Thursday, 19.09.2013

08:30 Registration, welcome coffee

09:00 Official launch of TCAD
- Introduction, targets
  Björn Nagel
  DLR

09:20 Aircraft Design Task
- Challenges for the next generation of transport aircraft
  Lars Jörgensen
  Airbus
- Reference configurations as basis for assessment
  Eike Stumpf
  RWTH Aachen
- A cost model for assessment of transport aircraft
  Dieter Scholz
  HAW Hamburg
- Novel aircraft concepts: The FANWING
  George Seyfang
  BAE Systems (ret.)

Discussion
- How to set up aircraft design studies which are of relevance for industry?
- Which are the relevant targets?
- How to assess the benefits of a novel design?
- Are there new aircraft concepts for new operational concepts?

11:00 Lunch

12:00 Collaborative MDO Methods
- Overall aircraft design optimization in industry:
  Christopher Jouannet
  SAAB
- Multidisciplinary optimization of aircraft configurations:
  Gerd Schuhmacher
  CASSIDIAN
- Novel MDO concepts
  Jos Vankan
  NLR
- Aircraft design in distributed MDO environments:
  Björn Nagel
  DLR
- Is collaboration the next big challenge?
  TBV
- High dimensional multidisciplinary optimization:
  Roberto d’Ippolito
  NOESIS Solutions
  challenges and current opportunities
  Towards coupling of different MDO systems
  Alexander Schneegans
  PACE GmbH

Discussion
- What is the state-of-the-art in Collaborative MDO which is applied in reality?
- What are remaining and new challenges?
- How to deal with rising non-technical challenges of collaborative MDO?

14:15 Coffee break
Aircraft Design Studies 1 – The BoxWing

Introduction to the Prandtl Plane and activities of Uni Pisa
Aldo Frediani
Uni. Pisa

Configuration studies using the Design Engineering Engine
Gianfranco La Rocca
TU Delft

Aerodynamic studies of box wing configurations
Arthur Rizzi
KTH Stockholm

Design aspects of passenger BoxWing aircraft
Dieter Scholz
HAW Hamburg

Discussion
- What do we actually know about the BoxWing?
- What are remaining research questions?
- How can new research projects complement the existing studies?

16:30 Coffee break

Aircraft Design Studies 2 – Towards High Fidelity in OAD

Multidisciplinary optimization of strut braced configuration using high fidelity tools
Gerald Carrier
ONERA

Towards HiFi Optimization of Truss-Braced Wing Configurations via CPACS
Ke-Shi Zang
NPU

Development of new aircraft design semi-empirical methodologies through CFD analysis
Fabrizio Nicolosi
Uni. Napoli

Aeroelastic design studies of strut braced configurations
Sergio Ricci
Poli. Milano

Systems models in aircraft design optimization
Ingo Staack
Linköping University

Discussion
- How much do we know about strut braced wings for transport aircraft?
- Which disciplines need to be considered on which level of fidelity?
- How can we move towards higher levels of fidelity?
- How can new research projects complement the existing studies?

19:30 Get together

Mingel (Light dinner)
Technical Committee on Aircraft Design

Friday, 20.09.2013

09:00  **Open Software Projects**

<table>
<thead>
<tr>
<th>Tool Description</th>
<th>Speaker</th>
<th>Affiliation</th>
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</thead>
<tbody>
<tr>
<td>CPACS data model and TIXI/TIGL libraries</td>
<td>Petter Krus</td>
<td>Linköping University</td>
</tr>
<tr>
<td>RCE open source framework tool</td>
<td>Daniel Böhnke</td>
<td>DLR</td>
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<tr>
<td>OpenCDT open source conceptual design tool</td>
<td>Doreen Seider</td>
<td>DLR</td>
</tr>
<tr>
<td>CEASIOM computerised environment for aircraft synthesis and integrated optimization methods</td>
<td>Arthur Rizzi</td>
<td>KTH Stockholm</td>
</tr>
<tr>
<td>NeoCASS conceptual aero structural sizing</td>
<td>Sergio Ricci</td>
<td>Poli. Milano</td>
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**Discussion**
- Which tools can be shared and do not need to be re-invented?
- Which functionalities are missing?
- How can we best create synergies between commercial and open tools?

11:00  Coffee break

11:30  **Towards the next European project on Overall Aircraft Design**

<table>
<thead>
<tr>
<th>Topic</th>
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</thead>
<tbody>
<tr>
<td>Which should be the topics of the next large European project on aircraft design considering the results of NACRE and other projects such as CleanSky?</td>
<td>Lars Jörgensen</td>
<td>Airbus</td>
</tr>
</tbody>
</table>

**Discussion**
- Way forward of the CEAS TCAD
- Agreeing the TCAD’s terms of reference
- Planning of the next meeting

12:30  **Terms of reference of the CEAS Technical Committee on Aircraft Design**

<table>
<thead>
<tr>
<th>Speaker</th>
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<tbody>
<tr>
<td>Thierry Lefebvre</td>
<td>ONERA</td>
</tr>
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</table>

**Discussion**
- Way forward of the CEAS TCAD
- Agreeing the TCAD’s terms of reference
- Planning of the next meeting

13:00  Lunch

14:00  **End of symposium**