# Day 1 | 18.10.16

| From | To | Session | Paper | Session | Paper | Session | Paper | Session | Paper |
|---|---|---|---|---|---|---|---|---|---|
| 08:00 | 09:00 | | **Registration** | | | | | | |
| 09:00 | 09:10 | | Welcome Note by **Prof. Spiros Pantelakis**, EASN Chairman | | | | | | |
| 09:10 | 09:20 | | Welcome Note by **Prof. Alcibiades Guedes**, President of INEGI | | | | | | |
| 09:20 | 09:50 | | ***"Portuguese aerospace industry – driving innovation through collaboration networks"*** Key-Note Speech by **Dr. Jose Rui Marcelino**, PEMAS President | | | | | | |
| 09:50 | 10:20 | | **Coffee Break at Exhibition Hall** | | | | | | |
| 10:20 | 10:40 | 2.1 Design Challenges for Future Passenger Aircraft | **"Studies and demonstration on advanced aircraft configurations", CleanSky2, Large Passenger Aircraft, Platform 1"** *L. Joergensen, M. Fischer* | 5.2 Characterization & Modelling of Nanofilled Polymers & Composites | **"Experimental investigation of the effect of hydrothermal ageing on the mechanical behaviour of carbon nanotube /PA 6 nano composite"** *E. Moutsompegka, K. Tserpes, O. Murariu, L. Bonnaud* | 3.1 Multi Disciplinary Optimisation | **"Multi Disciplinary Optimisation in Aeronautical Engineering"** *T. Goetzendorf-Grabowski* | | **"Some necessary additions to EASA PART 66 & 147 Licenses"** *M. Igdi-Sen* |
| 10:40 | 11:00 | | **"Studies to configure a non-conventional rudder on a commercial transport aircraft: aerodynamics, structures and lateral- directional static and dynamic stability"** *M.-A. Castillo-Acero* | | **"Mechanical characterization and fatigue lifetime assessment of PLA reinforced with functionalized carbon nanotubes"** *V. SATC. Pinto, R. M. Guedes* | | **"Improvement and Optimisation of Light-Gyroplane Performance"** *Wienczyslaw Stalewski* | 9 The CATER Project | **"Introduction to CATER"** *Giuliano D'Auria* |
| 11:00 | 11:20 | | **"Preliminary Design and Sizing of a cabin escape system for a suborbital vehicle aimed at parabolic flights"** *R. Fusaro, N. Viola, M. Fioriti, D. Ferretto* | | **"Time-dependent mechanical behaviour of PLA/CNT-COOH nanocomposites"** *V. C. Pinto, R. M. Guedes* | | **"Common Computational Model for coupling Panel Method with Finite Element Method"** *J. Mieloszyk, T. Goetzendorf-Grabowski* | | **"CATER R&I Framework Needs and Opportunities"** *Daniel Ruflin* |
| 11:20 | 11:40 | | **"Continuing with Environment & Passenger Friendly "Green" Civil Aviation Solution Air- to-Air Refuelling (AAR) – Why Needed & How to Achieve, Another Challenge Ahead"** *R. K. Nangia* | | **"Finite element prediction of stress transfer in h-BN sheet nanocomposites"** *K. Spanos, A. Tsiamaki, N. Anifantis* | | **"Optimisation of small aircraft parameters in the initial phase of project"** *A. Iwaniuk, W. Wisniowski* | | **"Assessment of past and ongoing EC-funded projects"** *Daniel Ruflin* |
| 11:40 | 12:00 | | **"Large turbofan engine integration into civil aircraft via active flow control"** *H. Bieler, M. Meyer, S. Rolston, B. Stefes* | | **"Investigation of Tensile Failure of Defective Single Walled Carbon Nanotubes"** *S. Y. Ahmadi-Brooghani* | | **"Optimization of Unconventional aircraft configurations under uncertainty"** *P. Roglev* | | **"The CATER door-to-door model"** *Enno Geissler* |
| 12:00 | 12:20 | | **"Demonstration of Hybrid Laminar Flow Control in European projects - Clean Sky 2 and AFLoNext -"** *J. Medina-Gonzalez* | | **"Lab based in-situ X-ray mechanical testing in very small scales on state-of-the-art composite materials, porous barrier coatings & nano-structured systems"** *A. Clausner, M. Gall, C. Sander, K. Kutukova, M. Löffler, E. Zschech* | | **"Aerodynamics optimization of the rocket plane in subsonic and supersonic flight conditions"** *M. Figat, A. Kwiek* | | **ACARE** TBC |
| 12:20 | 12:40 | | **"A novel Design-for-X holistic approach in complex product development integrating modular design and lean thinking"** *A. J. Baptista* | 5.1 | **"Microstructural aspects and mechanical behavior of copper base alloys for high heat flux applications"** *M. Kommer, W. Schwarz, T. Sebald, H. Werner Höppel, M. Gören* | | **"Advanced concurrent design of a composite wing box considering material selection, manufacturing process planning and modeling optimization of the composite panels"** *K. Bacharoudis, T. Turner* | | |
| 12:40 | 13:30 | | **Lunch Break** | | | | | | |
| 13:30 | 14:00 | | ***"Aerodynamic Crutches"*** Key-Note Speech by **Prof. Ray Whitford**, Cranfield Shrivenham | | | | | | |
| 14:00 | 14:20 | 2.7 Aeroelasticity & Unsteady Flows | **"Aeroelastic Challenges in Aircraft Design"** *H. Timmermans* | 5.1 Innovative Multifunctional Materials For Aeronautics | **"Thermal resistance of TiAlN coating deposited via HiPIMS on a gamma-TiAl alloy"** *S. M. Deambrosis* | 3.1 Multi Disciplinary Optimisation | **"Robust optimisation of air delivery duct shape"** *K. Marchlewski, L. Wolk-Laniewski* | 9 The CATER Project | **"Gap identification and analysis"** *Giuliano D'Auria* |
