12th EASN International Conference on
Innovation in Aviation & Space for opening New Horizons

Preliminary Programme in detail

DAY 1 | 18.10.2022

Time (CET)		Room:		Auditori
8:30	17:30			Registration
9:00	9:15	Welcome Lecture	Chaired by Prof. A. Brahmayer EASN Chairman; Prof. P. Sofiadis EASN Honorary Chairman; Dr. J. Pons-Prats EASN VICE Manager	Welcome by the Rector of the Universitat Politècnica de Catalunya, Prof. Daniel Crespo Artiaga Welcome & Introduction by the Conference Chairmen
9:15	9:45	Keynote Lecture		"Catalonia is going into orbit with the NewSpace Strategy" Keynote speech by **Mr. Daniel Marco Parraga** | Director General of Innovation and Digital Economy, **Government of Catalonia**
9:45	10:15	Keynote Lecture		"From inception to implementation of EU Research, Innovation and Deployment with CINEA" Keynote speech by **Mr. Pablo Perez-Illana** | Deputy Head of Unit, Horizon Europe Transport, **"Climate, Infrastructure and Environment Executive Agency" (CINEA), European Commission**
10:15	10:45	Coffee Break		

Rooms		Auditori	Sala d'Actes	VS208	VS217	VS218	VS219	VS216	VS201
Session Title		Hybrid Electric aircraft roadmap *joint session of FutPrint50, IMOTHEP and EASIER*	ecoDESIGN and Sustainable Productivity: Part I	Urban Air Mobility (UAM) Workshop I: Scaled Demonstrators	Air Traffic Management (ATM) and Airports: Part I	2nd DOMMINIO Workshop	Aerodynamic Analysis & Design: Part I	Aerostructures: Part I	ALTERNATE project session
Session Chair		Dr. Ricardo Reis (EMBRAER, Portugal) & Prof. Timoleon Kipouros (University of Cranfield, UK)	Dipl.-Ing. Torsten Moll (Fraunhofer-Gesellschaft, Germany)	Dr.-Ing. Christian Eschmann (DLR, Germany)	Prof. Octavian Thor Pleter (University Politehnica of Bucharest, Romania)	Dr. Ricardo Lasada Mateo (AIMEN, Spain)	Prof. Jerzy Zoltak (ILOT, Poland)	Prof. Konstantinos Tserpes (University of Patras, Greece)	Dr. Gustavo Alonso (Polytechnic University of Madrid, Spain) & Dr. Jordi Pons Prats (Universitat Politècnica de Catalunya, Spain)
10:45	11:05	Introduction and Brief overview of Clean Aviation *Jean-Francois Brouckaert*	ecoDESIGN and Sustainable Productivity *Torsten Moll, Rainer Schweppe*	Open Discussion	Flight Trajectory Efficiency Analysis Using Bruchtäschchones *Cristian Emil Constantinescu, Octavian Thor Pleter*	Introduction & DOMMINIO Overview *Ricardo Lasada Mateo (AIMEN, Spain)*	Implementation of CFD as an Educational Practice for Post-Graduate Engineering Programmes with special focus on High-Speed Intake Aerodynamics and Flow Distortion *Aistha L Philippou, Pavlos K Zachos*	From Machine Tool 4.0 to Machine Tool 5.0: Review on Digital and Intelligent Manufacturing in Aeronautics *Dimitis Moutsis, John Angelopoulos, Nikos Panopoulos*	Policies and regulations to promote the use of Sustainable Aviation Fuels (SAFs) *Gustavo Alonso, Arturo Benito, Ana Nieto*
11:05	11:25	IMOTHEP European project: toward a roadmap for the development of hybrid electric propulsion *Philippe Nowell, Sébastien Defoort, Nicolas Tantot, Dirk Zimmer, Dario Varchetta, Christophe Viguier, Pia Iodice*	ecoDESIGN in Next Generation Aircraft Fuselage *Marta Salaera Canal, Torsten Moll, Laura Castro Lopez, Rolf Hermann, Piet-Christof, Wilcken, Carl-Christoph Hühne, Peter Brantsch*		Machine Learning Supporting Enhanced Optimized Spacing Delivery between Consecutive Departing Aircraft *Luca De Pehlis, Ivan De Visscher, Guillaume Shempfer, Arnaud Jacques, Massimiliano Saldi, Catherine Chaian Morgan*	Continuous fiber thermoplastic materials for 3D printing *Radolphe Henri (Suprem SA)*	Helicopter main rotor CFD analysis for different flight conditions using parametric blade model as an application for multidisciplinary optimisation *Jakub Kocjan, Stanisław Kachel, Robert Rogalski*	Optimal design of damping composite lamination *Soheil Bozorgzadeh, Marco Morandini, Gian Luca Ghiringhelli*	RSB's approach on SAF: Towards certification on Horizon projects *Blanca de Ulibarri*
