



# Press Release

July 12, 2019

Contact:

Julie M. Gibbs

[jmgibbs@vtol.org](mailto:jmgibbs@vtol.org)

703-684-6777 x103

## Vertical Flight Society Announces Winner of 2019 Alfred Gessow Best Paper Award

**Fairfax, Virginia** — The Vertical Flight Society (VFS) announced today the winner of the Society's prestigious Alfred Gessow Award for the best technical paper at the 75th Annual Forum and Technology Display. This year's winning paper from the Aerodynamics session is entitled, [Helicopter Rotor Boundary Layer Transition Measurement in Forward Flight using an Infrared Camera](#), by Anthony Gardner of the German Aerospace Center (DLR). The paper is available for sale in the [Vertical Flight Library & Online Store](#).

The selection process, which began in October 2018, was very rigorous. Session chairs selected more than 280 papers from the 375+ abstracts received. During the Forum, the session chairs and technical committee chairs selected the 20 best papers for final consideration. Then the Society's Deputy Technical Directors for Aeromechanics, Vehicle Design, Vehicle Integrity, System Integration, Systems Engineering, and Operations and Product Support winnowed that number down to six papers. Following that, the VFS Technical Director and a committee of technical experts reviewed and ranked the papers, and in that ranking, determined that the selected paper was the best of the best.

This year's Forum 75 was our diamond jubilee held on May 13-16, 2019 in Philadelphia, Pennsylvania. Next year, the Society's [76th Annual Forum & Technology Display](#) will be held May 19-21, 2020 in Montreal, Quebec.

Dr. Gardner will receive complimentary travel, registration and lodging to the European Rotorcraft Forum (ERF) in Warsaw, Poland, Sept. 17-20, 2019, where he will present his paper and receive the Alfred Gessow plaque. The award is named after the helicopter pioneer, researcher, author, professor and founder of the rotorcraft center at the University of Maryland now named for him.

The full list of other Forum 75 best papers with links:

- Acoustics: [Regarding the Perceptual Significant and Characterization of Broadband Components of Helicopter Source Noise](#) by Andrew Christian, Jarrett Caston, Eric Greenwood, NASA Langley Research Center
- Advanced Vertical Flight: [Development of a Gun-Launched Rotary-Wing Micro Air Vehicle](#) by Hunter Denton, Moble Benedict, Texas A&M University; Vikram Hrishikeshavan, University of Maryland; Hao Kang, U.S. Army Research Laboratory
- Aircraft Design: [VTOL Concepts for Unmanned Payload Delivery Applications](#) by Michael Avera, U.S. Army Research Laboratory
- Avionics & Systems: [Advanced Technology, Lightweight, Multifunctional Micro-avionics for Manned and Unmanned Rotorcraft Enhance Operational Capability of Future Vertical Lift Platforms](#) by Richard Healing, Air Safety Engineering LLC; RaNae Contarino, V. Michael Contarino, R Cubed Engineering LLC

