7th EASN International Conference on Innovation in European Aeronautics Research

Final Agenda

Day 3
Thursday, September 28th, 2017

Time		Room	
8:30	18:30		Registration
8:30	9:00	Room AULA	"Aviation 5.0 – Challenges and Solutions for 2050" Key-Note Speech by **Prof Dr.-Ing. Mirko Hornung** | Bauhaus Luftfahrt e.V.
9:00	9:30	Room AULA	"Connected, Networked Aircraft and The Future of On-Demand Air Mobility" Key-Note Speech by **Dr Bruce Holmes** | Vice President and Executive Director of the Skytelligence Group, SmartSky Networks
9:30	10:00		Coffee Break

Room		ALPHA	FOXTROT	BRAVO	IKAR	AULA	CHARLIE	DELTA
Session		12.2	1.3	4.1	11.2	9.1	10.3	2.5
Session Title		Clean Sky Session	NDT of Composites	Design Challenges for Future Aero-Engines	Optimisation, Control and Robust Design in Aerodynamics	Electric Propulsion for Commercial Aircraft – Challeges & Oportunities	Space Robotics	Aircraft Components & Systems
Session Chair(s)		Mr Giuseppe Pagnano Clean Sky Joint Undertaking	Prof Elena Jasiuniene Kaunas University of Technology	Prof Witold Wisniowski & Dr Pawel Stezycki Institute of Aviation	Prof Tomasz Goetzendorf-Grabowski Warsaw University of Technology	Prof Mike Benzakein The Ohio State University	Dr Karol Seweryn Space Research Centre PAS	Dr Mariusz Krawczyk Institute of Aviation
10:00	10:20	How to exploit the Synergies with European Investment Funds in the aeronautics sector *Christos Vasilakos, Bruno Mastantuono*	NDE of composites in case of hybrid metal/composite joints [188] *Elena Jasiuniene, Liudas Mazeika, Vykintas Samaitis, Vaidotas Cicenas, David Mattsson*	Turboprop Centrifugal Compressor System Design Challenges [98] *Konrad Socha, Jan Feliks Sikorski, Wojciech Antoni Macias*	Aerodynamic and Flight Dynamic Interaction of a military trainer in spin [249] *Zdobyslaw Jan Goraj, Ewa Cichocka, Marcin Figat*	Turboelectric distributed propulsion systems for future commercial aircraft [143] *Borys Lukasik*	Concept down-selection of an innovative launch system for small satellites [21] *Diego Giuseppe Romano, Philippe Choy, Julie Gauvrit-Ledogar, Eduard Diez*	Less-skilled pilot decision support [27] *Jozsef ROHACS, István Jankovics, Daniel Rohacs*
10:20	10:40	People, Planet, Profit: The Clean Sky 2 PPP *Ron Van Manen*	Quantifying the Influence of Lightning Strike Shock Wave Pressure Loading on Composite Material Damage [341] *Peter Foster*	Investigation of secondary flow details in low pressure turbine [64] *Paweł Jonak, Bartosz Gorecki, Tomasz Borzecki, Slawomir Kubacki*	Light aircraft aerodynamic design methodology in examples [287] *Krzysztof Kubrynski*	World record electric aircraft motor and analytical calculations of its copper power losses [197] *Robert Goraj*	Target Leaded Obstacle Avoidance Method Based on a Genetic Algorithm for Mobile Robot [183] *Konrad Krzysztof Kwaśniewski, Zdzisław Gosiewski*	Distributed measurement system based on CAN data bus [50] *Piotr Grzybowski, Maciej Klimczuk, Pawel Rzucidlo*
10:40	11:00	Clean Sky 1 success stories [325] *Giuseppe Pagnano*	A new experimental approach to studying fracture processes in fiber reinforced polymer (FRP) materials under external loading [300] *Vadim Levin, Yulia Petronyuk, Egor Morokov, Tatiana Ryzhova, Alexander Shanygin*	Experience with the Design of Ultralight Airplane with Unconventional Powerplant [78] *Robert Theiner, Jiri Brabec*	The application of the Inverse Robust Design technique to the RAE 2622 airfoil [290] *Krzysztof Marchlewski, Łukasz Łaniewski-Wołłk*	The Path to Electrical Propulsion for Commercial Aircraft [258] *Mike Benzakein*	Satellite angular motion classification for active on-orbit debris removal using robots [154] *Karol Seweryn, Jerzy Sasiadek*	Battery Management System Architectures for Use in Aviation [54] *Melih Yildiz, Hikmet Tahir Karakoc*
11:00	11:20	Clean Sky 1 to Clean Sky 2 Technology evolution [326] *Giuseppe Pagnano, Ron Van Manen*		Cooled Turbine Shroud assembly for small turboprop engines [87] *Krzysztof Klimek, Michał Nowak, Piotr Markiewicz, Tomasz Bulsiewicz, Grzegorz Kaczmarek, Rafał Kowalewski*	Aerodynamic design of main rotor blades for ilx-27 light helicopter with elements of optimisation [299] *Wieńczysław Stalewski, Wiesław Zalewski*	11:00 - 11:20 Thermoelectric Generators for Aerospace Applications: Development Experience and Future Challenges [133] *Ludek Janak, Zdenek Ancik, Zdenek Hadas* 11:20 - 11:40 Real world fuel consumption of a piston-prop aircraft [124] *Teresa Donateo*	Gripper technology for on-orbit rigid capture of non-cooperative object *Mateusz Wolski*	Entropy of preference as an effective way of assessing the influence of human factors on the security of the dynamic active system [128] *Krzysztof Stanisław Szafran*