11:25	11:45	Development of the Initial Certification and Technology Roadmap for the FUTPRINT50 framework *Nicolas Moebs, Ricardo Reis, Evert Windels, Timoleon Kipouros, Michelle Wastin, Andreas Strohmayer*	Stiffened thermoplastic aircraft structures by integral stiffening concepts and continuous ultrasonic welding *Senne Sterk, Jan Holm, Bram Jongbloed, Irene Fernandez Villegas*		SEESAW Concept: Data-driven Approach for Safety and Resilience Integration in Air Traffic Management *Bojana Mirkovic, Dorotheja Timotic, Fedja Nehjasov, Dusan Cinagorac, Christian Eduardo Verdonk Gallego, Chen Xia*	The silent revolution of composites additive manufacturing via compact AFP and CFRP 3D printing systems *Pravin Luthada (ADDcomposites)*	Parametric investigation of the aerodynamic and acoustic performance of a low-boom supersonic airliner *Chris Blanks, Pavlos Papadopoulos, Kyros Yakinthos*	A robust tool for preliminary design of open and filled holes in composites using the coupled criterion *R. Hamze, TV. Biro, B. Gely*	Uncertainty in life cycle greenhouse gas emissions of sustainable aviation fuels - *Ganca Sebar, Nesa Bacabac, Hugo Valin, Robert Malina*
11:45	12:05	A roadmap for engineering development practices for the electrification of aircraft *Ola Isaksson, Christoffer Levandowski, Timos Kipouros, Massimo Panarotto*	Energy Consumption of Autoclave Curing using Semi-empirical Thermodynamics Based Model *Chizoba Josphine Ogugua, M.D. Lamrabet, J. Sinke, C.A. Dransfeld*		Simple airports are not that simple when it comes to airside capacity analysis *Bojana Mirkovic*	Process and performance evaluation of Automated Fiber Placement (AFP) for CF/UA-T-PEEK composite *Francisco Ansedes, Noelia González-Castro, Ivette Cafo, Adrián Rodríguez, Ricardo Lasada, Elena Rodríguez-Senín*	Designing aerodynamic devices for UAV - lessons learned *Mieloszyk J., Tarnowski A., Goetzendorf-Grabowski T.*	Lightweight aircraft structures welded by Refill Friction Stir Spot Welding with integral corrosion protection. *Ilya Ostrovsky, Bjoern Sievers, Dr. Jorge F. dos Santos, Dr. Uwe Schuster, Dr. Koen Faes, Jens Candeweirth, Dr. Landry Giraud*	SAF developments in Europe in the context of global discussions - Speaker: *César Velarde*
12:05	12:25	Cross-sectional Battery projects under CINEA: mapping the synergy *Pablo Perez-Illana*	Development of a framework to support the preliminary design of eco-efficient aircraft structural components *Natália Cristina Gomes de Paula, Christos Kassapoglou, Roeland De Breuker*		The concentration values of PM2.5 and PM10 in selected places of the airport, propagation and amount of NOx and CO emitted during take-off and landing cycle of airplanes *Paweł Głowacki, Piotr Kalina, Damian Maciorowski*	Improving thermal management of FFF nozzle for aerospace applications *Claudia Sakran, Mustafa Megahed, Thomas Joffre, Wolfgang Ohlow, Antoine Runacher, Stephane Pellerteau*	Aerodynamic modeling of a VTOL tilt-wing transition corridor *Robert Kulhánek, Petr Vrchota, Pavel Hospodář*	Fatigue performance evaluation of a LP87 Ti-6Al-4V bracket for aerospace application: an experimental study *Alok Gupta, Chris Bennett, Wei Sun*	Impact of Sustainable Aviation Fuel composition on fuel system and emissions *Jean Baptiste May-Carle, Ismael Ortiga*
12:25	12:45		Replacement of Hexavalent Chromium on LCA Study *Ali Bathwan*		CO2 and non-CO2 balanced Environmental Scores Module for flight performance evaluation and optimisation *Jan Middel, Kinanthi Sutopo, Bart Hwebsen, René Verbeek, Nick van den Dungen, Raul Sáez, Xavier Prats, Angelo Riccio*	Development and characterization of magnetic nanoparticle reinforced filament for additive manufacturing applications *Christos Tsioglannis, N. Lara, S. Anagnou, D. Semitekolos, P. Maroulas, K. Zafeiris, C. A. Charitidis*			
