

# The 2<sup>nd</sup> International conference on aircraft structural design special issue

## Editorial

This issue is a refereed compilation of selected papers presented at the 2<sup>nd</sup> International Conference on Aircraft Structural Design held at The Royal Aeronautical Society, London, UK on 26-28 of October 2010. The event addressed the challenges facing the designers of the next generation aircraft that can be complex and have to operate under strict environmental rules and life-cycle cost and efficiency pressures.

The conference attracted contributions that covered current research and thinking about the type of civil and military aircraft structures, including innovative forms, required to sustain a growing, but threatened, industrial sector in the light of a world much more closely focused on the threat of climate change than in the past. It covered the challenges that emerge from complete life-cycle consideration of an aircraft from initial concept to final disposal. In doing so, matters relating to design with manufacturing/cost constraints, high volume/low cost manufacture and easy re-use or disposal were pertinent.

In addition to examining structural concepts the conference addressed design methods and methodologies, together with computational methods to support the construction of these aircraft. Contributions covered a broad range of research topics that match the current and future needs of the industry. Complex designs of the type normally considered in the 'innovative design' category require interdisciplinary and dynamically interactive design methods as no single discipline can be taken in isolation. Today's design teams are multinational, being distributed across continents, or the globe, and the computational methods must be able to support distributed working. The control of such complexity was, therefore, a major issue that the conference managed to successfully address.

The event attracted many high quality papers and delegates from industry, research agencies and universities world wide, and successfully brought together researchers from a variety of backgrounds to explore and discuss common interests. It offered a full and varied programme of oral and poster presentations along with the opportunity to the delegates for invaluable networking and the chance to update and impart their knowledge and experience.

Plans are being made for the 3<sup>rd</sup> Design Conference to be held in The Netherlands at the Technical University of Delft in October 2012 (the request for written submissions can be found on the inside back cover of this publication) and we look forward to seeing you then. We hope you will enjoy reading these papers and we would like to take this opportunity to thank the authors who submitted them, and of course the referees who helped ensure that high standards were maintained. Last but not least we would like to acknowledge the International Organising Committee and the RAeS Conference and Events Department for the assistance and support throughout the meeting and ensuring the smooth running of the conference.

**The Guest Editors**

**Prof Alan Morris**

**Dr Malcolm Nash**

**Prof Jonathan Cooper**

**Prof Constantinos Soutis**