



PhD in INGEGNERIA AEROSPAZIALE / AEROSPACE ENGINEERING - 41st cycle

**THEMATIC Research Field: BUCKLING-DRIVEN COMPOSITE STRUCTURES FOR MORE
EFFICIENT AND SUSTAINABLE AIRCRAFT OF THE FUTURE**

Monthly net income of PhDscholarship (max 36 months)

1500.0

In case of a change of the welfare rates during the three-year period, the amount could be modified.

Context of the research activity

**Motivation and objectives of the research
in this field**

The research activities will be conducted within the framework of the ERC-NABUCCO project, which aims to enhance the structural efficiency of future aircraft by implementing innovative concepts based on the smart utilization of buckling-driven solutions. Although structural buckling has traditionally been seen as a potentially dangerous issue to be avoided due to its association with catastrophic failure, the nonlinear behavior linked to this phenomenon could actually be advantageous in the current drive for more efficient structures.

**Methods and techniques that will be
developed and used to carry out the
research**

The research will be conducted as part of the ERC Advanced Grant NABUCCO, a project funded by the European Research Council of the European Commission. The methodology to be developed for designing aeronautical composite structures will involve an integrated approach encompassing analysis, optimization, and testing.

Educational objectives

The goal is to optimize aerospace composite structures through a multidisciplinary approach.



Job opportunities	The knowledge gained can be applied across various sectors where lightweight structures play a significant role.
Composition of the research group	1 Full Professors 1 Associated Professors 2 Assistant Professors 4 PhD Students
Name of the research directors	Prof. Chiara Bisagni

Contacts
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Additional support - Financial aid per PhD student per year (gross amount)	
Housing - Foreign Students	--
Housing - Out-of-town residents	--

Scholarship Increase for a period abroad	
Amount monthly	750.0 €
By number of months	6

Additional information: educational activity, teaching assistantship, computer availability, desk availability, any other information
The PhD candidate will receive a desk, possibly through a hot-desking procedure, and a personal computer, if needed. In addition to the compulsory ones, the PhD candidate will have the opportunity to take additional courses and receive economic support to attend summer schools and participate in conferences. There will be the possibility of a paid teaching assistantship.