DLR

Lilienthalplatz 7
38108 Braunschweig
Germany

World Center of Education and Research for Trans-disciplinary Flow Dynamics
Tohoku University Global COE Program

DGLR

C²A²S²E
Center for Computer Applications in AeroSpace Science and Engineering

Workshop Scope:

The aim of the workshop is to discuss various cutting edge Multi-Disciplinary and Multi-Objective Design Optimisation techniques based on high-fidelity methods. At the workshop, the bottlenecks of the usage of MDO and the required research fields will be discussed to facilitate technology development in aerospace design problems among the participants from universities, research institutes and industries.

Workshop Topics:

- ✓ Multi-Disciplinary Design Optimisation
- ✓ Multi-Objective Design Optimisation
- ✓ Data Mining

Venue:

Deutsches Zentrum für Luft- und Raumfahrt (DLR)
Hermann-Blenk-Saal
Building 106, Ground Floor
Lilienthalplatz 7
38108 Braunschweig
http://www.dlr.de/en/desktopdefault.aspx/tabid-360/464_read-658/

Organization committee:

Daisuke Sasaki (Tohoku University)
Joël Brezillon (DLR)

The workshop is free of charge but a registration is mandatory:

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Agenda

09:00-09:10: Welcome to the workshop

Session I - Industry

09:10 **Airbus (France)**
Anne Gazaix
Multi-disciplinary optimisation in aircraft design processes

09:40 **Mitsubishi Aircraft Corporation (Japan)**
Keita Hatanaka
A fully automated CAD-based framework for MDO

10:10 **Honda Research Institute (Germany)**
Dr. Markus Olhofer, Bernhard Sendhoff
From robust design to evolvable systems engineering

10:40-11:00: (Coffee) Break

Session II - University

11:00 **Tohoku University - Institute of Fluid Science (Japan)**
Prof. Shigeru Obayashi, **Dr. Koji Shimoyama**
Data mining for performance map construction in multi-objective turbomachinery design

11:30 **University of Trier (Germany)**
Prof. Volker Schulz, Roland Stoffel
Aspects of aeroelastic shape optimization under uncertainties

12:00 **Tohoku University - Department of Aerospace Engineering (Japan)**
Dr. Daisuke Sasaki, Prof. Kazuhiro Nakahashi
Aerodynamic optimization of an over-the-wing-nacelle-mount configuration

12:30-13:30: Lunch

Session III – Research center

13:30 **DLR (Germany)**
Joël Brezillon, Arno Ronzheimer, Danil Haar
Development & application of multi-disciplinary design capabilities based on hifi methods

14:00 **ONERA (France)**
Gerald Carrier
Recent and ongoing aerodynamic and multi-disciplinary optimization activities at ONERA

14:30 **NLR (The Netherlands)**
Jos Vankan, Robert Maas, Martin Laban.
Optimisation at NLR: MDO, MOO, MLO

15:00-15:20: (Coffee) Break

Session IV – Research center

15:20 **CIRA (Italy)**
Dr. Domenico Quagliarella, Emiliano Iuliano
Wing design using multi-objective evolutionary optimization

15:50 **INRIA (France)**
Dr. Jean-Antoine Desideri
Split of territory for two-discipline optimization

16:20 **QinetiQ (United Kingdom)**
Steve Dean
Multidisciplinary design optimisation and application at QinetiQ

16:50: Final Discussion

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