| 14:20 | 14:40 | | **"An experimental study of a pitching and plunging wing with a NACA64418 airfoil"** *D. Yiasemides, D. Gkiolas, D. Mathioulakis* | | **"Fire Properties of Composites for Aeronautic Application"** *G. Barra, L. Guadagno, L. Vertuccio, A. Albolino, S. Russo, J. Torero* | | **"Application of POD method to optimal design of experiment"** *W. Gryglas, L. Wolk-Laniewski* | | **"CATER stakeholder consultation process – ATS expert's view on Time Efficency incentives and horizons"** *Thomas Chaboud* |
| 14:40 | 15:00 | | **"Effect of low Reynolds number wind gust on aerodynamics of plunging airfoil"** *A. Das, S. Tiwari* | | **"Experimental determination of fire degradation kinetic for aeronautical polymer composite materials"** *N. Grange, P. Tadini, K. Chetehouna, N. Gascoin, G. Bouchez, S. Senave, I. Reynaud* | | **"Nonlinear Aeroelastic Scaling Studies on High Aspect Ratio Wings"** *M. Lima Coelho, F. Afonso, F. Lau* | | **"CATER way forward – Crossing Gaps and Stakeholder feedback"** *Romain Kervarc* |
| 15:00 | 15:20 | 2.8 Crew & Cockpit | **"Development of the human performance envelope concept for cockpit operations"** *I. Graziani, B. Berberian, B. Kirwan, P. Le Blaye, L. Napoletano, L. Rognin, S. Silvagni* | | **"Nanostructured copper-carbon nanotubes composites for aircraft applications"** *I. Graça, A. C. Ferro, M. Guedes* | | **"Aircraft Noise Module development for integration in MDO Framework"** *M. R. Dias, F. Afonso, J. Vale, F. Lau* | | **"One breath – how much can we do to optimise airport resource in improving time efficiency"** *Toni Baceanu* |
| 15:20 | 15:40 | | **"i-VISION: Immersive Semantics-based Virtual Environments for the Design and Validation of Human-centred Aircraft Cockpits"** L. Rentzos, A. Karvouniari, C. Vourtsis, S. Antoniou, G. Chryssolouris | | **"Thermoplastic based carbon nanotube in structural composite"** *N. Kchit, M. Claes* | 3.2 Aircraft 3rd Generation MDO: the AGILE project | **"AGILE Project: Towards the next generation in Collaborative MDO"** *P. D. Ciampa, B. Nagel* | | **"Interactive Workshop to co-imagine together the future"** *animated by François Vérez* |
| 15:40 | 16:00 | | **"i-VISION Human Factors Analysis Method using Virtual Reality"** L. Rentzos, A. Karvouniari, C. Vourtsis, S. Antoniou, G. Chryssolouris | | **"Piezoresistive properties of composites filled by carbon nanotubes for health monitoring of aircraft stractual parts"** *P. Lamberti, V. Tucci, G. Spinelli, L. Guadagno, L. Vertuccio, S. Russo* | | **"AGILE DC-1 MDO process using an efficient global optimization approach"** *T. Lefebvre, N. Bartoli, R. Lafage, P. D. Ciampa* | | |
| 16:00 | 16:40 | | **Coffee Break at Exhibition Hall** | | | | | | |
| 16:40 | 17:00 | 2.9 TOICA Project "Thermal Overall Integrated Conception of Aircraft" | **"Thermal Overall Integrated Concept Aircraft – The TOICA Project"** *P. Arbez* | 5.1 | **"Virtual Prototyping of Energy Harvesting Systems for Aeronautics"** *Z. Hadas, J. Smilek, L. Janak* | 3.2 Aircraft 3rd Generation MDO: the AGILE project | **"Automated Meshing and Data Fusion applied to create Aerodataset for AGILE DC-1 and beyond"** *M. Zhang, A. Rizzi, J. B. Vos, A. Jungo* | 4.2 Hybrid Electric Technologies | **"Sizing of Fuel-Based Energy Systems for Electric Aircraft"** *I. Geiß, R. Voit-Nitschmann, A. Strohmayer* |
| 17:00 | 17:20 | | **"The Behavioural Digital Aircraft environment"** *J. C. Dunyach* | 5.3 Structural Aspects in Aircraft Design | **"Designing pro-composite truss layout for load-bearing aircraft structures"** *A. Shanygin, E. Dubovikov, V. Fomin, I. Mareskin* | | **"Aircraft system architectures for aircraft design optimization in an automated process"** *M. Fioriti, L. Boggero, S. Corpino, R. D'Ippolito* | | **"Application of electric systems for future aircraft propulsion"** *B. Lukasik, W. Wiśniowski* |
| 17:20 | 17:40 | | **"Streamlining cross-organisation product design in aeronautics"** *E. Baalbergen, J. Kos, C. Louriou, C. Campguilhem, J. Barron* | | **"Failure analysis of T-stiffened composite panels in compression after impact"** *C. Chary, S. Giardina, A. P. Gonze, D. Gueuning, L. Ravier* | | **"The AGILE method applied to aircraft design at University of Naples"** *P. Della Vecchia, F. Nicolosi, A. De Marco, L. Stingo, G. Nardone* | | **"Control of Conducted Emissions of an Aeronautical Converter for HVDC Power Distribution System"** *V. S. Rodríguez, C. G. Domínguez-Palacios Durán, P. G. Vizuete, J. B. Méndez, M. Á. M. Prats* |
| 17:40 | 18:00 | | **Conclusions and Perspectives** *J. C. Dunyach & P. Arbez* | | **"Free vibration responses of advanced composite beams based on a quasi-3D higher-order shear deformation theory"** *Z. F. Zohra, H. H. A. Lemya, M. Mustapha, T. Abdelouahed, O. Djamel* | | **"A novel graph-based system for agile configuration and execution of MDO workflows"** *I. van Gent, G. La Roccay, A. Makusz, Leo L. M. Veldhuis* | | **"Analysis and optimisation of hybrid powertrains for rotorcraft applications"** *G. Avanzino* |
| 18:00 | | | **End of Day 1** | | | | | | |