Session		7.2	6.1	4.1	11.2	9.2	10.3	2.5
Session Title		New Solutions and Technology Challenges in SAT	Fatigue of Aeronautical Materials & Structures	Design Challenges for Future Aero-Engines	Optimisation, Control and Robust Design in Aerodynamics	Hubrid - Electric Propulsion Technology	Space Robotics	Aircraft Components & Systems
Session Chair(s)		Dr Krzysztof Piwek Institute of Aviation	Prof Mario Guagliano Politecnico di Milano	Prof Witold Wisniowski & Dr. Pawel Stezycki Institute of Aviation	Prof Tomasz Goetzendorf-Grabowski Warsaw University of Technology	Prof Andreas Strohmayer University of Stuttgart	Dr Karol Seweryn Space Research Centre PAS	Dr Mariusz Krawczyk Institute of Aviation
11:20	11:40	What is the right level of innovation for SAT? [344] *Michel Claude Goulain*	Static and fatigue behaviour of Composite L-beams [44] *Demirkan Coker, Burcu Tasdemir*	Sustainability Performance Measurement for a Turboshaft Engine Based On Exergy [208] *Onder Turan, Hakan Aydın*	The effects of implementing a spiked nose attachment in shockwave reduction around a body [264] *Laurent Dala*	Cycle Analysis and Preliminary Design of Novel Aero-Engines [29] *Dimitrios Chatzianagnostou, Stephan Staudacher*	Laboratory models of drilling modules for future space exploration [163] *Adam Jan Zwierzyński, Wojciech Teper, Andrzej Gonet, Mirosław Rzyczniak, Stanisław Bednarz, Albert Złotkowski, Tomasz Buratowski, Tadeusz Uhl, Karol Seweryn, Paweł Paśko, Błażej Żyliński*	Immersive environments in assistance of collaborative human-oriented product/process design in aeronautic industry [219] *Anna Karvouniari, Kosmas Alexopoulos, Dimitris Mavrikios*
11:40	12:00	Small Aircraft Transport forecast models [226] *Daniel Rohacs*	Gas Turbine Blade Failure Behavior During High Cycle Regime [297] *Tomasz Didenko*	Flow structure ananlysis in the gas turbine shroud gap [113] *Filip Wasilczuk, Paweł Flaszyński, Piotr Doerffer*	Aerodynamic characteristics of ultralight airplane for modelling aircraft control system for taxiing phase [319] *Robert Placek, Paweł Ruchała*	Hybrid-Electric Flight – what are we waiting for? [112] *Jonas Lay*	High Accuracy and repeatability of the mirror positioning and precision of speed control of driving system of Pointing Unit of Space Hiperspectral Spectrometer DESIS [270] *Roman Wawrzaszek, Mirosław Rataj, David Krutz, Ingo Walter*	Developing the pilots' load measuring system [227] *Istvan Jankovics, Mehmet Burhan Tekbas, Utku Kale*
12:00	12:20	Integrated Transportation System Model for SAT System [204] *Andrzej Iwaniuk*	Fatigue behavior of freestanding Inconel fabricated by cold spray deposition [310] *Mario Guagliano, Sara Bagheirfard Bagheirfard, Maria Vittoria Zuccoli, Jan Kondas*	Conceptual design study of a geared turbofan and an open rotor aeroengine with intecooled recuperated core [165] *Christina Salpingidou, Dimitrios Misirlis, Zinon Vlahostergios, Michael Flouros, Kyros Yakinthos*	Structural dynamic model with control system kinematics of a light surveillance aircraft for numerical flutter calculations [330] *Aleksander Olejnik, Robert Rogolski, Lukasz Kiszkowiak*	Conceptual Study of a Mechanically Integrated Parallel-Hybrid Electric Turbofan [123] *Arne Seitz, Markus Nickl, Anne Stroh, Patrick Vratny*		Innovative aviation technologies and the role of safety systems in sustaining airworthiness [284] *Michal Woelke*
12:20	12:40	Capacity of small airports in Poland within the potential Small Aircraft Transport system [22] *Maciej Maczka*	Strain field based fatigue damage identification on a helicopter tail boom during full-scale fatigue test [313] *Claudio Sbarufatti, Marco Giglio*	Optimal instrumentation for turbine cascade [294] *Wojciech Gryglas, Łukasz Łaniewski-Wołłk, Bartosz Olszański, Piotr Szałtys*	Numerical and Experimental Studies of a Separation Control On The Wing Flap Using Close Loop System *Wieńczysław Stalewski, Andrzej Krzysiak*	12:20 - 12:40 Hybrid Electric Intermodal Aircraft Auxiliary Power Unit [350] *Richard Glassock* 12:40 - 13:00 Performance, Environmental and Economic Assessments of a Turbo-electric Distributed Propulsion Systems *Devaiah Nalianda*		

