

**International Conference of Aerospace Sciences,
“AEROSPATIAL 2020”
15 – 16 October 2020, Bucharest, Romania
Virtual Conference**

Agenda

Day 1 Thursday, 15 October 2020				
Time (CET)		Plenary ROOM (Click to join the Virtual Meeting)		
9:00	9:10	Welcome and introduction by the Conference Chairman Dr. Eng. Catalin NAE , President & CEO, INCAS – National Institute for Aerospace Research “Elie Carafoli”, Bucharest, Romania		
Plenary 9:10 – 10:10		Chair: Catalin NAE (INCAS)		
9:10	9:40	“Towards a full composite large passenger aircraft: some critical environmental aspects” Plenary Lecture speech by Prof. Sp. G. PANTELAKIS and Ch. V. KATSIROPOULOS Laboratory of Technology & Strength of Materials, Dept. of Mechanical Engineering & Aeronautics, University of Patras, Greece		
9:40	10:10	“Unsteady High-Lift Aerodynamics – Unsteady RANS Validation. An Overview on the UHURA Project” Plenary Lecture speech by Dr.-Ing. Jochen WILD German Aerospace Center DLR, Institute of Aerodynamics and Flow Technology, Dep. for Transport Aircraft - High-Lift Aerodynamics Group, Braunschweig, Germany		
10:10	10:30	Break		
ROOMS Session 10:30 – 12:30		ROOM 1 Click to join the Virtual Meeting ROOM 1	ROOM 2 Click to join the Virtual Meeting ROOM 2	ROOM 3 Click to join the Virtual Meeting ROOM 3
Session Title		Flight Mechanics	Workshop Project “FITCoW”	Workshop Project “CONTUR”
Session Chair(s)		Ion STROE (UPB) Dan N. DUMITRIU (UPB)	Cesar BANU (INCAS) Albert ARNAU (ROMAERO)	Aurelian Andrei RADU (ISS) Ioan URSU (INCAS)
10:30	10:50	S2.1 Satellite attitude dynamics using the 3D rotation matrix parameters Dan N. DUMITRIU, Ion STROE, Octavian MELINTE	W4.1.1 Presentation of the OPTICOMS program and introduction for the FITCoW and ELADINE projects A. NATHAN, Y. YUROVITCH, Y. OFIR, C. BANU, A. PAVAL	W5.1.1 Correlation Based Analysis Between Pilots CAT Reports and the Meteorological Forecast <i>Cristian-Emil CONSTANTINESCU, Octavian Thor PLETER, Irina STEFANESCU, Marius STOIA-DJESKA</i>
10:50	11:10	S2.2 Calculus of compass robotic arm in inertial and non-inertial reference frames <i>Sandra Elena NICHIFOR, Roxana Alexandra PETRE, Andrei CRAIFALEANU, Ion STROE</i>	W4.1.2 Composite Tool design challenges in the frame of manufacturing of a 7-meter-long CFRP wing (skin-spars assembly) in a one-shot process (pre-preg and LRI) C. BANU, A. ARNAU, L. TERSIGNI, A. PAVAL, D. DANILA, I. BRINZA, R. VASILE, A. CORRADO	W5.1.2 Influence of wind shear and gusts on the aeroelastic response of an elastic aerial vehicle Marius STOIA-DJESKA, Laurentiu MORARU
11:10	11:30	S2.3 Issues on Quadcopter Design Customized for Urban Aerial Surveillance <i>Javier LINARES, Timothee Pol DUCROST, Alexis BILLEREY, Bastien FONTANA-CASTETS, Radu MIHALACHE, Irina-Carmen ANDREI, Gina Florica STOICA, Nicoleta CRIȘAN, Delia PRISECARU, Cristian STOICA, Anca GRECULESCU</i>	W4.1.3 High temperature laboratory testing of epoxy resins system meant to correlate mechanical properties with temperature variation C. BANU, L. FIRTAT, G. PELIN, O. OPREA, R. MARIN, A. PAVAL	W5.1.3 Regarding the dynamics of an airplane in a gust Laurentiu MORARU, Marius STOIA-DJESKA
11:30	11:50	S2.4 Issues on Light Payload Quadcopter Design Customized for Transporting Staple Foods and Medicines <i>Dries BIERENS, Adrien THIBAUT, Vincent BURRE-ESPAGNOU, Martin DILLINGER, George ZDRU, Irina-Carmen ANDREI, Gina Florica STOICA, Nicoleta CRIȘAN, Delia PRISECARU, Cristian STOICA, Anca GRECULESCU</i>	W4.1.4 Challenges in the process of manufacturing the 7-meter Spar Tool subcomponents by Liquid Resin Infusion process A. ARNAU, D. DANILA, M. MARIN, R. VASILE, K. MAYRHOFER	W5.1.4 Stability of a wing model with delay on switching control Ioan URSU, Adrian TOADER, Daniela ENCIU, George TECUCEANU
11:50	12:10	S2.5 Inertial Couples in the Dynamics of Mechanical Systems with Rotors Sorin Stefan RADNEF	W4.1.5 Challenges in the process of designing and manufacturing the Caul Plates elements for a 7-meter tool L. TERSIGNI, A. CORRADO	W5.1.5 CAT detection using a synergy of lidar and wind profilers Razvan PIRLOAGA, Livio BELEGANTE, Sabina STEFAN, Aurelian Andrei RADU
12:10	12:30		W4.1.6 Concepts for safe and effective demoulding process of the 7-meter wing Y. YUROVITCH, C. BANU, A. PAVAL	W5.1.6 A tenable interinstitutional collaboration beyond the completion of the CONTUR project Aurelian-Andrei RADU, Livio BELEGANTE, Razvan PIRLOAGA, Iulia SURUCEANU, Ioan URSU
12:30	13:10	Break		

