Air Force Research Laboratory|AFRL

Science and Technology for Tomorrow's Air and Space Force

Success Story

AFMC JUNIOR CIVILIAN ENGINEER AWARD

The Air Force Materiel Command (AFMC) awarded Ms. Charlotte Gerhart, of the Space Vehicles Directorate, the Junior Civilian Engineer Award, which recognizes individuals with less than 10 years of engineering experience for technical contributions to the sustainment, testing, and advancement of Air Force weapons systems. AFMC will also forward the winner in this category as a nominee for the Air Force Outstanding Engineer Awards.

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Accomplishment

Ms. Charlotte Gerhart received the AFMC Junior Civilian Engineer Award for program manager of the year for her work on the Vibro Acoustic Launch Protection Experiment (VALPE) and other research projects. Her efforts will save the Air Force hundreds of millions of dollars during the next decade.

Background

The VALPE project, launched on two Terrier Improved Orion sounding rockets, consisted of five separate experiments that demonstrated vibration isolation, acoustic mitigation, and energy recovery. These technologies are key to decreasing design requirements and improving overall reliability for future space missions.

In addition to coordinating the VALPE Team, Ms. Gerhart is a recognized expert in the area of spacecraft thermal management and continues to direct and coordinate research, design, and analysis in that field. Keeping all components of a satellite within their individual temperature limits is critical for operation and is difficult in the harsh environment of space.

Ms. Gerhart is also responsible for overseeing the development of novel technologies that will eventually result in the capability to perform autonomous on-orbit servicing of satellites. The ability to refuel, repair, and upgrade satellites on orbit has the potential to revolutionize the way the Air Force and the Department of Defense currently use satellites, much the way mid-air refueling has changed aircraft operations.

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. (03-VS-21)