Press Release

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Contact:
Julie M. Gibbs
703-684-6777 x103
pr@vtol.org

Vertical Flight Society Announces Winner of 2018 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 74th Annual Forum and Technology Display. This year's winning paper from the Avionics & Systems session is entitled, Avoiding Obstacles during Approach: DVE-Mitigation Flight Trials and Beyond, by Michael Zimmermann, Martin Gestwa of DLR, and Stephanus Klasen and Andreas Lederle of HENSOLDT Sensors GmbH. The paper is available for sale in the Vertical Flight Library & Online Store.

The selection process, which began in October 2017, was very rigorous. Session chairs selected more than 250 papers from the 320+ abstracts received. At 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 his committee reviewed and ranked the papers, and in that ranking, determined that the selected paper was the best of the best.

This year's Forum 74 was held on May 14-17, 2018 in Phoenix, Arizona. Next year, the Society's 75th Annual Forum & Technology Display will be held on May 13-16, 2019 in Philadelphia, Pennsylvania.

Mr. Zimmermann will receive complimentary travel, registration and lodging to the European Rotorcraft Forum (ERF) in Delft, Netherlands, Sept. 18-21, 2018, 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.

See below for full list of Forum 74 best papers and links to the online paper.

- Acoustics: Estimating Helicopter Noise Abatement Information with Machine Learning by Eric Greenwood, NASA Langley Research Center
- Advanced Vertical Flight: A Truly Biomimetic Hover-Capable Flapping Wing Robot by David Coleman, Moble Benedict, Texas A & M University
- Aerodynamics: Unsteady Boundary Layer Transition Measurements on a Rotor in Forward Flight by Austin Overmeyer, US Army; Christian Wolf, German Aerospace Center (DLR); J.T. Heineck, NASA Langley Research Center

- Aircraft Design: Heuristic Discovery of Improved Rotor Designs by Jeff Sinsay, US Army AMRDEC; Juan Alonso, Stanford University
- Crash Safety: Preliminary Assessment of Bird Strike on Low Noise Rotor Blade Sections by Martin Annett, NASA Langley Research Center; Mike Pereira, NASA Glenn Research Center
- Crew Stations & Human Factors: ARSAD: An Augmented Reality Spatial Auditory Display for Obstacle Avoidance for all Phases of Flight by Martine Godfroy-Cooper, Joel Miller, Elizabeth M. Wenzel, SJSUF/NASA
- Dynamics: Automated Operational Modal Identification of a Rotor Blade by Daiju Uehara, Jayant Sirohi, Marc Eitner, University of Texas Austin
- Handling Qualities: Piloted Simulation Evaluation of Tracking MTEs for the Assessment of High-Speed Handling Qualities by David Klyde, Systems Technology, Inc.
- Health & Usage Monitoring Systems: Rotary Inspection Tracking System by Melvin Cooke, Traci Webb, Mandy Kramer, GS Engineering, Inc.; Zachary Edel, Corey Packard, ThermoAnalytics, Inc.
- Manufacturing Tech. & Processing: Utilization of Factory Physics in Reducing Span and Variation in Production by Chandrashekhar Tiwari, Gregg Skinner, Bell
- Modeling & Simulation: Full-Envelope Stitched Simulation Model of a Quadcopter Using STITCH by Eric Tobias, Mark Tischler, US Army ADD; Frank Sanders, San Jose State University
- Operations: The Evolving Threat & Operational Environment's Impact on Aircraft Vulnerability Reduction by Warren Aylworth, US Army
- Product Support Systems Technology: Estimating On-Condition Direct Maintenance Cost (DMC) by Isaac Munene, Bell
- Propulsion: Design Space Exploration of Pericyclic Transmission with Counterbalance and Bearing Load Analysis by Zachary Cameron, NASA Glenn Research Center; Edward Smith, Robert Bill, Pennsylvania State University; Hans DeSmidt, University of Tennessee
- Safety: Development of Powered Lift Airworthiness Standards as Applied to the AW609 Tiltrotor Certification Basis by Joseph Schaeffer, David King, William Fraser, Dan Wells, AgustaWestland Philadelphia
- Structures & Materials: Joint Multi-Role Technology Demonstrator Fuselage Proof Test by Dennis McCarthy, Dan Solari, Jasmina Maack, Boeing Co.; Darryl Toni, Matthew Spies, Sikorsky, a Lockheed Martin Co.
- Systems Engineering Tools & Processes: Architecture-Driven Assurance for Safety-Critical Avionic Systems by Dan Bliek, Rockwell Collins
- Test & Evaluation: Experimental Evaluation of Multi-rotor UAV Operation under Icing Conditions by Sihong Yan, Tomas Opazo, Jose Palacios, Jack Langelaan, Pennsylvania State University; Louis-David Germain, Transport Canada
- Unmanned VTOL: A System for Autonomous Rotorcraft Dual-Lift Flight Research by Marc Takahashi, Matthew Whalley, Marcos Berrios, US Army; Greg Schulein, San Jose State University

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; toll free: 1-855-AHS-INTL
email: staff@vtol.org; web site: www.vtol.org