

READ 2012

Research and Education in Aircraft Design

OCTOBER 17th-19th

BRNO UNIVERSITY OF TECHNOLOGY

Conference preliminary programme:

17th October - Wednesday

Room: A - Aula

9:00	Registration	
9:30	Welcome speech	Miroslav Doupovec , Dean of FME
9:40	Welcome speech, presentation of CEDESA Project	Jaroslav Juracka - Institute of Aerospace Engineering, BUT
10:00	Management expertise on major aeronautical international programmes (40+10min)	Jean-Pierre Barthélemy
10:50	<i>Coffee break</i>	
11:10	Aircraft Survivability	Ray Whitford
12:00	IFAR-International Forum for Aviation Research - Contribution for Research and Education on International Level	Richard Degenhardt
12:30	<i>Lunch</i>	

Room A- Aula

13:30	Aerodynamic and stability analysis of PPlane vehicle tandem-wing configuration	Tomasz Goetzendorf-Grabowski
13:50	Tandem wing configuration – a Personal Air transport vehicle proposal	Marcin Figat
14:10	Active flow control optimization on simplified geometry at high Reynolds number	Petr Dvořák
14:30	Assessment of CFD simulation data applicability for aerodynamic loads estimation	František Vaněk
14:50	Experimental investigation of propellers operating at low Reynolds numbers	Diana Kravchenko
15:10	Hail Impact on Composite Plates – Experiments and Numerical Modelling	Vladimír Matěják
15:30	<i>Coffee break</i>	
15:50	Flapping wing efficiency assessment for preliminary aircraft design	Diana Kravchenko
16:10	ASTRID - Aircraft on board Systems sizing and TRade-off analysis in Initial Design	Sergio Chiesa
16:30	An Investigation on Vertical Tailplane Design	Fabrizio Nicolosi

16:50	Students Training in “Composite Structures Design and Manufacture” for Aerospace Industry	Iryna Gagauz
17:10	Fuel cell system integration for combined heat and power generation on board of the aircraft	Anna Maria Mazur
17:30	Performance estimation of solar-powered long endurance airplane at the stage of preliminary design	Sergey Serokhvostov
17:50	END	

Room B – Štukový sál

13:30	Gravity Model Calibration for Regional Route Planning	Allan Nõmmik
13:50	Neural Network-Based Model of the “Existence Conditions” for Air Routes	Tatiana Tseytlina
14:10	Identification of Major Safety Issues for Futuristic Personal Plane Concept	Jiri Hlinka
14:30	Benefits and technological impacts of the future ATM scenario for civil and military aircraft	Giovanni Antonio Di Meo
14:50	Leveraging Space Technologies to Improve ATM NAV and COM Performance	Vit Stencel
15:10	Problem of Forecasting the Development of Russia’s Trunk Air Routes	Tatiana Tseytlina
15:30	Coffee break	
15:50	Curriculum Development in Air Transport Management	Allan Nõmmik
16:10	Alternative fuels and their influence on aircraft design and potential emissions reduction	Aleksey Okhapkin
16:30	Development of an Unmanned Aerial System (UAS) for scientific monitoring	Rob De Roo
16:50	Investigation into a load spectrum and strength tests of an UAV structure	Mirosław Rodzewicz
17:10	Vehicle tracking system for unmanned aerial vehicles using TLD-algorithm	Dmytro Mishkin
17:30	Coffee break	
17:50	END	

18:30	Social evening - reception in Rectorate of Brno University of Technology, Antonínska 1	
22:00	END	

18th October - Thursday

Room A- Aula

9:00	First Day resume	
9:10	Air Transport 2025 – Chances and Challenges for Eastern Europe	Prof. Dr.-Ing. Dr.hc. Dieter Schmitt
9:50	Flying around the World with a solar powered Aircraft	Hannes Ross
10:20	Coffee break	

Room A - Aula

10:40	Flapping wing efficiency assessment for preliminary aircraft design	Diana Kravchenko
-------	---	------------------

