2018-12-11 **MEA 2019**

PRELIMINARY PROGRAM

Wednesday, Feb. 6

9.00	**Opening, keynote 1, plenary session 1**		
1.1	Electric Propulsion Units : design aspects & performance levels	F. Anton, J. Zoll, M. Christmann	Siemens
1.2	Hybrid propulsion system based on superconducting electrical machines	Konstantyn Kovalev and Nicolay Ivanov	MAI - Moscow Aviation Inst.
10.40	**Coffee break & industrial exhibition opening**		
11.00	**Keynote 2, plenary session 2**		
2.1	Exploring the Design Space for a Hybrid-Electric Regional Aircraft with Multidisciplinary Design Optimisation Methods	J. Thauvin, X. Roboam, M. Budinger, B. Sareni and G. Barraud	Airbus, Toulouse University
2.2	An overview of activities for the design and assessment of regional and short range aircraft with hybrid electric propulsion	M. Strack, M. Iwanizki, M. Plohr, T. Hecken, M. J. Arzberger,	DLR
2.3	Studies towards a civil transport aircraft based on Hybrid Electric Distributed Propulsion	Peter Schmollgruber	ONERA
12.40	**Lunch at industrial exhibition**		
14.00	**Plenary session 3**		
3.1	Research and Perspectives for More Electrical Aircraft	X. Lamoussiere, F. Salas, M. Todeschi	Airbus
3.2	Hybrid ECS for Turboprop Aircraft	P. Borrelli, A. Romano	Leonardo
3.3	Innovative Electrical Wing Ice Protection System: key enabler towards 'More Electrical Aircraft'	K. Benmachou, N. Van Hille	Liebherr, Sonaca
3.4	Electrical Flight Control for Load Control and Alleviation System	G. Jacazio , F.Gallorini, M.Palmieri, G.Pispola, G.Pozzuto	Turin U., Viola Consulting, Umbra, Leonardo
15.40	**Coffee break and poster session 1 (program below)**		
16.50	**Plenary session 4**		
4.1	Preliminary approach on hybrid aircraft certification	Richard Ambroise	Airbus
4.2	Evaluating the impact of fleet switching to hybrid-electric aircraft on airport infrastructures	L. Trainelli, C. Riboldi, A. Rolando, F.Salucci	Politecnico di Milano
17.40	**Adjourn - Bus departing for gala dinner 18:00**		

PRELIMINARY PROGRAM

Poster session 1

1.01	Distributed Electric Propulsion, a technology requiring Multi-Disciplinary Aircraft Design	E. Nguyen Van, C. Döll, P. Pastor, D. Alazard	Toulouse U., ONERA
1.02	Systems Design and Mission Optimization of a More-Electric Regional Aircraft in Pacelab	S.S. Manikar, A. Ramanan, M.Tobar Meneses, J.Jezegou	Toulouse U.
1.03	Hybrid propulsion system for commuter airliners	A.Varyukhin, P.Suntsov, M.Gordin, V. Zakharchenko, D.Rakhmankulov	CIAM
1.04	Preliminary Sensitivity Study of Battery Technology Evolution over CO2 Emissions for HEA	V.Palladino, A. Jordan and A.Tripoli	ATR
1.05	Recent developments in electric aircraft conceptual design	L.Trainelli, C.Riboldi and A.Rolando	Polimi
1.06	MAHEPA – A Milestone-Setting Project in Hybrid-Electric Aircraft Technology Development	L.Trainelli, I. Perkon	Polimi, Pipistrel
1.07	The eOpter, a practical tail-sitter concept for passenger eVTOL applications	Arnaud Didey	Neoptera
1.08	Linear Electrical Landing Gear Retraction System for Medium Rotorcraft	M. Amokrane, S.Robert, T.Sebag, M. Denavaux, J.B. Antoine	Airbus
1.09	Fully HTS six-phase direct drive turbo generator	R.Ilyasov, K. Kovalev, D. Dezhin	MAI
1.10	12-phases magneto-electric direct drive turbo generator	R. Ilyasov, D.Dezhin, K.Kovalev, D.Shishov, D.Shevtsov,B.Zechikhin	MAI
1.11	Dual Active Bridge DC/DC Converter for Aircraft Application	P.Méline, A. Mahé, A.M'Sir, J.Devautour and S. Gugen	Thales
1.12	Energy Storage: Lithium-Ion battery for aircraft applications	Marc Pontrucher and Laurent Garnier	Thales CEA
1.13	New standard of aircraft voltages : HVDC	Christian Donadille	Airbus
1.14	Current measurements on insulating materials used in aeronautic HVDC cables	N.Diaw Elhadji, S.Le Roy, G.Teyssedre Gilbert and E.Aubert	Toulouse U. Safran
1.15	HVDC Intelligent Power Switches for aircraft power distribution	J. Domingo Salvany, P.Decroux, S. Frisella C.Degoutte, L. Liggio	Nexter, DTSMNS
1.16	Addressing space charge issues in aeronautical DC cables.	A.Benyoucef, E.Aubert L.Berquez,G.Teyssedre	IRT St. Exupéry, Safran,Toulouse U
1.17	Characterization of HVDC contactors in depressurized environment	R. Landfried, M.Boukhlifa, P.Teste and T.Klonowski	CentraleSupelec, Safran
1.18	Spatial extension of electric arcs in aeronautical pressure conditions	R.Landfried, P.Teste M.Boukhlifa, J. Andrea	CentraleSupelec Esterline
1.19	Solutions for Open and Modular HIL Test Systems	Andreas Himmler	dSPACE
1.20	Hardware real time solver for high power electric aircraft	J.Pulice, N. Favarcq, F.Colas, O. Gomozov	Spherea, Lille U.

