

Preliminary program of the 9th International Conference on
Recent Advances in Aerospace Actuation Systems and Components
November 18-20, 2020, Hotel Mercure Compans-Cafarelli, Toulouse, France

Established from the list of submissions accepted for oral presentation and inclusion of full paper in the printed and electronic proceedings

A three-dimensional contact model for sphere/grooves interactions in a ball screw system

A. C. BERTOLINO, G. JACAZIO, S. MAURO, M. SORLI, Politecnico of Turin, *Italia*

Top-down development of real-time models for simulation of electromechanical actuators

J-C. MARE, S. AKITANI, Institut Clément Ader - INSA, *France*

A. C. BERTOLINO, G. JACAZIO, Politecnico of Turin, *Italia*

New concept of electromechanical actuation system for flight control application

J. K. MIYAZONO, Y. NISHIYAMA, Kawasaki Heavy Industries Ltd, *Japan*

Friction estimation for force control and gust load alleviation of electrically actuated flight surfaces

C. SCHALLERT, C. SCHWARTZ, German Aerospace Center (DLR), *Germany*

Outlooks for development of actuators of aircraft flight control systems

E. EROFEEV, L. KHALETSKY, Central Aerohydrodynamic Institute (TsAGI), *Russia*

A. ALEKSEENKOV, Moscow Aviation Institute (MAI), *Russia*

P. REDKO, Voskhod Plant, *Russia*

V. KUZNETSOV, Saint Petersburg Electrotechnical University, *Russia*

E. SUVIROVA, S. KONSTANTINOV, Sukhoi Company, *Russia*

PHM for Electro-Mechanical Flight control systems in the context of Integrated Vehicle Health Management

A. DE MARTIN, G. JACAZIO, M. SORLI, Politecnico of Turin, *Italy*

S. MARTORANA, Leonardo S.p.A., *Italy*

Failsafe innovative electromechanical actuator with advanced electric motor control technique against single point of failure

E. OTAOLA, I. IGLESIAS, Tecnalia Research & Innovation, *Spain*

G. DI DOMENICO, M. D'ANDREA, Umbra Group S.p.A., *Italy*

The EMA fault early detection system algorithms research

A. SKRYABIN, A. STEBLINKIN, Central Aerohydrodynamic Institute (TsAGI), *Russia*

G. VERESNIKOV, Institute of Control Science of Russian Academy of Science (ICS RAS), *Russia*

Magneto-rheological shock absorber testing on FTI aircraft platform

M. OCANA, E. NOVILLO, Compañía Española de Sistemas Aeronauticos (CESA S.A.U.), *Spain*

An attempt at EHA-pump: Design and Testing of a rectangular piston pump

J. ZHAO, Y. FU, J. FU, Beihang University, *China*

Aircraft braking dynamics and brake system modeling for fault detection and isolation

L. CARDOSO NAVARRO, L. GARCIA GARCIA, L. GOES, Instituto Tecnológico de Aeronáutica (DTCA), *Brasil*

Development of an nose landing gear electro-hydraulic steering, extension and retraction system

M. DUVAL, R. KLEINHANS, T. LAMMERING, Liebherr-Aerospace Lindenberg GmbH, *Germany*

Performance Improvements of a high power EHA for thrust vector controls

S. ZHAO, K. CHEN, P. ZHANG, H. LIU, Y. ZHAO, China Academy of Launch Vehicle Technology, *China*

Research of dynamic characteristics of the aircraft electro-backup hydraulic actuator with combined speed control

E. EROFEEV, V. KUVSHINOV, L. KHALETSKY, Central Aerohydrodynamic Institute (TsAGI), *Russia*

A. ALEKSEENKOV, Moscow Aviation Institute (MAI), *Russia*

On the use of harmonic drives for fault tolerant electromechanical actuators for unmanned aerial vehicles

