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Success Story

PROPULSION ENGINEER RECEIVES SAE MEDAL FOR TECHNICAL PAPER



A Propulsion Directorate engineer was recently awarded the Society of Automotive Engineers (SAE) Charles M. Manly Award for a technical paper he wrote. The award is given to the author(s) of the most outstanding technical paper relating to the theory or practice in the design, construction, or research of aerospace engines, their parts, components, or accessories. A major factor in the selection of the recipient is the value of the author's contributions to the development of high-tech solutions in the furtherance of engine technology, their parts, components, subsystems, or accessories.



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Accomplishment

Mr. Peter T. Lamm, a project engineer in the Electrical Technology and Plasma Physics Branch of the directorate, received the Charles M. Manly Award for his technical paper, “Analysis and Simulation of a UAV Power System.” Mr. Lamm was responsible for developing an in-house dynamic modeling and simulation laboratory using distributed heterogeneous simulation (DHS), a new technique used in the numerical simulation of large-scale systems.

The DHS system, developed in collaboration with P.C. Krause & Associates, integrates propulsion, power, and avionic systems by linking different simulation models together with a core set of software routines. These routines allow different computer platforms to exchange data in a common format. It used to take months to get the type of information that DHS will now provide in days.

The approach for distributing the subsystems among multiple computers significantly improves simulation speed and shows the capability to make computer simulations 700 times faster. The new tool allows for the investigation of dynamic interconnections of specific components or subsystems such as electrical, mechanical, hydraulic, or thermal.

Background

The award is named for Charles M. Manly, who served as the SAE president in 1919. He also served as Samuel P. Langley’s chief mechanic and test pilot. Langley was an aviation pioneer and former director of the Smithsonian Institute in Washington DC.

Established in 1928, the award consists of a certificate, bronze medal, and honorarium. Mr. Lamm, along with the coauthors of the paper, received the award at the Aerospace Congress & Exhibition at the Palais des Congres in Montreal, Quebec, Canada.

Additional information

To receive more information about this or other activities in the Air Force Research Laboratory, contact TECH CONNECT, AFRL/XPTC, (800) 203-6451 and you will be directed to the appropriate laboratory expert. (04-PR-03)