12:45	13:05	Open Discussion Moderators: Ricardo Reis & Timoleon Kipouros	Enhanced ecological analysis of aircraft using a combined approach of life cycle assessment and discrete-event simulation *Kai Wicke, Antonia Rohr*			Open Discussion			
12:25	13:25	Lunch Break							

Rooms		Auditori	Sala d'Actes	VS208	VS217	VS218	VS219	VS216	VS201
Session Title		Hybrid-electric flight: Part I	ecoDESIGN and Sustainable Productivity: Part II	Urban Air Mobility (UAM) Workshop II: Future Energy Sources for Aviation	Air Traffic Management (ATM) and Airports: Part II	MRO & Recycling Activities on Aeronautics' Composites Parts	Aerodynamic Analysis & Design Part II	Aerostructures Part II	Optimizing Design for Inspection
Session Chair		Prof. Andreas Strohmayer (University of Stuttgart, Germany)	Dipl.-Ing. Torsten Moll (Fraunhofer-Gesellschaft, Germany)	Mr. Marcello Kivel Mazuy (CIRA, Italy)	Prof. Octavian Thor Pleter (University Politehnica of Bucharest, Romania)	Prof. Costas Charitidis (National Technical University of Athens, Greece)	Prof. Jerzy Zoltak (ILOT, Poland)	Prof. Konstantinos Tserpes (University of Patras, Greece)	Prof. E. Jasiuniene (Kaunas University of Technology, Lithuania) & Prof. R. Pullin (Cardiff University, UK)
13:30	13:50	Influence of Distributed Propulsion on the Sizing of the Vertical Stabilizer and Rudder in Preliminary Aircraft Design *Alexander Albrecht, Andreas Bender, Andreas Strohmayer*	A national engine model approach to address Aircraft Engine Life Cycle Assessment *Kilian Hicke, Maud Lemagnen, Torsten Moll*	Open Discussion	Innovative integration of severe weather forecasts into an extended arrival manager *L Nosteen, M. Temme, O. Gluchshenko, K. Multi, A. Temme, M. Kerschbaum, A. Parodi, V. Mazzarella, M. Milelli, M. Lagasio, L. Poletti, E. Rivolini, L. Eisbi, M. C. Liaast, T. Rigo, S. Federico*	Identification and critical assessment of circular ecosystems for aerospace composite components based on a novel Re-strategy *Philipp Johst, Paul Schulz, Alexander Knorr, Robert Kupfer, Robert Böhm*	Multidisciplinary design of aircraft wing for multiregime purposes *Pavel Hospodar, Armand Dribek*	Development and design of tiltrotor nacelle's (NGCTR) *Magdalena Granowska, Marek Tabor, Jacek Dudzik, Michał Furdyna*	Health monitoring of the shaft bearings in a micro turbojet based on vibration analysis *Radosław Przysowa, Paweł Majewski*
13:50	14:10	Assessment of (hybrid)-electric drive-train architectures for future aircraft applications *Paul König, Philipp Müller, Klaus Hüschler*	Life Cycle Impact Assessment of Engine Blisk-Manufacturing *Kilian Hicke, Thomas Bergs, Philipp Gansel, Sascha Gierlings*		Enabling UAS BVLOS flights in CTR *Adam Kleczatsky, Jakub Kráso, Saska Hulinska*	ECO-CLIP: From CF/ LMPAEK factory waste to recycled material for aerospace structural parts manufacturing *Rocío Pena, Elena Rodríguez-Senín, Celia Martín-Pérez, Daniel Rodríguez-Del Rosario, Noelia González-Castro*	Kriging-based framework applied to a multi-point, multi-objective engine air-intake duct aerodynamic optimization problem *Przemysław Drezek*	Made i interlaminar properties of carbon-glass fiber/epoxy interply hybrid composites *Cansu Karataş, Demircan, Demirkan Çiçker*	Evaluation of quality of adhesive joints using non-destructive testing techniques and image fusion *Gawher Ahmad Bhat, Bengisu Yilmaz, Damira Sinagubova, Vaidotas Ciceras, Egidijus Žukauskas, Elena Jasiuniene*
