



## **2009 FLC Midwest Region Awards**

### **Excellence in Technology Transfer Award**

The Excellence in Technology Transfer Award is presented to an employee or team of employees of a Midwest Region member laboratory in recognition of outstanding work during the transfer of a technology between a federal laboratory and another entity.

At the 2009 FLC Midwest regional meeting, a team from NASA Glenn Research Center received an Excellence in Technology Transfer Award for its development of a metallic foam liner that reduces aviation noise. The team of Dr. Daniel Sutliff, Dr. Cheryl Bowman, Michael Jones, and Tom Hartley worked against challenging time and cost restraints to create a technology that would enable commercial aircraft to meet increasingly stringent restrictions on aviation noise, without adding to the size or weight of the aircraft.

The NASA team used a Space Act Agreement with Williams International to test its patent-pending over-the-rotor acoustic metallic foam liner on an FJ44 turbofan engine. NASA transferred the knowledge on the over-the-rotor liner design, as well as acquisition and processing of the acoustic data. In return, Williams built the liner and provided the engine test bed. The liner, which reduces noise by acting as rotor-tip rub strip, previously had never been used in a full-scale turbofan engine, and the tests proved its viability. Succeeding on a small engine cleared the way for NASA to test the method on larger commercial aircraft engines, and the NASA team has taken steps to begin work with larger engine manufacturers for these tests. Successful implementation on larger engines would reduce noise in even more communities near airports. NASA may also be able to market the method for other applications, such as HVAC systems and space propulsion.