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PRELIMINARY PROGRAM

Thursday, Feb. 7

9.00	**Keynote 3, plenary session 5**		
5.1	Evolution of electrical generators in Aerospace industry	Joel Devautour	Thales
5.2	Enhanced onboard energy management concepts for future aircraft platforms	S. Bozhko, A. Cavallo, F. Cuomo, B. Guida, S. Riverso	Nottingham U., Campania U., Leonardo, Aeromechs, United Tech.
5.3	Hybrid turboshaft engine for helicopter eco-mode operation	Philippe Lagarde, Fabien Orlandini	Safran
10.40	**Coffee break & poster session 2 (program below)**		
11.50	**Plenary session 6**		
6.1	Electric Power System Design for Aircraft Propulsive Power Applications	Peter Malkin	Newcastle University
6.2	SiC and GaN in modern power converters: from characterization to applications in More Electrical Aircraft	Bernardo Cougo	IRT St. Exupéry
12.40	**Lunch at industrial exhibition**		
14.00	**Plenary session 7**		
7.1	Supercapacitors and Power Hybridization in Space Applications	G. Beulaguet, B. Samaniego, L. Gajewski, B.Faure	Airbus
7.2	Emission free electric flight with hydrogen fuel cells propulsion systems	Josef Kallo	DLR
15.15	**Coffee break at industrial exhibition**		
15.35	**Keynote 4 and plenary session 8**		
8.1	Anvil: A project for the competitiveness of the electrical engineering sector applied to transportations	L. Ybanez, R. Sutra-Orus and T. Lebey	IRT St. Exupéry, Toulouse U.
8.2	Future of Electrical Aircraft – Is there a dichotomy in Technology Development?	K.B Akhilesh, C.V Sindhuja, B. Siddappaji	Indian Institute of Science
16.50	**Closing - Adjourn 17.00**		

PRELIMINARY PROGRAM

Poster session 2

2.01	Feature Modelling as a New Architectural Approach for the Accelerated Integration and Early-Stage Development of Hybrid-Electric Propulsion, MEA and MEE Architectures	Michal Sztykiel, Patrick Norman, Stuart Galloway,Graeme Burt	Strathclyde U.
2.02	The idea of power circulation between engine shafts for the MEE	H.Balaghi Enalou, Serhiy Bozhko	Nottingham U.
2.03	Design of Electric Machine Taking Into Account the Partial Discharges Phenomena for Future Hybrid Propelled Aircrafts	P. Collin, S.Touhami, D.Malec, Y.Lefevre, J.F. Llibre	Toulouse U.
2.04	Phase-lag compensation for standstill and low speed sensorless control for brushless synchronous starter generator in the context of the More Electric Aircraft	Andreea-Livia Beciu and Amira Maalouf	Thales
2.05	Flight Control Strategies for More Electric Aircraft	M.A. Hernandez Lopezomoza, S.Aoues, M. Benlahrache	Altran
2.06	Closed-Loop Position Control of a Deformable A320 Flap Actuated by Shape Memory Alloys	Isabel Gortazar, Gurvan Jodin, Clement Nadal	Toulouse U.
2.07	Electromechanical Resonant Ice protection Systems: Analysis of Fractures initiation and propagation Mechanisms	P. Rouset, Valérie Pommier-Budinger, Marc Budinger	Toulouse U.
2.08	Spoiler and Flap Rotary EM Actuation (REMA) Implementation on a Recently Certified Business Jet	Errol Zatloff	Curtiss-Wright
2.09	Sizing of Aerospace Electric Drive Systems and their Associated Challenges	Patrick Xie, Gaurang Vakil, Chris Gerada	Nottingham U.
2.10	Mutualization of electrical power for green taxiing operation and main landing gear extraction/retraction	Serge Roques and Francois Guillot	Safran
2.11	Towards a more efficient cooling of electrical components – The Pulsating Heat Pipes for Hybrid Propulsion systems project (P(HP)2)	César Becerril, John Thome and Franco Provenziani	Altran, JJcooling, Provides
2.12	Effects of More Electric Systems on Fuel Tank Thermal Behaviour	A.Stevan J. van Heerden, D.M.Judt, C.P.Lawson, D. Bosak, P. Walsh	Cranfield U., Meggitt
2.13	Differential mode input filter design for three-phase inverters used in aircraft applications	Hans Hoffmann, Bernardo Cougo and Jean Pierre Carayon	IRT St. Exupéry
2.14	Modeling a complex harness for technology optimization for an helicopter application	C. Jullien, J.J. Vonfelt, J. Genoulaz, A. Dieudonne,G. Crousier	Safran
2.15	Impact of power semiconductors reliability on the architecture of aircraft power supply system	N. Selvesuyk, A.Chekin, V.Verzun M. Kiselev	Gosnias
2.16	Evaluation of the intrinsic fault tolerance of an EMA landing gear based on a five-phase SM-PMSM	A. Sierra-Gonzalez, E. Ibarra, I. Kortabarria, J. Andreu, J.Lasa	Tecnalia, UPV
2.17	An innovative short-circuit tolerant machine for an aeronautical electromechanical actuator	Alexandre Giraud, Ioav Ramos and Bertrand Nogarède	Novatem
2.18	Deep Sub-Micron Failure Rate Modeling Technique for CFR and EOL Prediction of 45 nm, 28 nm and 20 nm technologies based on M-STORM methodology multi-stress experiments	Alain Bensoussan, Joseph Bernstein, Fabio Coccetti and Mark Musil	IRT St. Exupéry, Ariel U.
2.19	Deterministic networks and network-level system health monitoring for integrated vehicle health management	Mirko Jakovljevic and Jacques Gatard	TTTech