USF – LEADING THE CHARGE IN ADVANCED AIR MOBILITY (AAM)

USF Associate Professor Tansel Yucelen

The first revolution in aviation began with the Wright brothers' successful powered flight, forever extending the reach of humanity. The second revolution came with jet propulsion, transforming global mobility by allowing people to travel across the world at unprecedented speeds. Now, we are witnessing the third major revolution in aerospace: one that promises to reshape urban mobility, disaster response and product delivery through rapid and efficient air travel across short distances. This third revolution, driven by the development of electric aircraft collectively referred to as Advanced Air Mobility (AAM), is set to redefine personal aerial travel. Concepts like "flying cars," air taxis and other emerging innovations are no longer the realm of science fiction but are becoming a tangible reality.

At the forefront of this transformation is the University of South Florida, led by Associate Professor Tansel Yucelen, who is also the Director of the Laboratory for Autonomy, Control, Information and Systems (LACIS). USF is pioneering AAM research and development with the acquisition of the Lift Hexa, making it the first public university to possess a full-scale manned VTOL (Vertical Take-Off and Landing) vehicle. This milestone positions USF as a leader in advanced aerospace research, with a particular focus on autonomous control systems, urban air mobility and safety.

Professor Yucelen explains that the Hexa is designed for two main purposes: transporting a single passenger via vertical takeoff and landing from rooftops or remote areas, and cargo delivery. Looking ahead, he envisions that within the next 10 to 20 years, these "flying cars" will move beyond novelty and become an integral part of daily life.

VTOL (Vertical Take-Off and Landing) vehicle

https://www.sarasotamanatee.usf.edu/magazine/2024/now-arriving.aspx

A YouTube Demonstration of the eVTOL Aircraft:

https://www.youtube.com/watch?v=XRWfjnrGMH8