

NASA and ONERA, strategic partners against aircraft noise

On the occasion of the International Forum for Aviation Research IFAR, held in Daejeon (South Korea), Bruno Sainjon, CEO of ONERA, and Dr Jaiwon Shin, Associate Administrator for the Aeronautics Research Mission Directorate at NASA, signed an agreement specifying the terms of an enhanced bilateral scientific cooperation for 4 years on the subject of reducing aircraft noise.



This agreement covers four main research topics:

- Acoustic liners (absorbent materials)
- Noise modeling around an airport platform (modeling of its source and of its propagation)
- Perception and noise discomfort perceived by residents (*auralization and psychoacoustics)
- Signal processing methods for the identification of sound sources (spatial location, sound levels)

Signature of the agreement by Bruno Sainjon (ONERA), left, and Jaiwon Shin (NASA), right (copyright ONERA)

The DLR will also participate in the topic of modeling the noise around an airport platform and will also contribute flight data from its test aircraft Attas (a Fokker VFW614).

The purpose of this agreement is the mutual comparison of various noise prediction methods, thereby acquiring new knowledge on the same field of research but through different methods, with which both institutions will be able to increase their expertise.

This strategic agreement will strengthen the NASA-ONERA partnership on noise initiated in 2008, and is part of the framework agreement for cooperation signed between the two institutions in 1991.

The first ONERA-NASA collaboration is took place more than 40 years ago. In 1972, it related to helicopter aeroelasticity, and research topics have since diversified to cover materials and structures, aerodynamics, human factors, icing, air traffic management (ATM) and aircraft noise reduction. NASA has therefore made ONERA its preferred research partner.

**Auralization: restitution of the sound environment from simulated or measured data*

About ONERA

ONERA, a key player in aeronautics and space research, employs approximately 2000 people. Under the supervision of the Ministry of Defense, it has a budget of EUR 230 million, of which more than half comes from commercial contracts. As a State Expert, ONERA prepares future defense, meets the aerospace challenges of the future, and contributes to the competitiveness of the aerospace industry. It masters all disciplines and technologies in the field. All major civil and military aerospace programs in France and Europe share part of ONERA's DNA: Ariane, Airbus, Falcon, Rafale, missiles, helicopters, engines, radars, etc. Internationally renowned and having often received awards, its researchers train many doctoral students. www.onera.fr

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