# Day 2 | 19.10.16

| From | To | Session | Paper | Session | Paper | Session | Paper | Session | Paper |
|---|---|---|---|---|---|---|---|---|---|
| 08:20 | 08:40 | | **Registration** | | | | | | |
| 08:40 | 09:00 | | | | | | | | |
| 09:00 | 09:20 | 2.4 / 2.6 Active Flow Control & Flight Control | **"On the usage of morphing camber for performance improvement and load alleviation of a small scale glider"** *J. L. Vale, F. Afonso, F. Lau, É. Oliveira, A. Suleman* | 5.3 Structural Aspects in Aircraft Design | **"Skin-side Stationary Shoulder Friction Stir Welding (SSFSW) of dissimilar T-joints: Challenges and Results"** *A. Barbini, P. E. Gazola, J. Carstensen, J. dos Santos* | 11 Support Actions for Coordinating Research in the Field of Aeronautics and Air Transport | **"Cost efficiency & innovation enablers strategy for a competitive European aviation"** *Fabien Marty, CAPPADOCIA Project* | 4.2 Hybrid Electric Technologies | **"Studying and Sizing of Batteries for Efficient Battery Management in Aviation Applications"** *M. Yildiz, H. T. Karakkoc* |
| 09:20 | 09:40 | | **"GLAMOUR Project: An Overview of Design and Wind Tunnel Test Validation Activities of Gust Load Alleviation Systems"** *S. Ricci* | | **"Aluminium friction stir welding and adhesive bonded joints"** *D. F. O. Braga, J. Fortunato, S. Constantino, J. Santos, L. F. M. da Silva, V. Infante, P. M. G. P. Moreira* | | **Coordinating Air transport Time Efficiency Research** *by a representative of the CATER Project* | | **"System electronics for energy harvesting"** *P. Tofel, R. Macku, P. Skarvadav* |
| 09:40 | 10:00 | | **"Active Flutter Suppression of a High Aspect-Ratio Wing using Aileron Control"** *F. Afonso, J. Vale, É. L. Oliveira, F. Lau, A. Suleman* | | **"Analytical weigh estimation of unconventional landing gear designs"** *R. C. Munjulury, A. P. Prat, D. Borhani Coca, P. Berry, P. Krus* | | **FORUM on Aviation and Emissions (& Environment)** *Sigrun Matthes, FORUM-AE Project* | | **"Investigating the Dynamic Response of Hybrid-Electric Propulsion Systems"** *G. Wortmann* |
| 10:00 | 10:20 | | **"Optimization and testing of fluidic actuators for active flow control at the engine/wing junction"** *P. Schloesser, M. Meyer, M. Schueller, P. Weigel, M. Bauer* | | **"Fatique behaviour of cold sprayed AL alloys"** *K. Petrackova, M. Guagliano, J. Kondas* | | **"2050 Aviation Safety challenges: are we doing the right research?"** *Sara Silvagni, OPTICS Project* | | **"Design Aspects of Cycle-Integrated Parallel Hybrid Power Plants"** *P. C. Vratny, S. Kaiser* |
| 10:20 | 10:40 | | **"Active flow control concepts and application opportunities for commercial aircraft"** *H. R. Bieler* | | **"Evaluation of discontinuities in AMC friction stir welds produced by different geometry tools"** *A. F. Miranda Pérez, C. E. Morales Bazaldúa, G. Y. Pérez Medina, E. Hurtado Delgado* | | **Summary and Conclusions by Workshop's Chairs** *Dietrich Knoerzer & Irene Pantelaki* | | **"Power Train Options for a Propulsive Fuselage Aircraft Layout"** *J. Bijewitz, A. Seitz* |
| 10:40 | 11:00 | | **Coffee Break at Exhibition Hall** | | | | | | |
| 11:00 | 12:40 | | **EASN General Assembly** | | | | | | |
| 12:40 | 13:10 | | ***"Global Challenges to Aviation – A Need for Advanced Technologies"*** Key-Note Speech by **Dr. Dietrich Knoerzer**, European Commission | | | | | | |
| 13:10 | | | **Start of Voting Process at Exhibition Hall** | | | | | | |
| 13:10 | 14:00 | | **Lunch Break** | | | | | | |
| 14:00 | 14:30 | | ***"The Clean Sky Academy Initiative: How to better involve students in Europe's largest Research Program for Aeronautics"*** Key-Note Speech by **Dr. Jean-Francois Brouckaert**, Project Officer CSJU | | | | | | |
| 14:30 | 14:50 | 2.4 / 2.6 | **"Multivariable Flight Control Systems Robustness Evaluation through Gain and Phase margins"** *E. Liceaga-Castro, M. P. Torres-Reyna, U. Alvarez* | 5.3 Structural Aspects in Aircraft Design | **"Non-conventional composite materials for aerospace structures"** *P. P. Camanho, A. Arteiro, C. Furtado* | 10 The CAPPADOCIA Project "Strategic cost efficiency & innovation enablers for a competitive and sustainable European aviation" | 14:30–14:45 Welcome and Workshop introduction (Fabien Marty) Incl. CAPPADOCIA 3rd year approach & expectations<br>14:45–14:30 Questions and Discussions on CAPPADOCIA CSA prospective aviation contribution definition (4th year and after)<br>14:30–15:15 Review of latest updates on **"Collaborative Supply Chain"** initiatives towards competitiveness improvement : state-of-the-art, bottlenecks, gaps, innovations opportunities, proposals for future action plan (PPT to be presented by **Efficient Innovation**)<br>15:15–15:35 **"Collaborative Supply Chain"** Experts' individual pitch to contribute to targeted issues (5 min. PPT to be presented by attending experts) + interaction with public<br>15:35–15:50 Review of latest updates on **"Factory of the future"** initiatives towards competitiveness improvement : state-of-the-art, bottlenecks, gaps, innovations opportunities, proposals for future action plan (PPT to be presented by **Aernnova**)<br>15:50–16:10 **"Factory of the future"** Experts' individual pitch to contribute to targeted issues (5 min. PPT to be presented by attending experts) + interaction with public | 4.1 Design Challenges for Future Aero-Engines | **"Design challenges for future aero-engines"** *W. Wiśniowski, P. Stężycki* |