- Crash Safety: [Hydrodynamic Ram Compliant and Self-Sealing Fuel Cell Structures](#) by Dennis McCarthy, Lisa Chiu, Chris Gatley, Clark Andrews, James Childress, Boeing Company, Mark E. Robeson, U.S. Army Aviation Development Directorate
- Crew Stations & Human Factors: [A Strategy for Determining Optimal Crewing in Future Vertical Lift: Human- Automation Function Allocation](#) by Katie Ernst, Applied Decision Science LLC; Devorah Klein, Marimo Consulting; Emily Roth, Roth Cognitive Engineering; Scott Scheff, HF Designworks; Grant Tayler, U.S. Army; Laura Militello, Christen Sushereba, Julie Dilulio, Scott Wonderly, Applied Decision Science
- Dynamics: [Advanced Rotorcraft Aeromechanics Simulations Using HPCMP CREATE™-AV Helios](#) by Beatrice Roget, Science & Technology Corp.; Jay Sitaraman, Parallel Geometric; Ryan Blumenstein, Hossein Saberi, Mina Taheri, Advanced Rotorcraft Technology
- Handling Qualities: [Flight Test Evaluation of Proposed High-Speed Break Turn Mission Task Element \(MTE\)](#) by James Bumbaugh, NAVAIR; John Tritschler, Christopher Mattei, Michael Mosher, Robert Barthelmes, US Naval Test Pilot School
- Health and Usage Monitoring Systems: [Diagnostic Features from Aircraft Propulsion Bearings in Accelerated Aging Experiments](#) by Brian Dykas, Adrian Hood, Edward Zhu, CCDC Army Research Lab; Nenad Nenadic, Rochester Institute of Technology
- History Bernie Lindenbaum Best Paper: [The Lost Treasures of Maitland Bleecker: His Helicopter and Other Innovations](#) by Paul J. Fardink, US Army (Retired)
- Manufacturing Tech. & Processing: [Additive Manufacturing \(AM\) of a Rotorcraft Gearbox Housing Independent Research & Development \(IRAD\) Project](#) by Gerald Cross, Robert Filler, Boeing Company
- Modeling & Simulation: [Linearized Inflow and Interference Models from High Fidelity Free Wake Analysis for Modern Rotorcraft Configurations](#) by Jeffrey Keller, Robert McKillip, Daniel Wachspress, Continuum Dynamics; Mark Tischler, Ondrej Juhasz, U.S. Army Aviation Development Directorate
- Operations: [Speed and Maneuverability Benefits of Sikorsky's X2 Technology™ vs. Air Defense Artillery](#) by Bjorn Foote, Jordan Kay, Alex Weintraub, Sikorsky, a Lockheed Martin Co.; Mark E. Robeson, Jay Kiser, Daniel Camp, U.S. Army Aviation Development Directorate
- Product Support Systems Technology: [RFID Solution for Tracking Components Life for Rotor Head Assembly](#) by Maciej Zawodniok, Sohel Pate, Missouri S&T; Nagaraja Iyyer, Technical Data Analysis; Kishan Goel, Nam Phan, NAVAIR
- Propulsion: [Lessons Learned in Fabrication of a High-Specific-Torque Concentric Magnetic Gear](#) by Zachary Cameron, Thomas Tallerico, Justin Scheidler, NASA Glenn Research Center
- Safety: [System Safety for Vertical Flight](#) by John Hewitt, Sikorsky Aircraft, a Lockheed Martin Co.
- Structures & Materials: [An Alternative Probabilistic Approach for Reliability Assessment of Rotorcraft Structures](#) by Thomas Frewen, Mark Gurvich, Bob LaBarre, United Technologies Research Center
- Systems Engineering Tools & Processes: [Intelligent Black Box Verification, Validation, and Accreditation for Rotorcraft Performance Modeling](#) by William B. McCandless, U.S. Army Combat Capabilities Development Command; Ian D. Dettwiller, U.S. Army Corps of Engineers
- Test & Evaluation: [Advanced AH-64 Compound Wind Tunnel Testing Overview](#) by Edward Brouwers, Richard Deresz, Boeing Company; Michael Fillman, AeroVironment Inc.
- Unmanned VTOL: [Helicopter Formation Control Algorithm for Manned-Unmanned Teaming](#) by Alexander Dondels, Andreas E. Voight, German Aerospace Center (DLR)

Founded in 1943 as the American Helicopter Society, the Vertical Flight Society today is the international organization that advocates, promotes and supports global vertical flight technology and professional development. For 75 years, the Society has provided global leadership for the advancement of vertical flight.

### ***The Vertical Flight Society***

2701 Prosperity Ave, Ste. 210, Fairfax, VA 22031, USA  
 phone: 1-703-684-6777; email: [staff@vtol.org](mailto:staff@vtol.org); website: [www.vtol.org](http://www.vtol.org)