ROOMS Session 13:10 – 15:10		ROOM 1 Click to join the Virtual Meeting ROOM 1	ROOM 2 Click to join the Virtual Meeting ROOM 2	ROOM 3 Click to join the Virtual Meeting ROOM 3
Session Title		Materials and Structures	Workshop Project "FITCoW"	Experimental Investigations in Aerospace Sciences
Session Chair(s)		Adriana STEFAN (INCAS) Viorel ANGHEL (UPB)		Ion FUIOREA (UPB) Mihai-Victor PRICOP (INCAS)
13:10	13:30	S4.1 3D Phase Shift Measurement Technique with High Definition Images, a Great Achievement of Remote Visual Inspection <i>Mark GRIFFITHS, Frederic NERRIERE</i>	W4.1.7 Challenges of complex monitoring of the curing parameters in coupons for LRI manufacturing <i>A. TORRE, E. RODRIGUEZ, T. GRANDAL, A. PINTO, R. TRAVIESO</i>	S6.1 Deep Learning Aircraft Glide Path and Artificial Horizon Estimation for Visual Navigation Enhancement <i>Ion FUIOREA, Ana-Maria Adriana PISO, Mihai Alexandru BARBELIAN</i>
13:30	13:50	S4.2 Bending Vibration Analysis of Nanobeams using the Nonlocal Motion Equations solved by an Integral Approach <i>Viorel ANGHEL, Ștefan SOROHAN</i>	W4.1.8 Numerical analysis of a curing process for a laminate panel <i>Mircea BOCIOAGĂ, Laurențiu FÎRTAT, Cesar BANU, Adrian PAVĂL</i>	S6.2 Development of damping rigs for trisonic wind tunnel <i>Ionuț BUNESCU, Mihai-Victor PRICOP, Mihaela Gilbert STOICAN, Ruxandra DUȘMĂNESCU</i>
13:50	14:10	S4.3 Conceptual Design of a Low Cost Linear Actuator for Variable Span Wing Application <i>Aynul HOSSAIN</i>	W4.1.9 Impact of composite parts distortion (spring-in) in the overall manufacturing process. Means of mitigation and costs estimation <i>Y. YUROVITCH, Y. OFIR, C. BANU, A. PAVĂL</i>	S6.3 Approaches on flight data recordings <i>Peter KALMUȚCHI, Dumitru POPOVICI, Radu Sebastian ZAHARIA</i>
14:10	14:30	S4.4 Compositionally complex fluorite oxide ceramics for thermal barrier coatings applications – a review <i>Vasile-Adrian SURDU, Ecaterina ANDRONESCU</i>	W4.1.10 Scanning and inspection of composite parts and tools. Processing of raw data and geometry validation <i>S. PALAS, A. PAVĂL, C. BANU</i>	S6.4 Brief history of flight data recording <i>Dumitru POPOVICI, Radu Sebastian ZAHARIA, Peter KALMUȚCHI</i>
14:30	14:50	S4.5 Particularities of the early design phase for a single skin paraglider wing <i>Adrian SALISTEAN, Carmen MIHAI</i>		S6.5 Processing of flight data records <i>Radu Sebastian ZAHARIA, Peter KALMUȚCHI, Dumitru POPOVICI</i>
