

# Workshop Aircraft MDOpen day

The design of future airplanes  
and the AGILE project

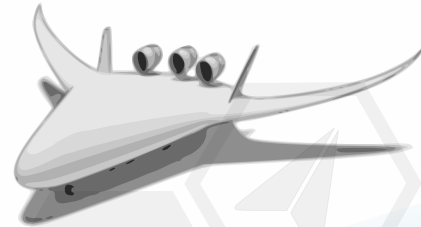
October, 9<sup>th</sup> 2018

9:00 - 13:00

15:00 - 17:30



University of Naples Federico II  
Aula Magna "Leopoldo Massimilla"  
Piazzale Tecchio, 80



The workshop will present and highlight the importance of innovative processes for aircraft analysis, design and optimization. To design complex and disruptive innovative future airplane configurations is crucial to develop fast, reliable and complete multi-disciplinary design framework. Results from the European AGILE project and other aircraft design applications will be presented by international research centers and industries. A demo session is scheduled in the afternoon.

## Agenda

**Welcome** 9:00 - 9:20  
Welcome from local institutions

**Introduction** 9:20 - 9:40  
Prof. F. Nicolosi

**Industries** 9:40 - 10:40  
G. Cerino (Leonardo Aircraft)  
A. Cozzolino (Piaggio Aerospace)  
F. Russo (Tecnam)

### BREAK

**Dep. overview** 11:00 - 11:20  
Prof. A. Moccia (Head of Dep.  
of Industrial Engineering)

**AGILE Project** 11:20 - 13:00  
Pier Davide Ciampa (DLR)  
Imco Van Gent (TU Delft)  
Pierluigi Della Vecchia (UniNa)  
Agile academy challenge team

**AGILE Demo**  
15:00 - 17:30

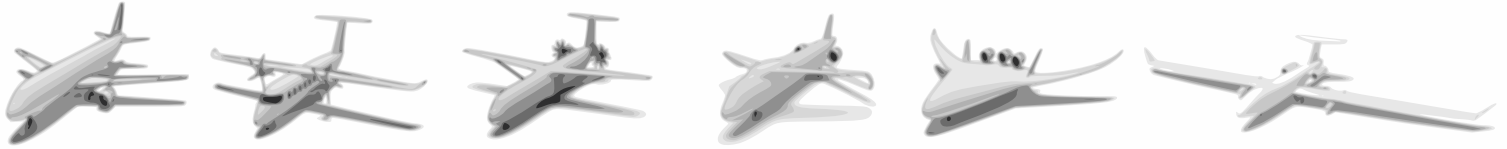
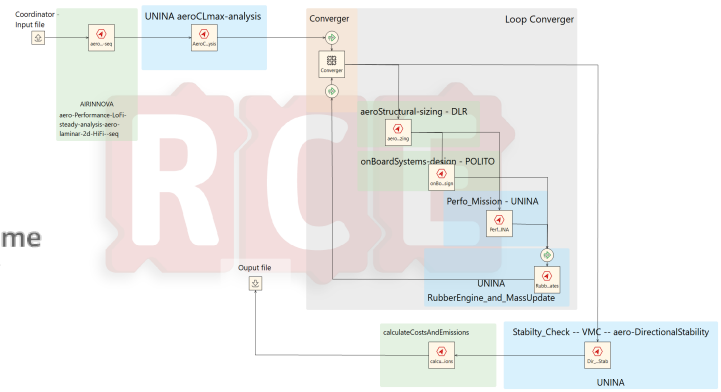
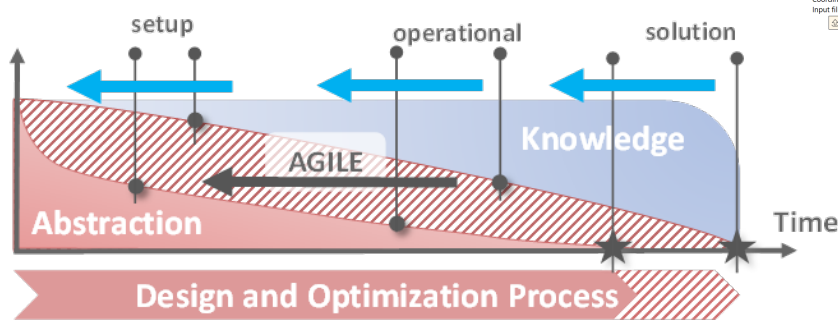


UNIVERSITÀ DEGLI STUDI DI NAPOLI  
FEDERICO II



**AGILE**  
AIRCRAFT 3<sup>RD</sup> GENERATION MDO  
FOR INNOVATIVE COLLABORATION  
OF HETEROGENEOUS TEAMS OF EXPERTS





The workshop will highlight the importance of innovative processes for aircraft analysis, design and optimization. To design complex and disruptive innovative future airplane configurations is crucial to develop fast, reliable and complete multi-disciplinary design framework. Results from the European AGILE project and other aircraft design applications will be presented by international research centers and industries.

Airline operations nowadays require airplanes with high efficiency, low operative costs and reduced environmental impact (emissions and noise). The workshop will show to MSc and PHD students and researchers all recent results obtained in some European research projects for aircraft design applications. Innovative solutions and configurations in development phase have been obtained thanks to new algorithms, tools and modern aircraft design approaches.

Since 2015 the DAF research group at University of Naples ([www.daf.unina.it](http://www.daf.unina.it)) is deeply involved in the European research project AGILE (Aircraft 3rd Generation MDO for Innovative Collaboration of Heterogeneous Teams of Experts). AGILE is a Horizon H2020 project with 19 members and is focused on the development of modern and innovative framework for efficient aircraft preliminary design phase. Peculiar aspects of the AGILE project are the collaborative approach, the inclusion of modern tools, analysis and optimization techniques and the final development of an efficient MDO aircraft design framework.

The AGILE project has recently been awarded the ICAS Award for Innovation in Aeronautics: “In recognition of aeronautic innovations and accomplishments in advancing the next generation of collaborative Multidisciplinary Design and Optimization processes in international collaborations”.

During the first part of the workshop several modern aircraft design examples which are part of Agile and other research projects (Clean Sky 2, collaboration between University of Naples and Leonardo Aircraft) or Industrial programs will be presented.

At the end of the morning session the dissemination activity concerning the AGILE Academy will be presented and the winning team (about 7 students from different international Universities) will be invited to briefly present the results of the initiative.

In the afternoon a DEMO-session is scheduled to show a specific use-case analyzed in the AGILE project. This session will be addressed to MSc and PHD students. International partners such as DLR, TU Delft and ONERA will also present and mention possible activities and opportunities for MSc students for their future thesis, stages and PHD programs.