M. ISMAIL, R. KOWALSKI, German Aerospace Center (DLR), *Germany*

S. RIVERA, Harmonic Drive AG, *Germany*

S. WIEDEMANN, MACCON, *Germany*

Primary Flight controls architect for elevator with innovative configuration

A. JIMENEZ OLAZABAL, Airbus, *Spain*

Modular approach for thermal management of aircraft actuators

F. DE GIORGI, L. YAPI, Collins Aerospace, *France*

M. BUDINGER, I. HAZYUK, Institut Clément Ader - INSA, *France*

Preliminary system safety assessment of electromechanical actuation architectures for unmanned aerial vehicles

C. BOSCH, M. HAJEK, Institute of Helicopter Technology, *Germany*

M. ISMAIL, German Aerospace Center (DLR), *Germany*

Hydraulic pressure spikes in aerospace landing gear actuation systems

M. BESLIU, Safran Landing Systems Canada Inc., *Canada*

Study of rotary EM actuation (REMA) for Fly-By-Wire primary flight control applications

E. ZATLOFF, Curtiss-Wright Actuation Group, *USA*

Design of reconfigurable control laws for a fault-tolerant electro-mechanical actuator with differential ball screws

G. DI RITO, Università di Pisa, *Italy*

B. LUCIANO, AESIS srl (AESIS), *Italy*

N. BORGARELLI, M. NARDESCHI, Umbra Cuscinetti SpA (UCS), *Italy*

Electromechanical actuator for nacelle cowl opening systems

R. MACIAS, J. FERNANDEZ, E. NOVILLO, Compañía Española de Sistemas Aeronáuticos, S.A.U., *Spain*

Design of flight control actuators for reusable launch vehicles

J. WINDELBERG, O. MAIER, Institute of Flight Systems (DLR), *Germany*

Model-based design of flight control actuators – A step toward digital continuity

C. COIC, Modelon, *Germany*

ATR research and perspectives for aircraft power systems

O. PASIES-RUBERT, V. DE LABORDERIE, GIE ATR, *France*

Adaptive control strategy of a digital hydraulic actuator (DHA) subject to failure for aircraft control surfaces

R. LOPES Jr, L. A. DE CARVALHO, H. KAGUEIAMA, A. GAMA, R. FERNANDES, V. DE NEGRI, Universidade Federal de Santa Catarina (UFSC), *Brazil*

A. DELL'AMICO, Saab AB, *Sweden*

A. KRUS, Linköping university (LIU), *Sweden*

EMA steering maturity demonstration

N. NGUYEN, O. COLLET, Safran Landing Systems, *France*

Towards decentralized and multifunctional electro-hydraulic power generation systems for more electric aircraft

P. BISCHOF, N. TROCHELMANN, L. NORDMANN, F. THIELECKE, Hamburg University of Technology, Institute of Aircraft Systems Eng., *Germany*

Application of fault tolerant architecture on electro-mechanical landing gear actuator

L. PIZZONI, N. BORGARELLI, M. D'ANDREA, L. CIANCALEONI, Umbra Group, *Italia*

Recent advances in EMA design for primary flight control actuators

J. SOCHELEAU, Collins Aerospace, *France*

Advancement in simulation of a distributed high speed electromechanical actuation system

A. MOMOTIUK, D. ROBERTS, Eaton Corporation, *USA*

An approach to a digital hydraulic load-sensing actuator for aerospace applications

A. DELL'AMICO, Saab AB, *Sweden*

P. KRUS, Linköping University, *Sweden*

V. DE NEGRI, Federal University of Santa Catarina (UFSC), *Brazil*

Using MBSE philosophy and tools for architectural trade study of more electric thrust reverser actuation concepts

K. SHAHROUDI, W. B STONE, Airframe Systems, Woodward Inc., *USA*

Big Data opportunities for actuation

F. SALAS, M. SAVY, M. TODESCHI, Airbus Operations SAS, *France*

Agenda of presentations

Tuesday 28 April 2020	8.30 -17.30 (13 presentations)
Wednesday 29 April 2020	8.00 - 17.30 (14 presentations)
Thursday 30 April 2020	8.00 - 12.00 (7 presentations)

Registration

Tuesday 28 April	7h30 - 8.30
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Banquet

Wednesday 29 April	19.30 - 23.00
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