Announcement of the

1st European Workshop

on

MDO for Industrial Applications in Aeronautics – Challenges and Expectations

24-25 October 2017

Hosted by DLR, Braunschweig, Germany

Multidisciplinary design optimization (MDO) based on high- and multi-fidelity methods have been intensively investigated during the last decades in academia and government research labs, and were shown to be promising tools for aircraft design. However, the perception exists that only limited transfer of formal MDO techniques into daily design work of aircraft manufacturers has been achieved until today.

At DLR, IRT Saint Exupéry and ONERA, we explore, implement and test innovative ideas and methods to practical MDO, based, in particular, on high-fidelity methods. With this experience and ambition at hand, we aim at bringing together practitioners from research and industry to discuss the bottlenecks and barriers of MDO use for airframe design, so that future solutions can be designed with these issues in mind.

This European workshop is the first of a planned workshop series organized by DLR, IRT Saint Exupéry and ONERA. The ambition is to establish a European MDO community to enhance collaboration on the subject.

Targets of the 1st workshop:

- Establish a discussion platform among European institutions that assesses state-of-the-art MDO for aircraft industry and maintains European lead in real-world MDO
- Uncover gaps and shortcomings of current MDO, especially for high-fidelity methods
- Understand industry's requirements and targets concerning MDO and openly discuss industrial needs
- Keep research in MDO on the right track, innovative and serving the prospects of the real-world users
- Provide stimulus for future targeted research in the field and for collaboration among participants

Format of the 1st workshop:

- Day 1: MDO activities – overview and roadmaps
  - Introduction and MDO activities at DLR, IRT Saint Exupéry and ONERA
  - Invited presentations by industry
  - Keynote lecture
  - Panel discussion
- Day 2: Sessions addressing the following MDO topics
  - CAD and parameterization for MDO
  - Gradients in MDO
  - MDO methods and algorithms
  - Loads and structure sizing for MDO
  - Data management in MDO
  - Collaborative MDO; Architectures and IT aspects
  - Uncertainty in MDO

Please register for the workshop (free of charge) **until 31st of July** by sending an Email to mohammad.abu-zurayk@dlr.de

Organizers:

- **DLR:** Mohammad Abu-Zurayk, Stefan Görtz, Olaf Brodersen
- **IRT Saint Exupéry:** Anne Gazaix François Gallard
- **ONERA:** Christophe Blondeau, Gérald Carrier, Nathalie Bartoli