

Propulsion and Power Technical Meeting
Tuesday October 29 - Wednesday October 30, 2019
Hampton Roads Convention Center

Tuesday, October 29, 2019

8:15 - 8:30 AM	Welcoming Remarks	
8:30 - 9:00 AM	<i>Keynote Presentation: Future Vertical Lift Propulsion Systems & Associated S&T Challenges</i>	Dr. Kenneth Suder, NASA GRC
Session 1:		
9:00 - 9:30 AM	<i>Development of the Pericyclic Drive from Concept to Prototype - A Path Towards Rotorcraft Transmission Weight and Noise Reduction</i>	Tanmay Mathur, General Electric Research Center
9:30 - 10:00 AM	<i>Establishing Practical Packing Factors for eVTOL Battery Systems</i>	Robert Hess, BAE Systems
10:00 - 10:30 AM	Coffee Break	
10:30 - 11:00 AM	<i>AH-64 Loss of Lubrication Study: Test of Isotropic Superfinished AH-64 (Apache) Engine Nose Gearbox Without Black Oxide Coating</i>	Christina Michaud, REM Surface Engineering
11:00 - 11:30 AM	<i>Enabling Technologies for Rotorcraft Propulsion, Power & Thermal</i>	Neil Garrigan, General Electric Aviation
11:30 AM - 1:00 PM	Lunch on Your Own	
Session 2:		
1:00 - 1:30 PM	<i>Advanced Gear Testing for FARA Accelerated Program Execution</i>	Yuriy Gmirya, Lockheed Martin
1:30 - 2:00 PM	<i>Impact of Lithium Sulfur Batteries on Electric VTOL Aircraft</i>	Emily Fidler, University of Maryland
2:00 - 2:30 PM	<i>Characterization of a Gasoline-Engine Based Hybrid-Electric Powertrain</i>	Brent Mills, Army Futures Command, CCDC Data and Analysis Center
2:30 - 3:00 PM	Coffee Break	
3:00 - 3:30 PM	<i>Smarter Flight Through Vectored Thrust</i>	Larry Leovan, HEKA Aero
3:30 - 4:00 PM	<i>Reliability Requirements and Research Strategies for Urban Air Mobility Propulsion</i>	Dr. Timothy Krantz, NASA GRC
4:00 - 4:30 PM	<i>Composite Materials for Hybrid Gears</i>	Matthew Waller, The Pennsylvania State University
4:30 - 5:00 PM	<i>Future Affordable Turbine Engine Summary and Results</i>	Brian Johnson, General Electric Aviation
6:00 PM	Dinner & Social at OozleFinch Craft Brewery	

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Session 3:		
8:30 - 9:00 AM	<i>An Investigation of the Mechanical Property Changes and Softening Mechanisms in Advanced Aerospace Gear Steels During Short-Term Exposure to High Temperature</i>	Aaron Isaacson, The Pennsylvania State University
9:00 - 9:30 AM	<i>Hybrid Power Generation for SUAS: Design and Efficiency Considerations</i>	Matthew Hayes, Unmanned Propulsion Development
9:30 - 10:00 AM	<i>Benefits of a Variable Speed Power Turbine as Applied to a High Speed Rotorcraft</i>	Stephen Gatto, Pratt and Whitney
10:00 - 10:30 AM	Coffee Break	
10:30 - 11:00 AM	<i>Design Optimization of a Hybrid Spur Gear Including Tooth Bending Effects</i>	Sean Gauntt, The Pennsylvania State University
11:00 - 11:30 AM	<i>Propulsion Optimization for UAS Platforms</i>	Craig Heathco, New Centerline Design
11:30 AM - 1:00 PM	Lunch on Your Own	
Session 4:		
1:00 - 1:30 PM	<i>An Overview of NASA's Magnetic Gear Program and Results to Date</i>	Thomas Tallerico, NASA GRC
1:30 - 2:00 PM	<i>Technologies for Hybrid Electric Aviation Propulsion</i>	Kurt Murrow, General Electric Aviation
2:00 - 2:30 PM	<i>Optimized Power and Energy Generation, Storage and Conditioning for Army Rotorcraft</i>	Dr. Thomas Podlesak, Army Futures Command, CCDC, C5ISR
2:30 - 3:00 PM	Coffee Break	
3:00 - 3:30 PM	<i>Improved Turbine Engine Program (ITEP) Integration</i>	Andy Keith, Sikorsky Aircraft Corporation
3:30 - 4:00 PM	<i>High-Speed Testing of a High-Efficiency Concentric Magnetic Gear</i>	Dr. Justin Scheidler, NASA GRC
4:00 - 4:30 PM	<i>The Array Controlled Turnless Structures (ACTS) Motor and its High Specific Power Distributed Inverters: The Underlying Technology and Selected Airborne Applications</i>	Oved Zucker, Polarix Corporation
4:30 PM	Technical Meeting Concludes	