



Vertical Flight Society
2023 Autonomous VTOL / Electric VTOL Meeting
Schedule Overview

	Monday 1/23/2023	Tuesday 1/24/2023	Wednesday 1/25/2023	Thursday 1/26/2023		
7:00 AM	Registration	Registration	Registration	Registration	7:00 AM	
7:30 AM					7:30 AM	
8:00 AM			Invited Speakers: Titans of Autonomy	Invited Speaker: Titans of Autonomy	8:00 AM	
8:30 AM		<u>Govt Keynotes</u>	Session 1 Intros: Bryan Chu	Session 2 Intros: Bryan Chu	8:30 AM	
9:00 AM			Break	Break	9:00 AM	
9:30 AM					9:30 AM	
10:00 AM	Short Course:	Break	CVLAD Overview : D. Gowanlock, NRC	Simultaenous Optimization of Conceptual Design and Flight Trajectory of a Lift + Cruise eVTOL UAV, S. Kaneko, University of Michigan Advanced Optimization Framework of eVTOL Aircraft including Geometry Consideration, Y. Chang, Seoul National Universtiy How Simple is Simple - Measuring Learning Trajectories in Emerging eVTOL Aircraft, S. Emerson, Aptima; S. Ellis, Agilty Prime Design Considerations for an Autonomous Vehicle, A. Wyrick, Honeywell	10:00 AM	
10:30 AM	Electric VTOL Design	<u>Industry Keynotes</u>	Session 1: GN&C Chair: Bryan Chu		Session 3: Configuration Design Chair: Ariel Louie	10:30 AM
11:00 AM	Dr. James Wang		Using Radar for Automated Detect and Avoid Maneuvers, A. Wyrick, Honeywell			11:00 AM
11:30 AM			Robust Autonomous Landing of a Quadcopter on a Mobile Vehicle Using Infrared Beacons, A. Garlow, Georgia Tech			11:30 AM
12:00 PM			Lunch	Lunch	12:00 PM	
12:30 PM		Lunch			12:30 PM	
1:00 PM			Session 1: GN&C (continued) Chair: Bryan Chu	Session 3: Configuration Design (continued) Chair: Ariel Louie	1:00 PM	
1:30 PM		<u>Electric VTOL Leaders</u>	Area Inursion Detection of Rotorcraft Unmanned Air Systems via the Radio Detection and Ranging (RADAR) Electromagnetic Spectrum Perception Modality, M. Alexander, NRC, Part 2	An Engineering Study of Retrofitting a Piston Engine Powered Helicopter with Hydrogen Fuel Cells, A. Pichitkul, Suranaree University Novel Tilting-Ducted-Fan Aerial Vehicle Configurations, L. Young, NASA Ames Research Center	1:30 PM	
2:00 PM			Session 2: Modeling and Simulation Chair: Parker Schnepf	Session 4: Operations Chair: Xenji Sarabia	2:00 PM	
2:30 PM			Automated UAV Launch and Recovery Regardless the Ship Platform or State of the Seaway by Quiescent Period Prediction, B. Ferrier, Hoffman Dynamic Interface Lab	Large-scale multidisciplinary design optimization of a NASA electric air taxi concept using a new computational aircraft design framework, M. Ruh, University of California San Diego Qualifying the Economic Impact of Future Optionally-Piloted Rotorcraft, R. Scott, U.S. Army Combat Capabilities Development Command	2:30 PM	
3:00 PM			Break	Break	3:00 PM	
3:30 PM		Break	Aerodynamic and Aeroacoustic Analysis of a Hovering Quadrotor Biplane, D. Jayasundara, University of Maryland	Multi-functional Drone Landing Gear and Docking Station for Robust Perching and Autonomous Charging, J. Fernandez, Georgia Tech Development of a Mobile Fast Charging Station for Electric Aircraft, D. De Clute-Meancon, Marine Turbine Technologies	3:30 PM	
4:00 PM			Session 2: Modeling and Simulation (continued) Chair: Parker Schnepf	Session 4: Operations Chair: Xenji Sarabia	4:00 PM	
4:30 PM		<u>Autonomous VTOL Leaders</u>	Predicted Effects of Blade Elasticity on Testing of Rotors for MARS Applications, S. Wright, NASA Application of CFD-Trained Neural Network on the Rotorcraft Airfoil Design Process, N. Paternostro, University of Maryland Simulation of 2D CoFlow Jet Deflected Slipstream VTOL Transition Transient Flows, G. Zha, University of Miami	Mission-optimized conceptual design of motors for electric aircraft, F. Saemi, Texas A&M Designing an X8 UAM Reference Vehicle using the RVL T Project Toolchain, J. Cornelius, NASA Ames Research Center	4:30 PM	
5:00 PM	5:00 pm end		5:30 pm end	5:30 pm end	5:00 PM	
5:30 PM		Reception (Cash bar)			5:30 PM	
		7:00 pm end				