| 14:50 | 15:10 | 2.2 Vortex Dynamics | **"Vortex Dynamics in Supersonic Shock-Boundary Layer Interaction Flows"** *I. W. Kokkinakis, D. Drikakis* | | **"Virtual testing of composite aerostructures"** *P. P. Camanho, A. Arteiro, C. Furtado* | | | | **"The Future of Propulsion Technology in the 21st Century"** *M. Benzakein* |
| 15:10 | 15:30 | | **"The Effect of Gusts on Aircraft Wake Vortices - One-Way and Two-way Coupling of RANS and LES Codes"** A. Stephan, S. Zholtovski, F. Holzäpfel | 5.4 Session on the BOPACS Project | **"BOPACS, BOLtless assembly of Primary Aerospace Composite Structures"** *J. H. Halm* | | | | **"Engine nacelles design approach"** *K. Kozaczuk* |
| 15:30 | 15:50 | | **"Analysis of potential wake vortex encounters at a major European airport"** *F. Holzäpfel* | | **"Design of near pure mode II specimens for the assessment of dis-bond stopping features in composite joints using X-FEM"** *V. Madhavan, D. Dumas* | | | | **"Vehicle Health monitoring system with special emphasis on power unit"** *P. Glowaki* |
| 15:50 | 16:10 | | **"Study of vortex roll-up using different wingtip shapess"** *S. Dufhaus, A. Uhl, E. Stumpf* | | **"A comparison between CZM and VCCT methods in predicting mixed-mode I +II crack growth in composite bonded joints with and without crack stoppers"** *I.S. Floros and K.I. Tserpes* | | | | **"Investigations on the Aerodynamic and Cooling Characteristics of Turbine Stage with Consideration of the Circular Type Diversion Structure Rim Seal Purge Flow"** *Z. LI, J. LI, Q. Gao, Z. Feng* |
| 16:10 | 16:50 | | **Coffee Break & Poster Session** | | | | | | |
| 16:50 | | | **End of Voting Process at Exhibition Hall** | | | | | | |
| 16:50 | 17:10 | 2.3 Modelling & Simulation of Flight Physics | **"New Developments for Initial Boundary Value Problems involving Multi-physics at Linköping University"** *J. Nordström* | 5.4 Session on the BOPACS Project | **"Bonded Aileron Demonstrator testing"** *A. Johnston* | 10 The CAPPADOCIA Project "Strategic cost efficiency & innovation enablers for a competitive and sustainable European aviation" | 16:50–17:05 Review of latest updates on **"Standardisation & Certification"** initiatives towards competitiveness improvement : state-of-the-art, bottlenecks, gaps, innovations opportunities, proposals for future action plan (PPT to be presented by **Airbus**)<br>17:05–17:25 **"Standardisation & Certification"** Experts' individual pitch to contribute to targeted issues (5 min. PPT to be presented by attending experts) + interaction with public<br>17:25–17:40 Review of latest updates on **"Innovative emerging trends"** initiatives towards competitiveness improvement : state-of-the-art, bottlenecks, gaps, innovations opportunities, proposals for future action plan (PPT to be presented by **NLR**)<br>17:40–18:00 **"Innovative emerging trends"** Experts' individual pitch to contribute to targeted issues (5 min. PPT to be presented by attending experts) + interaction with public<br>18:00–18:10 Workshop Conclusions and wrap up, including: Summary and conclusions of discussion (moderator) Next actions and closure by CAPPADOCIA WP2 (Fabien Marty) | 4.1 Design Challenges for Future Aero-Engines | **"Effect of Composition and Temperature on the Deposit-Induced Degradation Regimes in Coatings and Structural Alloys for Gas Turbines"** *J.E. García-Herrera, H. Ruiz-Luna, J.M. Alvarado-Orozco3, G. Meier, L.G. Trapaga-Martinez, J. Muñoz-Saldaña* |
| 17:10 | 17:30 | | **"Solving the Two Evolutionary Shape Optimisation Problem of a Natural Laminar Airfoil (NLA) and Shock Control Bump (SCB) with Game Strategies"** *Z. Tang, Y. Chen, J. Periaux* | | **"Fatigue behaviour and damage tolerant redisgn of composite bonded joints for aerospace applications"** *T. Kruse, T. Körwien, R. Ruzek* | | | | **"Evolution of oxygen in aircraft fuel tanks during climb"** *M. Frank, D. Drikakis* |
| 17:30 | 17:50 | | **"Turbulence Modelling Techniques for Aeroelastic Problems: Results and Comments from the Second AIAA Aeroelastic Prediction Workshop"** *M. Righi* | 5.5 Bird Strikes Simulation & Testing | **"Investigation of bird-strike events on composite wing panels"** *I. Diamantakos, K. Fotopoulos, M. Jamin, A. Eberhard, G. Lampeas* | | | | **"Effect of Rim Seal Diversion Structures on Aerodynamic and Cooling Performance of Turbine Rotor Blade and Endwall"** *Z. LI, J. LI, Q. Gao, Z. Feng* |
| 17:50 | 18:10 | | **"Numerical simulation of the insect hovering flight"** *J. Yao* | | **"Validation of a numerical model based on stacked-shell approach for Bird-strike using non-destructive tests (NDT)"** *A. Dafnis, M. Z. Sadeghi, T. Siebert, M. Anghileri, A. Milanese, S. Marco Bassi* | | | | **"Experimental and numerical study of plasma based flow control for low pressure gas turbines operating at low Reynolds numbers"** *M. G. De Giorgi, A. Ficarella, E. Pescini, D. Martínez Hernández* |
| 18:10 | | | **Announcement of Voting Resaults at Exhibition Hall** | | | | | | |
| 18:10 | 18:30 | | **New B.o.D. Meeting** | | | | | | |
| 18:30 | | | **End of Day 2 - Cocktail** | | | | | | |