11:00	Carbon Honeycomb Plastic as Unique Construction Material for Rocket-and-Space Technique	Volodymyr Slyvynskyi
11:20	Experimental investigation of energy dissipation in composites materials	Karel Barák
11:40	Shape Modifications of Critical Fuselage Parts According to Fatigue Durability	Tomáš Katrňák
12:00	UAV control system of guaranteed accuracy in presence of indefinite disturbances	Timur Belotserkivsky
12:20	Lessons learnt from SAMONIT program - a long endurance, surveillance, light UAV	Zdobyslav Goraj
12:40	<i>Lunch</i>	
14:00	Analysis of UAV Inertial Navigation System BIAS	Darius Rudinkas
14:20	Small UAV dynamic flight parameters registration using system based on STM32 microcontroller.	Vitaly Kobtsev (student section)
14:40	Advance Seaplane Concept Design and Operation based on 2050 Visionary Concepts for Future Aeronautical Transport	Alan Canamar (student section)
15:00	Strength analysis of thin-walled spars with web openings	Marek Horak (student section)
15:20	Application of Filament Winding Technology for CS22 Category Wing Construction	Jakub Cejpek (student section)
15:40	A composite landing gear design process	Pavel Schoř (student section)
16:00	<i>Coffee break</i>	
16:20	Nonlinear behavior of foam material	Martin Weis (student section)
16:40	Numerical simulation of adhesive-bonded joint failure	Anna Osmęda (student section)
17:00	Multi objective optimization algorithms and safety nets in ATC system	Liudas Masnauskas (student section)
17:20	Using of Common Cause Analysis in the Czech General Aviation	Rostislav Košťál (student section)
17:40	<i>END</i>	

Room B – Štukový sál

10:40	Development of the Aircraft Flight Path Optimization Program	Sergey Levin (student section)
11:00	Dynamical Behavior of a Fan Propulsion Unit for an Unconventional Ultra-light Aircraft	David Hlaváček (student section)
11:20	The Concept of Highly Manoeuvrable Airplane Control	Agnieszka Kwiek (student section)
11:40	Development of Thrust Vectoring System on a Turbojet	Giovanni Medici (student section)
12:00	Primary control of light sport aircraft	Tomáš Sommer (student section)
12:20	Methodology to Define the Available Thrust of an Aircraft Powered by a Ducted Fan Propulsion Unit	Martin Helmich (student section)
12:40	<i>Lunch - Jury session</i>	
14:00	Numerical study for the wing lift-to-drag increase at supersonic speeds	Nikita Ageev (student section)
14:20	The Aerodynamics Optimization of High Efficient Propeller	Ivan Dofek (student section)
14:40	Solution of the inverse problem for an airfoil within the framework of the Reynolds Averaged Navier – Stokes equations	Irina Gubanova (student section)
15:00	Gust identification on small unmanned aircraft	Jan Navrátil (student section)
15:20	Delivery tube – CFD analysis	Ondrej Lajza (student section)
15:40	Adaptive Free-Form Deformation parameterization for geometry and mesh morphing in aeronautical applications	Jiří Hradil (student section)
16:00	<i>Coffee break</i>	

16:20	Mathematical Model of a Stationary Vortex in Recirculation Area Behind the Spoiler on the Airfoil	Kseniya Redkina (student section)
16:40	Ducted Fan Propulsion System for an Ultra-light Aircraft - CFD Analysis of an Outlet Channel	Zdeněk Ilich (student section)
17:00	The possible solution of the flow field around the wing with a focus on the induced effects	Stěpán Zdobinsky (student section)
17:20	Energy Efficient Active Control of the Flow Past Aircraft Wings	Stavros Karampelas (student section)
17:40	END	

19th October - Friday

Room A- Aula

9:00	Second Day resume	
9:10	Developing the research competences of aeronautical PhD students	Prof.-Dr. Jozsef Rohacs
9:30	Insect air-gun design for surface contamination experiments	Zikmund
9:50	High level software support the aircraft development and design skill development	Rohacz Dániel (student section)
10:10	Will be added later	
10:30	<i>Coffee break</i>	
10:50	Regional airport airspace redesign supported by GNSS and RNAV procedures	Petr Veselý (student section)
11:10	Why Plane Crash: General Aviation Accident Statistics and Additional Safety Aspects	Helena Trefilova (student section)
11:30	Exploration of the GPS/EGNOS Position Errors and Their Impact on the Aviation User Integrity	Pavel Ptáček (student section)
11:50	Will be added later	
12:20	Formal end, conference resumes. Introduction of next conference organizer.	