14:50	15:10	S4.6 Influence of Preload on Failure Modes of Hybrid Metal-Composite Protruding Bolted Joints <i>Calin-Dumitru COMAN</i>	Q & A	S6.6 Shortt-Synchrone Time synchronization in distributed data collection systems- an old solution to a new problem <i>Alexandru- Marius PANAIT</i>
15:10	15:40	Break		
Time (CET)		Plenary ROOM (Click to join the Virtual Meeting)		
Plenary 15:40 – 16:40		Chair: Catalin NAE, President & CEO, INCAS		
15:40	16:10	"Urban Air Mobility – The Electric VTOL Revolution" Plenary Lecture speech by James (Jim) SHERMAN Director of Strategic Development, Organization: Vertical Flight Society, USA		
16:10	16:40	Artificial Neural Networks New Methodology Application for Aerodynamic Coefficients Calculations for Airfoil Shape Design Plenary Lecture speech by Ruxandra Mihaela BOTEZ Canada Research Chair Tier 1 in Aircraft Modeling and Simulation Technologies, ÉTS, University of Quebec, Montreal, Que., Canada		
ROOMS Session 16:40 – 18:40		ROOM 1 Click to join the Virtual Meeting ROOM 1	ROOM 2 Click to join the Virtual Meeting ROOM 2	ROOM 3 Click to join the Virtual Meeting ROOM 3
Session Title		Systems, Subsystems and Control in Aeronautics	Workshop Project "FITCoW"	Aerodynamics
Session Chair(s)		Alina-Ioana CHIRA (INCAS)		Mihai-Victor PRICOP (INCAS)
16:40	17:00	S5.1 Human Performance Envelope Model Study Using Pilot's Measured Parameters <i>Alina-Ioana CHIRA, Florin COSTACHE, Ana Maria DUMITRESCU, Cătălin Sever MOISOIU, Cristian-Alexandru TĂNASE</i>		S1.1 CFD Analysis of a Propfan for Modern Airplanes <i>Mihai Leonida NICULESCU, Mihai Victor PRICOP, Ruxandra Maria Ileana DUSMANESCU, Alexandra STAVARESCU, Alexandru DUMITRACHE</i>
17:00	17:20	S5.2 ENOVIA Business Tools for Concurrent Engineering <i>Ana Lavinia PETRACHE, George SUCIU, Gabriela IOSIF, Iulian IORDACHE</i>	Q & A	S1.2 Propeller low-fidelity constrained optimization for eVTOL <i>Alexandra STĂVĂRESCU, Mihai-Victor PRICOP, Georgiana ICHIM, Ion FUIOREA</i>
17:20	17:40	S5.3 Research on nose landing gear of a military school and training aircraft <i>Ilie NICOLIN, Bogdan Adrian NICOLIN</i>		S1.3 Low-speed airfoil optimization using constrained differential evolution <i>Mihai-Vladuț HOTHAZIE, Matei-Mihai MIRICA</i>
17:40	18:00	S5.4 Preliminary calculation of the landing gear of a military school and training aircraft <i>Ilie NICOLIN, Bogdan Adrian NICOLIN</i>		S1.4 Preliminary performance estimation of a new 15m class glider <i>Victoraș-Florentin ANGHEL, Laurențiu PĂDUREANU, Omar ȘARIF, Mihai-Victor PRICOP</i>