14:10	14:30	Modelling of a battery supported fuel cell electric powertrain topology for a regional aircraft *Jonas Ludowicz, Victor Bahns, Antje Link, Stefan Kazula*	CFRP Recycling Demonstrators for Engine Applications *Ronny Hanich-Spahn*		QAR Data-driven assessment of fuel efficiency in Continuous Descent Operations and evaluation of performance metrics *María del Pozo Domínguez, Javier López Leonés*	Potential of polymer recycling in aeronautics. ECOCLIP project *Celia Martín Rocío Pena, Santiago G. Cuenca, Raquel Trovisco, Elena Rodríguez*	Experimental studies of airliner aerodynamic characteristics at overcritical angles of attack *Andrzej Krzyslak, Aleksander Olejnik, Robert Placek, Łukasz Kiszkowiak*	Bird strike simulation on a bonded Ti/CFRP leading edge of an engine fan blade and numerical implementation of damage detection using FBGs *Konstantinos Tserpes, Kosmas Papadopoulos, Ioannis Floros*	Mode-I Fracture Toughness Evaluation of a 20-ply Composite Panel *Ömer Necati CORA, Muhammad Latif Bekci, Marwan Naaman, Rhys Pullin, Matthew Pearson*
14:30	14:50	A rule-based energy management strategy for hybrid-powered eVTOL *Taher Marzougui*	Performances of composites made from different recycled carbon fibres semi-products *Alexandre Faure, Olivier Mantaux, Arnaud Gillet*		Curved final approach segment in precision approach based on GLS and its impact on flight efficiency *Aleksandra Pasich, Andrzej Majka*	Investigation of induction healing capacity of nanocomposite materials for on-demand debonding/re-bonding applications *Konstantinos Zafeiris, C. Tsioglannis, T. Kosanovic, S. Anagnou, C.A. Charitidis*	Optimization-oriented modeling of low Reynolds number propeller aeroacoustics *Witold Kilmczyk, Adam Sieradzki*	Use of friction Stir Welding on Main Landing Gear Bay instead of riveted junction *Damien Desgoches*	Piezoresistive sensors of carbon nanotube fibres for structural health monitoring of next generation composite airframe parts *Anastasia Mikhaichuk, Mihaela Zarzosa, Celia Martín-Pérez, Pablo Romero Rodríguez, Meir Nefetz, Carlos González, Juan J. Vilatela*
14:50	15:10	AI approaches for Battery Management of Future Electric Propulsion System *Tahmineh Raoofi, Melih Yildiz, Suleyman Tolun*	Simplification of requalification procedure of outdated carbon/epoxy prepregs and scenarios of reuse *Constance Amané, Olivier Mantaux, Arnaud Gillet, Mathieu Pedros*		Analysis of the impact of GNSS disruptions on aircraft operations *Antonia Ivan, Alexandru Pandele, Bianca Ionescu, Teodor Lucian Grigorie*	Research on ThermoPlastic Composite (TPC) repairs. RETPAIR Project *Noelia González-Castro, Francisco Ansedes, Ivette Cafo, Adrián Rodríguez, Ricardo Lasada, Elena Rodríguez-Senín*	Preliminary Design of Next Generation Mach 1.6 Supersonic Business Jets to Investigate Landing & Take-Off (LTO) Noise and Emissions *Christos Mouroudis*	High dielectric breakdown strength of nano- and micrometer-thick magnetron sputtered AlN films probed by conductive atomic force microscopy *Z.R. Kudrynskyi, D.P. Cooper, M.D. Wadge, J. Kerfoot, V.V. Korolkov, D.M. Grant*	Transmission information system for taxiing on the aprons and taxiways using RFID technology *D. Kordas, T. Rogalski, R. Siwa, P. Grzybowski*
15:30	15:50		Implementation of a holistic MCDM approach to assess and compare novel aircraft fuel technologies towards sustainable aviation *Dionysios Markatos, Spiros Pantelakis*		A new empirical analysis of airport capacity evaluation: insights regarding air traffic design hours *Alvaro Rodríguez Sanz, Luis Rubio Andrada*			Effects of Sweep on the Flutter of Wraparound Fins *Harun Levent Şahin, Elif Damla Vedat Ziya Doğan, Yavuz Yaman*	Deep feature extraction from optical AE signals at loading of fiber reinforced composites *Tomasz Kek*
15:10	15:40	Coffee Break							

Rooms		Auditori	Sala d'Actes	VS208	VS217	VS218	VS219	VS216	VS201
Session Title		Hybrid-electric flight: Part II	ecoDESIGN and Sustainable Productivity: Part III	Urban Air Mobility (UAM) Workshop III: Circular Aviation System	Design and Manufacture of Smart Materials, Structures & Systems for Energy Harvesting EU FAST-SMART Project session	Nanomaterial-based Devices for Green and Efficient Aviation and Space Applications	Aircraft Testing	Aerostructures Part III	UHURA project session