Time		Room	
12:40	14:30		Lunch Break
14:30	15:00	Room: AULA	"Electric propulsion for aircraft" Key-Note Speech by **Dr Frank Anton** | Siemens Next47 Projects, eAircraft
15:00	15:30		Coffee Break

Room		ALPHA	FOXTROT	BRAVO	IKAR	AULA	CHARLIE	DELTA
Session		4.1	5.9	6.1	8.2	7.2 / 7.1	8.1	14.1
Session Title		Design Challenges for Future Aero-Engines	Surface engineering approaches	Fatigue of Aeronautical Materials & Structures	Design Challenges for MALE class IJAS	New Solutions and Technology Challenges in SAT / Safety in SAT	MINI WORKSHOP Future Challenges of Unmanned Aerial Systems Coordinated by Prof Fulvia Quagliotti, Politecnico di Torino	Rotors & sensitivity studies
Session Chair(s)		Prof Witold Wisniowski & Dr Pawel Stezycki Institute of Aviation	Prof Konstantinos Tserpes University of Patras	Prof Spiros Pantelakis University of Patras	Prof Zdobyslaw Goraj Warsaw University of Technology	Dr Krzysztof Piwek & Dr Bartek Dziugiel Institute of Aviation	Prof Fulvia Quagliotti Politecnico di Torino	Prof Maciej Bossak Institute of Aviation
15:30	15:50	Comparison of Various Fan Conceptions for Light Sport Aircrafts [206] *Jan Klesa, Martin Helmich, Tomas Sommer*	Cold Spraying and Laser Cladding in the aircraft coatings production as an alternative to harmful cadmium and chromium electroplating processes [242] *Jarosław Sienicki*	Thermomechanical Fatigue Assessment of Nickel-Based Superalloy [332] *Huang Yuan, Jingyu Sun*	Endurance Optimization Of UAV Male Class Wing By Aeroelastic Tailoring [99] *Marek Malinowski, Wojciech Grendysa, Bartłomiej Goliszek*	General aviation aircraft flight path management in emergency situation [234] *Andrzej Robert Majka*	Methods for determining the speeds start UAV launcher [312] *Leszek Ułanowicz, Grzegorz Jastrzębski*	Coaxial rotor a practical approach [176] *Łukasz Czajkowski*
15:50	16:10	Degradation prognostic in gas turbine engines using artificial neural networks [246] *Maria Grazia De Giorgi*	Cold spray technology for repair and additive manufacturing of aerospace components [320] *Klara Petrackova*	FEM-DBEM approach to simulate crack propagation on a turbine vane segment undergoing a load spectrum [254] *Venanzio Giannella, Roberto Guglielmo Citarella, Edoardo Vivo, Massimo Mazzeo*	Initial concepts and selected details of the structure of the unmanned aerial vehicle PW-100 [141] *Wojciech Grendysa, Marek Malinowski, Bartłomiej Goliszek*	Mission and performance sizing of low power turboprpeller single engine aeroplane [43] *Jerzy Bakunowicz*	Vision-based formation flight control of unmanned aerial vehicles [238] *Leszek Ambroziak, Mariusz Bogdan, Zdzisław Gosiewski*	Efficient Use of 2nd Order Sensitivity for Uncertainty Quantification [281] *Marcin Wyrozębski*
16:10	16:30	Practical approach to exergy and economy of a high bypass turbofan engine [278] *Onder Turan, Hakan Aydin*			The structural design of vertical empennage of PW-100 male aircraft [221] *Bartłomiej Goliszek, Wojciech Grendysa, Marek Malinowski*	Partially feasible solution space for integrated fleet schedule design [356] *Wojciech Jerzy Miksa, Tomasz Goetzendorf-Grabowski*	Civil rpas integration in future ATM: time-based separation procedures with dynamic mobile area (DMA) [217] *Roberta Fusaro, Giovanni Di Meo, Giovanni Di Meo, Nicole Viola, Nicole Viola, Sara Cresto Aleina, Sara Cresto Aleina*	Column stand for aircraft multi-barrel machine gun model sensitivity study on analisys methods [229] *Paweł Abratowski*
16:30	16:50	16:30 - 16:50 Exergo-genetic optimization of a high bypass turbofan in preliminary design phase [322] *Onder Turan* 16:50 - 17:10 Turboprop Exhaust Component Test [334] *Tomasz Iglewski*			16:30 - 16:50 Research and selection of MALE wing profile [233] *Cezary Górniak* 16:50 - 17:10 In-flight testing for assessment of a small UAV performance [250] *Adam Tomaszewski, Zdobyslaw Jan Goraj*			The concept of cooperation MOTOR SICH JSC with European Union enterprises/organizations and scientific institutions for the creation and modernization of helicopters [359] *Ivan Moskalenko*
17:00	17:15	Room: AULA	Closing Ceremony - summary & adjourn					