

Spring 2009 Flight Simulation Conference

# The Edge of the Envelope Technology Advances in Flight Simulation

Wednesday 3 - Thursday 4 June 2009

No.4 Hamilton Place, London W1J 7BQ



## CALL FOR PAPERS

## Synopsis

The growth of the aviation industry places increasing demands on safety throughout the operational envelope of aircraft. Flight simulation today is tasked with reproducing aircraft behaviour within the normal flight regime. However, aircrew preparedness also requires being ready to deal with uncommon situations. These can extend well beyond the reproduction of system failures. Recent experience has shown that aircraft themselves may encounter unusual attitudes, requiring pilots to recognise and correct the threat.

The task to provide training for these situations remains challenging - Acquiring data representative of abnormal flight envelopes, providing representative control forces, generating suitable visual information, and presenting appropriate motion cues are all part of the challenge. Training in conventional simulators, or through in-flight training provides alternatives. In military flight, familiarisation with the physiological effects of disorientation and high-g operations is critical to survivability, and industry has reacted here as well with innovative approaches.

Regulatory requirements continue to be reviewed to meet current and future training requirements. The latest revision of ICAO 9625, the Manual of Qualification for Flight Simulators, is built for the future, and it allows new approaches to be taken by industry in the design of flight simulators.

This two-day conference will bring together the users and developers of flight simulators that train both the conventional and extended envelope of flight vehicles, including fixed and rotary wing. The goal is to identify the training requirements, technical solutions, and the regulatory challenges.

## Instructions to Authors

Abstracts of 200 - 500 words typed and double spaced on A4 paper should be submitted **by Friday 5 September 2008**. Selection will be made on the abstract content and applicability to the final published programme requirement.

Accepted scripts and presentations, fully cleared for publication and presentation should be submitted **by Friday 24 April 2009**.

All written papers will be included in the CD Conference Proceedings and made available to delegates. Accepted papers may also be considered for inclusion in the Royal Aeronautical Society's Aeronautical Journal, subject to the refereeing process.

Topics at this conference:

- Unusual Attitude training – the civil airline perspective (courseware, simulator-based training, in-flight training)
- High-g training for military operations and physiological issues
- Disorientation training in fixed and rotary wing operations
- New technologies and processes needed to address these training needs for both civil and military, such as motion cueing systems, aircraft data acquisition and validation.
- Defining the regulations that should apply to simulation beyond the normally-accepted envelope.

This Call for Papers invites potential contributions to this Conference. The principal theme is the development of technologies related to simulation of the edges of the envelope, the factors driving these requirements, and the efforts to regulate the quality of these simulations. A number of international authorities will be invited directly to lead each session with keynote presentations.

## Key Dates & Deadlines

Abstracts submitted by	5 September 2008
Authors notified by	3 October 2008
Programme Circulation	November 2008
Full papers submitted	24 April 2009
Conference	3 – 4 June 2009

For more information visit

[www.aerosociety.com/conference](http://www.aerosociety.com/conference)

*It is important to note that Papers should not have been published previously and they should avoid marketing or sales content that is not appropriate.*

**Please send abstracts (quoting ref 597) to:**

Verna Tang

[verna.tang@raes.org.uk](mailto:verna.tang@raes.org.uk)

or

Conference & Events Department

[conference@raes.org.uk](mailto:conference@raes.org.uk)

## Organising Committee

This conference is being organised by the Royal Aeronautical Society's Flight Simulation Group. The Conference Committee responsible for planning the programme comprises:

- Dr Sunjoo Advani, MRAeS - Chairman
- Prof David Allerton, FRAeS
- Capt Hugh Dibley, FRAeS
- Stefan Sandberg, MRAeS
- Ian Strachan, FRAeS
- Gp Capt Gordon Woolley, FRAeS

## Take an active part in the aerospace community

The Royal Aeronautical Society's unique ability to stimulate discussion and exchange ideas is becoming ever more relevant with the need to harness the diverse nature of the industry into a cohesive entity.

### **Corporate Profiling Opportunities & Exhibition Space**

Exhibition space will be available for material related to the Conference. For further details on this and other promotional opportunities, such as sponsorship during the Conference, corporate insert in delegate pack and so forth, please contact the Conference Department at the address below.

### **Secretariat**

For more information please contact:

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