Session Chair		Prof. Andreas Strohmayer (University of Stuttgart, Germany)	Dipl.-Ing. Torsten Moll (Fraunhofer-Gesellschaft, Germany)	Mrs. Ligeia Palotti (NLR, The Netherlands)	Prof. Ti Qin (University of Strathclyde, UK) & Dr. Sergio Durante (D45 Group, Spain)	Prof. Patrizia Lamberti & Dr. Monica La Mura (University of Salerno, Italy)	Prof. Ivo Jebacek (BRNO University of Technology, Czech Republic)	Prof. Konstantinos Tserpes (University of Patras, Greece)	Mr. Hans Maseland (NLR, Netherlands)
15:40	16:00	Application of Model-Based Systems Engineering for the Integration of Electric Engines in Electrified Aircraft *Abhishek Kian Matayoppan Kamalanathan, Bahareh Zaghari, Timoleon Kipouros, Ricardo Jose Nunes Dos Reis*	Aircraft Recycling and Circular Economy *Thomas Reichert*		EU FAST-SMART project - Objectives and Approaches for the development of sustainable smart materials, structures and systems for energy harvesting *M. Rostagno, A. Malagnino, Yi Qin*	Impact of design parameters uncertainty on the performance of graphene-based ambipolar electronics *Monica La Mura, P. Lamberti, V. Tucci.*	An aerioelastic study of a solar-powered airplane at high altitudes *Pamela Bugala*	A second-generation finite element method for the analysis of multifunctional composite structures *Enrico Zappino, Erasmo Carrera, Matteo Filippi, Alfonso Pagani, Marco Petrolo*	The UHURA project at a glance – motivation and objectives *Apurva Hazabiya, Jochen Wild, Henning.Strüber, Frédéric Moëns, Bart van Raoijen, Hans Maseland*
16:00	16:20	Towards Zero Net Emissions: Evaluation of Electrified Aircraft Performance Using CHARM - Cranfield Hybrid electric Aircraft Research Model *Evangelia Pantika, Hossein Balaghi Enalou, Tianshi Zhou, Bahareh Zaghari, Timos Kipouros, Panagiotis Laskaridis*	Circularity studies on high performance thermoplastic demonstrators for the aircraft industry – End-of-Life concepts for PEEK/carbon fibre composites *S. Coakun, L. A. S. A. Prado, T. S. G. Das, A. Köthe, S. Sherk, J. Holm*		Development, optimisation and testing of a hybrid solar panel concept with energy harvesting enhancement *Amrutha Pattath Saseendran, Christoph Hartt*	Transistors and sensors with transition metal dichalcogenides *Antonio Di Bartolomeo*	Preliminary feasibility analysis for a "Class I" loitering munition UAV *Eleftherios Karatzas, Vasilis Kostopoulos, Voios Lappas*	Abstract of Determination and Validation of Low Velocity Impact Behavior of GLARE for Different Energy Levels and Specimen Thicknesses *Eren Çalış, Mustafa Yurdakul*	Krueger Design and Motion Requirements *Henning.Strüber, Jochen Wild, Antoon Vervliet, Frédéric Moëns*
16:20	16:40	Assessing improvements to enable the feasibility of using fuel cell in a small aircraft *Ana Lúcia de Almeida Castro, Carlos Henrique Ballarin Mourão, Pedro Teixeira Lacava*	Sustainable scrapping method of thermoplastic composite materials *Rocío Ruiz Gallardo, Alejandro Sandá, Jan Holm, Senne Sherk, Thomas Reichert*		Design, manufacturing, assembly and setup of energy harvesters powered hybrid powertrain for energy, automotive and aerospace application *Sergio Durante, Veronika Stafoukieva, Luca Merlino*	Electromagnetic Shielding with Graphene Nanoplatelets Coatings for Aeronautical Applications *Antonio Maffucci, M. D. Migliore, V. Moffola, D. Pinchera, F. Schettino, S. Stalla, F. Bertocchi, E. Di Pisi, B. Pistoria, V. Romeo, M.Zippa, D. Caniero, A. Forgione, L. Pace, M. Sansiveiro, F. Savoia*	Sizing Approach with Flight Time Comparison of An Electric Multirotor Propulsion Chain with Batteries and Fuel Cells *Saad Chabba, Rabia Sehab, Ahmad Akrad, Guillaume Krebs, Cristina Morel*	Effect of Temperature on Low Velocity Impact Behavior of GLARE Material *Burhan Celikayna, Ibrahim Catal*	CFD Methods for Unsteady High-Lift Simulation *Frederic Moens, Stefan Wallin, Hans Maseland*