18:00	18:20	S5.5 Development of dielectric elastomeric actuation structures for morphing wings <i>Ștefan URȘU</i>			S1.5 <i>In-house Code for Optimal Design of Horizontal-Axis Wind Turbine Using Blade Element Momentum Method</i> <i>Matei-Mihai MIRICA</i>
18:20	18:40	S5.6 H _∞ robust control design for lateral-directional dynamics of the Rockwell B-1 aircraft <i>Costin ENE, Valentin PANA</i>		End of the Workshop Project "FITCoW"	
End of the 1st Day of the 9th "AEROSPATIAL", Virtual Conference					

Time (CET)		Plenary ROOM (Click to join the Virtual Meeting)	
9:00	9:10	<p>Welcome and introduction by the Conference Chairman Dr. Eng. Catalin NAE, President & CEO, INCAS – National Institute for Aerospace Research “Elie Carafoli”, Bucharest, Romania Dr. Fiz. Adriana STEFAN, President of the Scientific Council of the INCAS – National Institute for Aerospace Research “Elie Carafoli”, Romania</p>	
9:10	10:00	The “Nicolae TIPEI” – Prize Award Ceremony	
		The “Gheorghe VASILCA” – Prize Award Ceremony	
		- <i>Tribute presentation of awards by Dr. eng. Victor MANOLIU (INCAS)</i> - <i>The winners' speech</i>	
10:00	11:00	Presentation of the awarded works	
11:00	11:20	Break	
ROOMS Session 11:20 – 15:00		ROOM 1 Click to join the Virtual Meeting ROOM 1	ROOM 3 Click to join the Virtual Meeting ROOM 3
Session Title		Materials and Structures	Management in Aerospace Activities
Session Chair(s)		Victor MANOLIU (Aerospace Consulting) Radu Robert PITICESCU (IMNR)	Cassandra Venera PIETREANU (UPB)
11:20	11:40	S4.7 The effects of thermal-shock tests on the surface texture and on the micro-abrasion wear resistance of a micro-composite refractory enamel designed to protect some turboreactor parts Ramona Nicoleta TURCU, V. MANOLIU, Georgiana CHIȘIU, I. PENCEA, M. BRÂNZEI, G. IONESCU, M. BOȚAN, A. C. POPESCU-ARGEȘ, M. ION, C. E. SFĂȚ, G. C. CRISTEA	S8.1 Risk Management and Organizational Considerations for Enhancing Safety State Given the Continuous Technological Development Processes Valentin Marian IORDACHE, Sorin Eugen ZAHARIA, Cassandra Venera PIETREANU
11:40	12:00	S4.8 Effect of thermal shock testing on the thermal barrier efficiency of a new micro-composite refractory enamel designed to protect the hot working parts of aircraft engines Ramona Nicoleta TURCU, V. MANOLIU, M. BRÂNZEI, I. PENCEA, G. IONESCU, Adriana STEFAN, A. C. POPESCU-ARGEȘ, M. ION, C. E. SFĂȚ, G. C. CRISTEA	S8.2 A Survey on Composite Applications in Aerospace Engineering and Management Corina-Elena BOȘCOIANU, Emil COSTEA, Radu BOGĂȚEANU, Adriana ȘTEFAN, Irina-Carmen ANDREI
12:00	12:20	S4.9 Researches concerning the lubrication of profiled surfaces with slip boundary conditions Alexandru Valentin RADULESCU, Irina RADULESCU	S8.3 State of Art on Automated Fiber Placement with Applications in Aerospace Engineering and Management Corina-Elena BOȘCOIANU, Emil COSTEA, Radu BOGĂȚEANU, Adriana ȘTEFAN, Irina-Carmen ANDREI
12:20	12:40	S4.10 Experimental study on rheology of animal fats Alexandru Valentin RADULESCU, Irina RADULESCU	S8.4 State of Art on Automated Tape Laying with Applications in Aerospace Engineering and Management Corina-Elena BOȘCOIANU, Emil COSTEA, Radu BOGĂȚEANU, Adriana ȘTEFAN, Irina-Carmen ANDREI
12:40	13:00	S4.11 Correlation between the anisotropy of an AA2021-T351 aluminium rolled thick plate and the occurrence of the stick-slip phenomenon N. A. STOICA, A. M. STOICA, A. TUDOR, V. MANOLIU, M. BOTAN, G. C. CRISTEA	S8.5 Project Management Applied for Composite Materials Used in Aeronautics. Carbon Fiber and Nano-Additives Sylvain TACHEREAU, Dylan VEELERS, Katharyna SZYMANSKA, Paul COZMA-IVAN, Adriana ȘTEFAN, Irina-Carmen ANDREI, Gina Florica STOICA, Nicoleta CRIȘAN, Delia PRISECARU, Cristian STOICA, Anca GRECULESCU
13:00	13:20	S4.12 Eddy Current Technologies: Surface products, Aerospace Challenges Laurent ROUFF	
13:20	13:40	S4.13 Universal thermal shock test installation of materials Mihail BOTAN, Victor MANOLIU, Gheorghe IONESCU, Radu Robert PITICESCU, George Catalin CRISTEA, Alina DRAGOMIRESCU, Radu BOGATEANU	
13:40	14:00	S4.14 Thermal Barrier Coatings based on Rare Earths doped Zirconia Materials obtained by EB-PVD process and their thermal shock properties Anca Elena SLOBOZEANU, Sorina Nicoleta VALSAN, Mircea CORBAN, Radu Robert PITICESCU, Mihail BOTAN, Victor MANOLIU, Bogdan St. VASILE	
14:00	14:20	S4.15 Surface manufacturing of materials by direct energy deposition Mihail BOTAN, Victor MANOLIU, Gheorghe IONESCU, George CRISTEA, Stoica NICOLAE, Alina DRAGOMIRESCU	

Session Title		Astronautics and Astrophysics	
Session Chair(s)		Adriana STEFAN (INCAS)	
14:20	14:40	S3.1 Effect of Aerodynamics Drag and Radiation Pressure on Orbit and Attitude Dynamics Coupling of Small Spacecrafts A. M. ABDELAZIZ	
14:40	15:00	S3.2 On the Earth Gravitational Waves <i>Horia DUMITRESCU,</i> <i>Vladimir CARDOS, Radu BOGATEANU</i>	
End of the 2rd Day of the 9th "AEROSPATIAL", Virtual Conference			