# Day 3 | 20.10.16

| From | To | Session | Paper | Session | Paper | Session | Paper | Session | Paper |
|---|---|---|---|---|---|---|---|---|---|
| 08:20 | 08:55 | | **Registration** | | | | | | |
| 08:55 | 09:00 | | **Announcement of new B.o.D.** | | | | | | |
| 09:00 | 09:30 | | ***"Sustainable development in Aeronautics – Role & Perspectives of the Clean Sky Initiative"*** Key-Note Speech by **Dr. Giuseppe Pagnano**, Clean Sky | | | | | | |
| 09:30 | 10:00 | | ***"The past 15 years and the next 15 years of European Aviation Research, an industry perspective"*** Key-Note Speech by **Mrs. Valerie Guenon**, V.P. of Safran | | | | | | |
| 10:00 | 10:20 | | **Coffee Break at Exhibition Hall** | | | | | | |
| 10:20 | 10:40 | 2.5 Aircraft Components & Systems | **"Effect of Design Parameters on the Structural Mass of a Telescopic Wing"** *P. D.R. Santos, D. B. Sousa, P. V. Gamboa* | 7.2 Future Challenges of Unmanned Aerial Systems | **"Aerodynamic and structural design for the development of a MALE UAV"** *P. Panagiotou, E. Giannakis, G. Savaidis, K. Yakinthos* | 8 Alternative Fuels | **Workshop Key-Note Speech "Alternative fuels for aviation : current challenges and a manufacturing industry's perspective"** *Mrs. Valerie Guenon* | 4.1 Design Challenges for Future Aero-Engines | **"Design and testing of an helicopter air intake equipped with barrier filters"** *P. Hendrick* |
| 10:40 | 11:00 | | **"Simless GSM positioning system for navigation in GPS-denied environments"** *I. Soldado Serrano, José G. Doblado, I. F. Finazzi, A. L. Rodríguez Vázquez, M. Á. M. Prats* | | **"Aeroacoustic optimization of rotary wings in MAV"** *R. Serre* | | | | **"Investigation of the Effects of Slotted Solid Propellant's Sectional Geometry on Structural Strength and Internal Ballistic Performance of a Rocket Motor"** *C. Tola, M. Nikbay* |
| 11:00 | 11:20 | | **"New approaches in CPACS-based preliminary design of aircraft fuselage structures using Python"** *J. N. Walther, M. Petsch, D. Kohlrüben* | | **"Pitch and roll estimation based on an image-flow algorithm"** *I. F. Finazzi, V. M. Fico, A. L. Rodríguez Vázquez, M. A. M. Prats* | | **"ITAKA – Demonstration flights with biofuel on a large aircraft"** *R. Dean* | | **"Synthesis and study of NiAlX (X = Cr, Co) intermetallic alloys by mechanical alloying for application in gas turbine engines"** *L.A. Cáceres-Díaz, J.M. Alvarado-Orozco, L.G. Trápaga-Martínez, J. Muñoz-Saldaña* |
| 11:20 | 11:40 | | **"Reducing thermal influence of a bleed pipe near a composite fuel tank wall"** *S. M. Moghadasi, A. J. de Wit, F. Chiacchio* | | **"The civil use of small Unmanned Aerial Systems (sUAS): legal and safety challenges"** *L. Novaro Mascarello, F. Quagliotti* | | **"Logisticschallenges in segregated and non-segregated fueling systems"** *R. Beunis* | 1.1 Quality Assurance Concepts For Adhesive Bonding | **"Quality assurance concepts for adhesive bonding of aircraft carbon fibre reinforced plastic (CFRP) structures by innovative extended non-destructive testing (ENDT)"** *K. Brune, M. Schlag, B. Mayer* |
| 11:40 | 12:00 | | **"A new IMA system integration process for multicore transfer, with compliance to incremental certification and robust partitioning"** *S. M'Sirdi, W. Godard, M. Pantel, S. Stilkerich* | | **"Modeling of Tiltwing Aircraft Dynamics as Linear Parameter-Varying System"** *J. Holsten, P. Hartmann, D. Moormann* | | **"ITAKA – Demonstration flights with biofuel on a regional aircraft"** *T. Cestari, M. de Freitas Gonçalves* | | **"NDE of adhesive dissimilar joints using ultrasonics"** *E. Jasiuniene, L. Mazeika, V. Samaitis, V. Cicenas* |