16:40	17:00	Functional and Safety Challenges of Hydrogen Fuel Cell Systems for Application in Electrified Regional Aircraft *Stefan Kazula, Martin Staggat, Stefanie de Graaf*	New EoL routes of Al-Li aircraft integral LBW and FSW welded panels including new Cr-free coatings *Ana Isabel Fernández-Calvo, Clara Delgado, Philippe Dufour, Egoitz Aldanondo and Belén García*		Pilot-scale mechano-chemical synthesis of new thermoelectric Materials *Alvise Bianchin, Paolo Mattazzi*	Robust design of graphene-enhanced absorbing metasurfaces for THz applications *M. La Mura, P. Lamberti, V. Tucci, P. Kuthir, et al.*	Determination of the Parachute Harness Critical Load based on Load Distribution into Individual Straps with Respect of the Skydiver's Body Position *Robert Grim, M. Horak, I. Jebacek, R. Popela*	Repairable Aircraft Structures - Multiscale Modelling of Intrinsic Self-Healing Phenomenon in FRP Composites *I. Smajver, D. Brizarić, D. Ivančević*	Validation Experiments *Geoffrey Tangey, Bart van Raoijen, Andreas Schröder, Jochen Wild*
17:00	17:20		Best EOL TEchniques for Biocomposited (ELIOT project) *Nora Lastiko Mizzan, Spela Ferjan, Lucie Pirin, and Rajesh Mehta*		New Air Systems for MEA *Frederic Sanchez, Jean Bonhara*	Ibd *L. Guadagno, P. Lamberti et al*		Towards numerical simulation of fatigue damage detection in CFRP laminates by modeling of stochastic vibration response *Niki Tsivoraki, Konstantinos Tserpes, Spiros Pasios*	CFD method validation & Lessons Learnt *Hans Maseland, G. Andreutti, A. Prachar, H. Strüber*
17:20	17:40		Chemical Recycling of Carbon Fiber Reinforced Polyurethane for Aviation Applications *Ronny Hanich-Spahn, Peter Brantsch, Carl-Christoph Hühne*			2D Materials for Space Applications at Microwave Frequencies *Sandra Castanza, Francesca Vennesi*		Synthesis and characterization of bulk mechanical properties of a bio-based resin filled by graphene and cellulose nanofibers *Konstantina Tserpes, S. Lagkousi, E. Tsouranta*	
17:30	19:00	13th EASN General Assembly							

End of the 1st Day

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Innovation in Aviation & Space for opening New Horizons

Preliminary Programme in detail

DAY 2 | 19.10.2022

Time (CET)		Room:		Auditori
8:30	17:00			Registration
9:00	9:30	Keynote Lecture	Chaired by Prof. S. Pantelakis EASN Honorary Chairman	"Disruptive technologies: the path to take European aviation to climate neutrality" Keynote speech by **Mr. Axel Krein** | Executive Director, **Clean Aviation Joint Undertaking**
9:30	10:00	Keynote Lecture		"Quò vàdis Aeronautics?" Keynote speech by **Prof. Dr. Dieter Schmitt** | Independent consultant for aeronautics, Chairman, **Stakeholders Advisory Board, EASN** *Keynote co-authors: Dr. Dietrich Knoerzer | former Senior Officer in the Aviation Unit of DG Research & Innovation, European Commission & Prof. Spiros Pantelakis | EASN Honorary Chairman*
10:00	10:30	Coffee Break		

Rooms		Auditori	Sala d'Actes	VS208	VS217	VS218	VS219	VS216	VS201
Session Title		Clean Sky 2 Special Session on Thematic Topics: Part I	FUTPRINT50 project session: Part I	U-space, digital services for urban air mobility	Way of future orbital and planetary robotics	Small Air Transport (SAT) Technologies	ecoDESIGN and Sustainable Productivity: Part IV	Meteorology and Environment in ATM	AICHAIN project session
Session Chair		Dr. Jean-François Brouckaert (Clean Aviation Joint Undertaking)	Prof. Andreas Strohmayer (University of Stuttgart, Germany)	Dr. Cristina Barrado (Universitat Politècnica de Catalunya, Spain)	Mrs. Wiebke Brinkmann (DFKI GmbH, Germany)	Dr. Vittorio Di Vito (CIRA, Italy)	Dipl.-Ing. Torsten Moll (Fraunhofer-Gesellschaft, Germany)	Prof. Manuel Soler (Universidad Carlos III, Spain)	Mr. Javier Busto (SITA FOR AIRCRAFT, Spain).
