



Propulsion and Power Technical Meeting October 29-30, 2019 | Hampton, Virginia *Sponsored by the Hampton Roads Chapter*

The theme of the 2-day conference is “**Powering the Future of Vertical Flight**”, which will highlight research and development efforts, both current and planned, related to manned and unmanned rotorcraft and other vertical flight vehicles. The meeting will consist of unclassified, unrestricted presentations and be held at the Hampton Roads Convention Center in Virginia. Hotel lodging is available next door at the Embassy Suites Hampton Convention Center.

If you are interested in presenting, please submit an abstract **NLT Monday, July 15, 2019 (final presentations will be due by Oct. 1, 2019)**. Abstracts should include presentation title, presenter(s) name and affiliation(s), contact number and email address and submitted to propulsion2019@vtol.org. *Presentations are invited on the following topics:*

Advanced Turbine Engine Technologies: technology applicable to both developmental and legacy vertical lift aircraft including both manned and unmanned platforms. Topics could include:

- advances in component technologies to enable increased performance
- increased reliability
- reduced operating and support costs
- increased durability or alternative approaches to existing designs

Electric and Hybrid-Electric Propulsion Technologies: all aspects of applying electric and hybrid electric propulsion solutions to UAV, rotorcraft, and VTOL aircraft. Technologies of interest could include:

- electric motors
- distributed propulsion systems
- batteries
- enabling control systems
- supercapacitors
- other enabling technologies for the advancement of hybrid propulsion solutions

Power and Thermal Management Technologies: technologies and approaches to provide significantly higher electrical power capability to future vertical lift systems that are able to address the consequential thermal issues. Technologies could include:

- energy storage
- systems/approaches to provide pulse power
- advanced heat exchangers
- thermal management technologies
- modeling and simulation approaches
- test capabilities

Advanced Powertrain Technologies: new and innovative drive system concepts, materials, and technologies applicable to vertical lift aircraft for current and future aircraft along with the challenges associated with integration into aircraft such as FVL, UAVs, and other VTOL aircraft. Recommended topics include:

- variable/multi-speed concepts
- weight/noise reduction technologies
- advanced materials and processes for gears/bearings
- technologies to reduce operations/sustainment costs
- advances in tribology
- alternatives to traditional rotorcraft drives system configurations

General Chair: Ms. Susan Gorton, NASA Langley Research Center

Technical Chair: Ms. Anastasia Kozup, US Army Combat Capabilities Development Command, Aviation & Missile Center, Aviation Development Directorate