| 12:00 | 12:20 | | **"Knowledge based aircraft fuel system integration in RAPID"** *R. C. Munjulury, A. S. López, I. Staack, P. Krus* | | **"C wing geometric design based on aircraft flying qualities"** *A. Arias Montaño, H. Rodríguez Cortés* | | **Workshop Key-Note Speech "Life-Cycle Approach to Assess Greenhouse Gas (GHG) Emissions of Alternative Aviation Fuels: Methodological Considerations"** *Adrian O'Connell* | | **"The effects of pre-bond contamination with de-icing fluid on the mode-I and mode-II fracture toughness of composite bonded joints"** *E. Moutsompegka, P. Polydoropoulou, K. I. Tserpes, C. Tornow, M. Schlag, K. Brune, B. Mayer, S. Pantelakis* |
| 12:20 | 12:40 | | **"Highly non-linear sensing devices in structural health monitoring of aircraft"** *H. Pfeiffer, J. Perremans, H. Sekler, M. Schoonacker, M. Wevers* | | **"Unmanned Air Vehicles: A tool in Novel Aircraft Design, Validation and Evaluation"** *A. Suleman* | | | | **"Strain monitoring and damage detection of bonded composite structures, using magnetostrictive sensors – Latest developments and applications."** *A. Christopoulos, I. Koulalis, K. Kitsianos, R. Chemama, G. Tsamasphyros, E. Hristoforou, G. Kanterakis* |
| 12:40 | 13:30 | | **Lunch Break** | | | | | | |
| 13:30 | 14:00 | | ***"Research on High Technologies for the Large Passenger Aircraft of Tomorrow- CleanSky2, Large Passenger Aircraft"*** Key-Note Speech by **Dr. Markus Fischer**, Airbus | | | | | | |
| 14:00 | 14:20 | 2.5 | **"Generation and evaluation of time-resolved 3D-scan data of ice accretion processes"** *R. F.A. Puffing, W. Hassler* | 7.1 Small Air Transport Challenges | **"Small Air Transport Challenges"** *K. Piwek* | 8 Alternative Fuels | **"The impact of HEFA fuel blend ratio on gaseous emissions and smoke number in a small gas turbine"** *S. Christie* | 1.1 Quality Assurance Concepts For Adhesive Bonding | **"An Improvement Of The Laser Shock Adhesion Test: The Symmetrical Shot"** *M. Sagnard, L. Berthe, R. Ecault, F. Touchard, M. Boustie* |
| 14:20 | 14:40 | 6.2 Fatigue of Composite Materials | **"Simulation of fatigue delamination in composite structures"** *A. Turon, L. Carreras, B. Bak, E. Lindgaard, Y. Essa, F. M. de la Escalera* | | **"Challenges of small turbine engine installation on I-31T aircraft"** *P. Gula, D. Ulma, K. Żurek, R. Zurawski* | | **"Sustainability and certification"** *M. Guitet* | | **"Influence of repair-related modification of adhesive bonds on electromechanical impedance characteristics "** *P. H. Malinowski, W. M. Ostachowicz, K. Brune* |
| 14:40 | 15:00 | | **"Assessment of quasi-static and fatigue performance of uni-directionally fibre reinforced polymers on the basis of matrix effort"** *A. Krimmer, R. Leifheit, A. Bardenhagen* | | **"Design and manufacturing of nacelles for small turboprop aircraft"** *J. Dudziak, P. Gula, A. Gawlik, J. Kondracki* | | **"Review of catalytic pyrolysis of lipids. Experiences from the Itaka project"** *D. Chiaramonti* | | **"Mechanical behaviour of a fuselage stiffened carbon-epoxy panel under debonding load"** *M. Torres, E. A. Franco-Urquiza, H. Hernández-Moreno, A. Arias-Montaño* |