10:30	10:50	LEARNNOX: The Lean Azimuthal Flame - a novel low-NOx, low-soot, fuel-flexible combustor concept *E. Mastorakos, P. M. de Oliveira, I. El Helou, L. Miniero, K. Pandey, N. Noiray, G. de Falco, M. Sirignano, A. D'Anna, D. Fredrich, A. Giusti*	Experimental Investigation of the Energy-Harvesting Performance of an Existing Aircraft Propeller *R. Nederlof, D. Ragni & T. Sinnige*	On-board performance monitoring and alerting mechanism & navigation specifications for drone flight operations *Pablo Haro*	PERASPERA, Future Space Ecosystem Roadmap, current developments and EOF *Javier Rodríguez Gonzalez*	Hybrid Navigation System Prototype for Small Aircraft Transportation Vehicles *Tomasz Voispacher, Radek Baranek, Pavel Mrázínek, Martej Kucera*	GENESIS: Aircraft design, technology foresight analyses and life cycle inventory building for regional class hybrid aircraft systems *Alexis Laurent, Nils Thonemann, Karen Saavedra Rubio*	Data-driven uncertainty quantification and propagation for probabilistic trajectory planning *Andrés Muñoz Hernández, Manuel Soler, Joaquín Ezquerra, Jordi Pons, Xavier Prats, Emre Koyuncu, Daniel Delahaye, Raimund Zopp, Alex Kuenz, Manuel Soler*	The AICHAIN solution: Improving air traffic management through machine learning collaboration on private data sets *Javier Busto, Sergio Ruiz*
10:50	11:10	CHAIRLIFT: Compact Helical Arranged combustOrs with lean LIFted flames *A. Andreini, L. Langone, R. Koch, S. Hoffmann, S. Harth, M. Shanma, M. G. De Giorgi, S. Bonuso*	An optimal battery sizing algorithm for future aircraft systems studies *Boris Berseneff, Lionel De Pazzi*	BUBBLES: A new Concept of Operations for Separation Management in the U-space *Cecilia Claramunt Puchol, Juan Vicente Balbastre Tejedor, Norberto Vera Vélez, Joan A. Vila Carbó*	Development of a visual-servoing control system for SIROM *Montserrat Díaz-Carrasco, Daniel Bilbao, Una Ferrer, Marta Centeno, Gonzalo Guerra, Javier Viñals*	In flight testing of the Flight Reconfiguration System advisory function within the COAST project *Piotr Grzybowski, Tomasz Rogalski*	Building life cycle inventory datasets for a hybrid-electric regional aircraft system in the project GENESIS *Nils Thonemann, Karen Saavedra Rubio, Alexis Laurent*	ATM network modelling, uncertainty propagation with thunderstorm disruptions *Emre Koyuncu, Muhammet Aksoy, Andrés Muñoz, Jordi Pons, Daniel Delahaye, Raimund Zopp, Alex Kuenz, Manuel Soler*	The AICHAIN solution proof-of-concept prototype and demo showcases *Salman Toor, Fredrik Wrede, Andre Rungger*
11:10	11:30	DENOX: Adjustment of numerical and physical experiments for the high activity zone of electrochemical combustion *Dmytro Dolmatov, Andrii Kukurudza, Sergiy Epifanov, Sergii Nahnyk*	Development and Analyses of a Thermal Management System (TMS) for a Hybrid-Electric Aircraft - FUTPRINT 50 *Felipe Reyes Barbosa, Ricardo Gandolfi, Walter Alfonso Jr., Ricardo Jose Nunes dos Reis, Michelle Fernandino Westin, Carlos Roberto Ilário da Silva, Higor Fattini Teza, Timoleon Kipouros, Panagiotis Laskaridis, Hossein Balaghi Enalou, Maria Coutinho, David Bento, Alain Souza*	Road to integrated ATMA *Iberto Iovino*	Ontology-Driven Robot Design for Future Orbital and Planetary Robotics with iorcut *Mehmed Yüksel, Thomas M. Roehr*	Enhancement of the Advanced Weather Awareness System for the development of an Integrated Mission Management System in the COAST project *Alessandro Lucia Zaita, Myriam Montesarchio, Michele Ferrucci, Edoardo Bucchignani, Davide Cinquegrano*	Design Exploration for Sustainable and Innovative Regional Aircraft *Valerio Marciello, Mario Di Stasio, Manuela Ruocco, Fabrizio Nicolosi*	Network-wide robust and resilient metaheuristic trajectory optimization under thunderstorm disruptions *Julien Levandier, Daniel Delahaye, Daniel González-Arribas, Javier García, Manuel Soler, Emre Koyuncu Aksoy, Andrés Muñoz, Jordi Pons, Xavier Prats, Daniel Delahaye, Raimund Zopp, Alex Kuenz*	The AICHAIN research use cases in the ATM domain (for demand and capacity balancing) *Sergio Ruiz, Ignacio Martín, Andre Rungger*
