

# AEROSPACE ENGINEERING

## DIMEAS - Experimental investigation of the flow-acoustic interaction over an acoustic liner grazed by a turbulent flow.

<b>Funded By</b>	Dipartimento DIMEAS
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<b>Contact</b>	Fabien Mery Estelle Piot
<b>Context of the research activity</b>	The PhD candidate will work on the ERC Starting Grant project LINING project. In this project we aim at measuring, describing, and modeling the complex acoustic flow interaction over acoustic liners with several degrees of complexity (i.e., from single degree of freedom to bulk acoustic liner).
<b>Objectives</b>	The PhD candidate will: <ul style="list-style-type: none"><li>- Develop an optical non-intrusive measurement setup, i.e. LDV, to measure the flow features near the surface of a conventional single/double degree of freedom liner and a novel meta-liner.</li><li>- Perform the acoustic characterization of the acoustic liners.</li><li>- Perform post-processing of the experimental data to assess the flow interaction between the grazing turbulent flow and the acoustic field.</li><li>- Build an experimental database that can be used to improve low-order models and validate high-fidelity numerical simulations.</li></ul> Experiments will be conducted in collaboration with ONERA (Toulouse).
<b>Skills and competencies for the development of the activity</b>	The candidate shall have: <ul style="list-style-type: none"><li>- Basic knowledge of aeroacoustics.</li><li>- Basic knowledge of turbulence and its statistical characterization.</li><li>- Experience with non-intrusive experimental techniques.</li><li>- Previous experience in working in grazing flow facility for acoustic liner characterization is a plus.</li></ul>