| 15:00 | 15:20 | | **"Dynamic response of functionally graded micro beam based on modified couples stress"** *H. H. A. Lamia, Z. F. Zohra, K. Abdelhakim, T. Abdelouahed* | | **"Problems of designing fuel installation for the small turbofan aircraft"** *Ł. M. Wujciów, R. Żurawski, T. Górniak* | | **"Alternative fuels for aviation: beyond Itaka"** *V. Mozo Montemayor* | | |
| 15:20 | 15:40 | | **"Fatigue behaviour of innovative multifunctional epoxy resins"** *C. Katsiropoulos, P. Polydoropoulou S. Pantelakis* | | **"The low power single engine turboprop aeroplane class – The first link of small air transport"** *J. Bakunowicz* | | **"Technical compatibility, certification and deployment of alternative fuels"** *A. Quignard* | | |
| 15:40 | 16:20 | | **Coffee Break at Exhibition Hall** | | | | | | |
| 16:20 | 16:40 | 6.1 Fatigue of Metallic Materials and Structures | **"An Overview of Fatigue in Aircraft Structures"** *S. M.O. Tavares, P. M.S.T. de Castro* | 7.1 Small Air Transport Challenges | **"Light Aircraft Spin Investigation"** *E. Cichocka* | 8 Alternative Fuels | **"Holistic assessment of different biojet-fuel pathways"** *A. Roth* | 1.2 Non-Destructive Testing of Composites | **"Non-destructive qualitative characterization of Thermal Damage interactions in carbon fibre composite panels"** *A. Haridas, C. Song, K. Hau-Kong Chan, M. V. Matham* |
| 16:40 | 17:00 | | **"Effect of Laser Shock Peening Processing Parameters on Fatigue Crack Propagation Behaviour in AA2024"** *N. Kashaev, S. Chupakhin, V. Ventzke, M. Horstmann, S. Riekehr, B. Klusemann* | | **"Combined, multi-body and FEM approach, to assessing the impact of launch of rescue parachute in case of emergency landing gyroplane"** *A. Dacko, L. Lindstedt, M. Rodzewicz, C. Rzymkowski* | | **"Biofuels in Aviation: Trends, Fuel demand and CO2 emissions evolution in Europe"** *A. O'Connell, M. Kousoulidou, L. Lonza* | | **"Numerical evaluation of shear and flexural properties of porous CFRP laminates utilizing X-ray CT data"** *A. Stamopoulos, K. Tserpes, S. Pantelakis* |
| 17:00 | 17:20 | | **"Morphing structures and fatigue: the case of an UAV wing leading edge"** *S. J. Moreira, S. M. O. Tavares, P. M.S.T. de Castro* | | **"Aerodynamic analysis of the main rotor influence on the static stability of the gyroplane"** *Marcin Figat* | | **"Renewable Jet Fuel from Algae: A Life Cycle Assessment"** *C. Endres, A. Roth, T. Brück* | | **"Non- destructive testing of contaminated CFRP Surfaces with the BoNDTinspect® System"** *A. Kraft, K. Brune, C. Tornow, G. Mühlhofer, B. Mayer, B. Valeske* |
| 17:20 | 17:40 | | **"Mechanical behaviour of AZ31B Magnesium alloy in a droop nose mechanism"** *L. Reis, E. Aguiar, J. Pereira* | | **"Design estimation methods for light-weight and sustainable joined wing for small passenger aircraft"** *A. Cini, A. Anobile, K. Bacharoudis* | | **"ATM4E: A concept for environmentally-optimized aircraft trajectories"** *S. Matthes, V. Grewe, D. Lee, F. Linke, K. Shine, S. Stromatas* | | **"Surface quality inspection with the aerosol wetting test"** *Célian Cherrier* |
| 17:40 | 18:00 | | **"Integral improvement of mechanical & surface properties of metallic materials of interest in aerospace applications by laser shock processing"** *J.L. Ocaña, J.A. Porro, M. Díaz, L. Ruiz-de-Lara, D. Peral, I. Angulo, F. Cordovilla* | | **"Numerical Study of a bush planeleaf landing gear"** *I. Rosu* | | **"Workshop Conclusions"** *I. Gomez Jimenez* | | **"Analysis method for guided wave propagation direction in anisotropic structures"** *A. Szewieczek, M. Sinapius* |
| 18:00 | 18:20 | | **End of Day 3** | | | | | | |