11:30	11:50	RAPTOR: Research of aviation PM technologies, modelling and regulation *Ayce Celikel*	Investigation of the operational flexibility of a regional hybrid-electric aircraft *Andrea Spinelli, Gustavo Pedro Krupa, Timoleon Kipouros, Boris Berseneff, Anh-Linh Bui Van, Ricardo Jose Nunes Dos Reis, Felipe Reyes Barbosa, Michelle Fernandino Westin, Ricardo Gandolfi*	Space for UAM: use of space data and technologies for drone operations *Patrick Le Blaye, Bertrand Lasserre, David Porchet, Patrick Lesueur, Marc Lemirin, Ian Kelly*	Outcomes of the PERIOD project on In-Space Manufacturing, Assembly and Refuelling Technologies *Stéphane Estable, M. Jankovic, W. Brinkmann, J. Gancet, A.M. Barrio, A. Bull, P. Lefler, F.J. Colmenero, A. Ampe, B. Grabowdzki, A. Chamas, G. Ariden, R. Caujolle, D. Silveira, I. Soto, M. Shilton, T. Vogel, S. Bartsch, M. Manz, I. Ahrns*	Evolution of the Tactical Separation System to support the Integrated Mission Management System in the COAST project *Vittorio Di Vito, Giulia Torrano, Giovanni Ciarcaluto, Michele Ferrucci*	Battery and fuel cell system design for future hybrid-electric aircrafts *Bruno Lemoine, Priscilla Caliandro, Thomas Wannemacher, Nils Baumann, Alexis guigemde, Zhangqi Wang, Erdem Akay and Sergio Turteltaub*	Simulation Exercises for robust Flight dispatching solution under thunderstorm disruptions *Alex Kuenz, Franz Knabe, Yanik Alex, Emre Koyuncu, Muhammet Aksoy, Andrés Muñoz, Manuel Polaina, Alejandro Gómez, Jordi Pons, Xavier Prats, Julien Levandier, Daniel Delahaye, Raimund Zopp, Alejandro Frías, Javier García, Manuel Soler*	The AICHAIN approach to enable governance and incentives policies in the machine learning collaboration *Ignacio Martín, Sergio Ruiz*
11:50	12:10	UNIFER19: Nonlinear dynamic inversion flight control design for distributed electric propulsion aircraft *Johannes Soikkeli, David Erlan*	Design and Off-design Performance Analysis of Thermal Management System (TMS) for a Parallel Hybrid Electric Regional Aircraft *Hossein Balaghi Enalou, Jacob simon, Timoleon Kipouros, Panagiotis Laskaridis*	A Drone Operation Plan model to support the effect of uncertainty in advance U-Space Capacity Planning Processes *Hugo Eduardo Tavarista, Jan Kleikemper, Ian Crook, Yannick Sepray, Michael Bidderfield, Pablo Sanchez Escalonilla*	Ground Interaction Models for Increased Autonomy of Planetary Exploration Systems *Alexander Deftmann, Malte Langosz, Jonas Eisenmenger, Marc Otto, Sebastian Kasperski, Malte Wirkus, Wiebke Brinkmann*	Technologies for Reusable Small Launchers Mr. Christophe Bonnal (CNES, France) & Prof. Alain Merlen (Lille University) PANGEA Aerospace technologies, developments, market analysis *Xavier Liaire, (PANGEA)*	Power electronics, electric drives and on-ground energy supply design in hybrid-electric aircraft systems *Markus Meinel*	Artificial Intelligence and Weather Forecasting *Aniel Jardines, Iván Martínez, Javier García, Manuel Soler*	AICHAIN conclusions and directions *Sergio Ruiz, Javier Busto*
12:10	12:30	CATANA: an open test case for future composite fans - final studies before experiment *Anne-Lise Piquet, Alexandra Schneider, Xavier Ottavy and Christoph Brandstetter*		A Comparative Study Between Different Parameter Tuning Strategies for PID Attitude Controller of Drones *M. Muhsin Cosdu, Burak Han Demirbilek, Mehmet Baskin*		Overview of the Small launchers business *Christophe Bonnal, (EUCASS & Air & Space Academy)*		Robust Climate Optimal Aircraft Trajectory Planning within Structured Airspace *Abolfazl Simorgh, Manuel Soler*	
12:30	12:50					Open Discussion		Complexity Assessment of Adopting Climate Optimal Aircraft Trajectories at Network Scale *Fateme Banesh, Manuel Soler*	
12:30	13:30	Lunch Break							

Time (CET)		Room:		Auditori
13:45	14:15	Keynote Lecture	Chaired by Prof. A. Brahmayer EASN Chairman	"Space Debris in a nut shell - Long Term Sustainability of Space Operations" Keynote speech by **Mr. Christophe Bonnal** | Senior expert, **CNES Directorate of Strategy** & Chairman of the Technical Committee, **EUCASS Board**
14:15	14:45	Keynote Lecture		"Surviving on Mars" Keynote speech by **Dr.-Ing. Gisela Detrell** | Research Team Leader, **Institute of Space Systems, University of Stuttgart**

Rooms		Auditori	Sala d'Actes	VS208	VS217	VS218	VS219	VS216	VS201