

Preliminary program of the International Conference on  
**Recent Advances in Aerospace Actuation Systems and Components**  
April 2-3, 2014, Hotel Mercure Compans-Cafarelli, Toulouse, France

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**Tuesday, 1 April 2014, Tutorial**

9 – 17:30, Tutorials on preliminary design of actuators, INSA Toulouse, special registration required

**Wednesday, 2 April 2014 - Talks**

7.30 – 9 am, Registration

9 – 9.15 am, Welcome and opening address

J-C. MARE, Chair of the conference, INSA Toulouse, *France*

9.15 – 10.45, Session 1, Applications: helicopters and engines

**High Bandwidth Electromechanical Actuator for Swashplateless Blade Control System**

M. GIANFRANCESCHI, UTAS, *Italy*

G. JACAZIO, Politecnico di Torino, *Italy*

J. WANG, Agusta Westland, *Italy*

**Helicopter EMA System: Electrical Drive Optimisation and Test**

M. ROTTACH, Liebherr-Aerospace-Lindenberg GmbH, *Germany*

C. GERADA, P. WHEELER, University of Nottingham, *United Kingdom*

**Electromechanical Actuators for Aero-engines to Control IGVs**

A. ISTURIZ, A. MUGARRA, J. VINALS, Sener, *Spain*

10.45 - 11.15 Coffee break

11.15 – 12.45, Session 2, Applications: Landing gears

**Airbus - Health Monitoring for the Flight Control EMAs: 2014 Status and Perspectives**

M. TODESCHI, L. BAXERRES, Airbus Operations SAS, *France*

**Electrical Actuators for Aircraft Landing Gear and Nose Wheel Steering**

M. BENAROUS, United Technologies Actuation Systems, *United Kingdom*

**Electric Brake**

P. CHICO, Safran Messier-Bugatti-Dowty, *France*

12.45 – 2 pm, Lunch

2 pm – 3.30 pm, Session 3, System level

**More Electrical Aircraft Control**

M. FERVEL, L. ANDRIEU, M. TODESCHI, J. ROIZES, Airbus Operations SAS, *France*

**Innovative Flight Control Systems Electronic Architectures for a More Electrical Aircraft**

J-C. DERRIEN, J-C. MINICHETTI, E. BRIDOT, M. WENDLING, Safran Sagem Défense et Sécurité, *France*

**Moog Next Generation Control and Actuation**

E. GILSON, Moog Inc., *France*

J. D. KOPP, D. MANZANARES, Moog Inc., *United States of America*

3.30 - 4 pm, Coffee break

4 – 5.30 pm, Session 4

**Deterministic High-Bandwidth Networks: Models of Computation and System Integration Capabilities for Actuator/sensor Networks**

M. JAKOVLJEVIC, J. GATARD, TTTech, *Austria*

**Analysis of Minimum Delta Pressure Specifications Between Actuators and Hydraulic Power Generation and their Effect on Overall System Sizing**

C. DUNKER, F. THIELECKE, Hamburg University of Technology, *Germany*

T. HOMANN, Airbus Operations GmbH, *Germany*

**Towards Electrical Actuator Standardisation**

L. BRAULT, S. GRAND, S. SANDLER, UTC Goodrich France, *France*

7.30 pm, Conference banquet at Salle des Colonnes, Hotel-Dieu, Toulouse

**Thursday, 3 April 2014 - Talks**

8.30 – 10.30 am, Session 5, Health Monitoring

**Model-based Fault Diagnosis of a Flight-Critical Actuator**

A. BOBRINSKOY, Thalès Systèmes Aéroportés, *France*

F. CAZAURANG, Université de Bordeaux, *France*

B. BLUTEAU, Estia-Recherche, *France*

M.GATTI, O. GUERINEAU, Thalès Systèmes Aéroportés, *France*

**Multi-phase High Reliability PM Brushless DC Motors for Aircraft Applications**

M. VILLANI, M. TURSINI, G. FABRI, University Of L'Aquila, *Italy*

**The Internet of Things and the Future of Condition Monitoring: Mechatronic Technology Development for Aerospace and Industry Bearing Solutions**

Y. HEBRARD, SKF Aerospace, *France*  
D. HOWIESON, SKF SPPD, *United Kingdom*

**Actuator for Electrical Green Taxiing System (oral only)**

J-P. GARCIA, Safran Messier-Bugatti-Dowty, *France*

10.30 - 11.00 Coffee break

11.00 – 12.30, Session 6, Jamming and damping in EMAs

**A Built-in Testable Jam Release Device for Electromechanical Actuators in Flight Control Application**

M. BILDSTEIN, Liebherr-Aerospace Lindenberg GmbH, *Germany*

**Active Damping, Inertial Electro-Mechanical Ballscrew Actuator**

N. MATTEUZZI, N. NARDESCHI, S. TORO, Umbra Cuscinetti SpA, *Italy*

A. COLOGNI, M. MADASCHI, F. PREVIDI, Università degli Studi di Bergamo, *Italy*

S. SAVARESI, Politecnico di Milano, *Italy*

**Electromechanical Actuator with Anti-Jamming System for Safety critical aircraft applications**

A. JIMENEZ, E. NOVILLO, F. AGUADO, E. MORANTE, CESA, *Spain*

12.30 – 2 pm, Lunch

2 pm – 3.30 pm, Session 7, Model-based Design

**A Methodology for Rapid Modelling and Sizing: Design Parameter Studies of High Lift Actuation Systems**

S. BENISCHKE, F. THIELECKE, Hamburg University of Technology, *Germany*

**Scaling-law-based Metamodels for the Sizing of Actuation Systems**

M. BUDINGER, I. HAZYUK, F. SANCHEZ, J-C. MARE, Insa Toulouse, *France*

**Virtual Performance Evaluation for Electro-mechanical Actuators considering Parameter Uncertainties (to be confirmed)**

T. KREITZ, D. ARRIOLA, F. THIELECKE, Hamburg University of Technology, *Germany*

3.30 - 4 pm, Coffee break

4 – 5.30 pm, Session 8

**Benefits of Multiphysics Models Integration Through Cosimulation. Case Study: Heat Monitoring on a Primary Flight Control EMA**

O. PASIES-RUBERT, C. MUR, M. GAREY, M. BAREILLE, Altran Sud-Ouest, *France*

**Hydraulic System Noise Attenuators for Aircraft Application: Study of a “Disc-Silencer” Design**

A. WAITSCHAT, F. THIELECKE, Hamburg University of Technology, *Germany*

C. NISTERS, P. KLOFT, Hydac Technology GmbH, *Germany*

R. M. BEHR, U. HEISE, AIRBUS Operations GmbH, *Germany*

**Two Phase Cooling System for Aircraft Actuators**

M. LECLEIR, L. BARREMAECKER, Euro Heat Pipes SA, *Belgium*

Friday, 4 April 2014, Tutorial

9 – 17:30, Tutorials on virtual prototyping of actuators, INSA Toulouse, special registration required

Poster sessions during coffee breaks (with full paper included in the proceedings)

**Thermal Management Materials to Improve the Performance of Electric Devices for Aerospace Applications**

D. E., BARBER, Open Technology Innovation - Lord Corporation, *United States of America*

**Pre-sizing of Permanent Magnet Synchronous Machine Under Mass Constraints**

P. ESTIVAL, C. MARCHAND, G. KREBS, Laboratoire de Génie Electrique de Paris, *France*

R. SEHAB, B. BARBEDETTE, Estaca, *France*

**Fault Tolerant Electromechanical Flap Actuation System**

M. TURSINI, M. VILLANI, G. FABRI, University Of L'Aquila, *Italy*