# Technical Visits

| From | To | |
|---|---|---|
| 08:30 | 09:00 | **Registration** |
| 09:00 | 18:00 | **Technical Visits**<br>**About the technical visits**<br>The technical visits are planned for the morning and afternoon of the 21st of October.<br>All tours are free for participants and accompanying persons.<br>Tours will include the Composite Materials laboratory, Optics and Experimental Mechanics laboratory and other facilities tbc.<br>If you wish to know more, on your arrival to the registration desk ask for the technical visits registration lists. You will be able to register on site. |
| 18:00 | | **End of the 6th EASN International Conference** |

# Poster Session

**The following papers will be presented by posters** (Poster Session)

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|---|---|---|---|
| **"Design-for-X innovative approach as a decision support tool for the creation of scaled models"** *A. J. Baptista* | **"Design of a telescopic wing mechanism using a AZ31B magnesium alloy"** *L. Reis, J. Pereira, E. Aguiar* | **"Continuing with Environment & Passenger Friendly "Green" Civil Aviation Solution Air- to-Air Refuelling (AAR) – Why Needed & How to Achieve, Another Challenge Ahead"** *R. K. Nangia* | **"Exergetic Greenization for business Aircrafts: Methodology and a Case Study"** *O. Sahin, O. Turan* |
| **"Fatigue behaviour of innovative multifunctional epoxy resins"** *C. Katsiropoulos, P. Polydoropoulou S. Pantelakis* | **"Exergetic design of a jet engine: A parametric study"** *O. Turan, A. Topal* | **"Some necessary additions to EASA PART 66 & 147 Licenses"** *M. Igdi-Sen* | **"Exergy-based sustainability analysis of a turbojet engine for subsonic flight"** *O. Turan, H. Aydın* |
| **"Advanced methods of economy supplies and waste management in engineering industry"** *M. Moszumański* | **"Sintering sliding materials and utensils research in the universal chamber furance in protective atmosphere"** *R. Moszumański* | **"An evaluation of aircraft sequencing with different constraints"** *O. Sahin* | **The Poster Session will take place on Wednesday 19.10.16, 16:10 to 16:50** |

# Workshop & Session Chairs

**The 6th EASN International Conference is chaired by Spiros Pantelakis & Pedro Moreira**

Workshops & Sessions organised in the frame of the 6th EASN International Conference

| | | | |
|---|---|---|---|
| 1. Workshop on Quality Assurance of Composite Materials *Chaired by* ***Welchy Cavalcanti & Kai Brune*** | 1.1 Session on Non-Destructive Testing of Composites *Chaired by* ***Welchy Cavalcanti & Kai Brune*** | 1.2 Session on Quality Assurance Concepts For Adhesive Bonding *Chaired by* ***Welchy Cavalcanti & Kai Brune*** | 2. Workshop on Aircraft Design / Flight Physics / Systems *Chaired by* ***Zdobyslaw Goraj & Eike Stumpf*** |
| 2.1 Session on Design Challenges for Future Passenger Aircraft *Chaired by* ***Markus Fischer*** | 2.2 Session on Vortex Dynamics *Chaired by* ***Eike Stumpf*** | 2.3 Session on Modelling & Simulation of Flight Physics *Chaired by* ***Shia-Hui Peng*** | 2.4 Session on Active Flow Control *Chaired by* ***Eike Stumpf*** |
| 2.5 Session on Aircraft Components & Systems *Chaired by* ***Zdobyslaw Goraj*** | 2.6 Session on Flight Control *Chaired by* ***Eike Stumpf*** | 2.7 Session on Aeroelasticity & Unsteady Flows *Chaired by* ***Zdobyslaw Goraj*** | 2.8 Session on Crew & Cockpit *Chaired by* ***Loukas Rentzos*** |
| 2.9 Session on the Toica Project *Chaired by* ***Jean-Claude Dunyach*** | 3. Workshop on Multidisciplinary Design Optimisation *Chaired by* ***Zdobyslaw Goraj*** | 3.1 Session on Multi Disciplinary Optimisation *Chaired by* ***Tomasz Grabowski*** | 3.2 Session on Aircraft 3rd Generation MDO: the AGILE project *Chaired by* ***Björn Nagel*** |
| 4. Workshop on Power Generation and Storage *Chaired by* ***Zdobyslaw Goraj*** | 4.1 Session on Design Challenges for Future Aero-Engines *Chaired by* ***Witold Wisniowski & Pawel Stezycki*** | 4.2 Session on Hybrid Electric Technologies *Chaired by* ***Andreas Strohmayer*** | 5. Workshop on Innovation & Emerging Technologies In Aeronautical Materials & Structures *Chaired by* ***Spiros Pantelakis & Mario Guagliano*** |
| 5.1 Session on Innovative Multifunctional Materials For Aeronautics *Chaired by* ***Vicenzo Tucci*** | 5.2 Session on Characterization & Modeling Of Nanofilled Polymers & Composites *Chaired by* ***Konstantinos Tserpes*** | 5.3 Session on Structural Aspects in Aircraft Design *Chaired by* ***Alexander Shanygin*** | 5.4 Session on the BOPACS Project *Chaired by* ***Jan Halm*** |
| 5.5 Session on Bird Strikes Simulation & Testing *Chaired by* ***George Lampeas*** | 6. Workshop on Fatigue of Aeronautical Materials & Structures *Chaired by* ***Paulo T. De Castro*** | 6.1 Session on Fatigue of Metallic Materials and Structures *Chaired by* ***Paulo T. De Castro*** | 6.2 Session on Fatigue of Composite Materials *Chaired by* ***Paulo T. De Castro*** |
| 7. Workshop on Small Air Transport & UAVs *Chaired by* ***Fulvia Quagliotti & Krzysztof Piwek*** | 7.1 Session on Small Air Transport Challenges *Chaired by* ***Krzysztof Piwek*** | 7.2 Session on Future Challenges of Unmanned Aerial Systems *Chaired by* ***Fulvia Quagliotti*** | 8. Workshop on Alternative Fuels *Organised by* ***Victoria Mozo Montemayor*** *Chaired by* ***Inmaculada Gomez Jimenez*** |
| 9. Workshop on the Cater Project *Chaired by* ***Romain Kervarc*** | 10. Workshop on the CAPPADOCIA Project *Chaired by* ***Fabien Marty*** | 11. Support Actions for Coordinating Research in the Field of Aeronautics & Air Transport *Chaired by* ***Irene Pantelaki & Dietriech Knoerzer*** | 12. Session on Air Traffic Management |

# Scientific Committee

International Scientific Committee

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|---|---|---|---|
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