



Department of Mechanical and Aerospace Engineering, IITH

Industry Lectures

Propelling Urban Air Mobility

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Increase in traffic congestion and the need to be able to transport faster than ever, at reasonable cost, have been the main driving factors for Urban Air Mobility (UAM). Challenges in UAM involves, source of energy (Turbo, Electric, Hybrid), cost, light weight, short runway and community noise. As UAMs are expected to fly at lower altitude as compared to commercial flights, reduction in noise has been one of the most critical design parameters. Also, UAM needs to be able to land and takeoff from shorter runway. These requirements call for redesign of propellers. Design requirements of propellers are low cost, low weight, low noise as well as vertical takeoff and landing capability. Design features to be incorporated to meet these requirements are discussed in brief. Aerodynamic features of the propellers to meet the design requirements are discussed in some details.



About the speaker

Shraman has been working for Honeywell in the field of Gas Turbine Engine Fan & Compressor and Turbine for last eighteen plus years. He has extensive experience in CFD analysis and design of Fan, Axial Compressor and Radial Compressor. He is actively involved with ASME India chapter as an organizer as well as with ASME international as a session chair. He has done his Masters from Indian Institute of Science and PhD from IIT Madras. He has three US Patents and one Trade Secret to his credit.