection of aerospace patents spans next-generation propulsion, satellite maneuverability, aerodynamic flow control, UAV design, and advanced navigation signal processing. From hypersonic airbreathing engines and capillary-fed micro thrusters to passive boundary-layer regulation and variable-pitch propeller UAVs, these innovations address key performance challenges in flight mechanics and space operations. Complementary breakthroughs in satellite navigation coding further enhance positioning resilience. We invite industry partners to explore these ready-to-license technologies for commercial aerospace, defense, and New Space applications

IP Reference Number	IP Title	Faculty Inventor @ IISc
MS-AE-2024-098	Curved compression ramp air intake apparatus for ramjet and scramjet engines and method thereof	Duvvuri Subrahmanyam
MS-AE-2025-174	A system and method for semi-autonomous obstacle avoidance and failsafe control in agricultural UAVs	Omkar Subbarama Narsipur
MS-AE-2023-105	Method and Embedded guidance system for UAVs: Autonomous high-precision soft-landing and flying through/hovering at waypoints	Radhakant Padhi
MS-AE-2025-123	Multisolv - software for flow simulations	Santosh Hemchandra
MS-AE-2023-042	Controlling fluctuating surface effects of turbulent spots in a transitional boundary layer	Sourabh Suhas Diwan
MS-AE-2023-060	A mechanism, system and method for morphing an aerial vehicle	Suresh Sundaram
MS-AE-2025-168	SAM-PRO: handheld textured 3D mapping device with edge computing and synchronized multi-sensor data fusion for high-precision digital twinning, autonomous navigation, surveying, change detection, and segmentation	
MS-AE-2024-002	Variable Pitch Propeller (VPP) system and method for managing operational conditions of an aircraft	
MS-AE-2023-090	Navigation Control Architecture for Autopilots adopting a series of Indian Fabricated Thejas32 Microcontrollers, based on indigenously developed Vega Processors, for Unmanned Systems	

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