



# Coanda Scientific Events

## Partners:

SC Carfil SA, Brasov



Romanian Committee for the History and  
Philosophy of Science and Technology (CRIFST) of  
the Romanian Academy, Bucharest



**CRIFST**

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The 12<sup>th</sup> Edition of the International Conference  
**Redefining Community in  
Intercultural Context RCIC'25**  
*Military Ethics in the Age of Hybridity*

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The 26<sup>th</sup> Edition of the International Conference AFASES, 2025  
**Scientific Research and  
Education in the Air Force**

BRASOV

22-24 May, 2025



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Romanian Committee for the History and  
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**Thursday, 22<sup>nd</sup> May, 2025**

**19:00 Welcome cocktail at “Henri Coandă” Air Force Academy, Officers’ Dining Facility**

**Friday, 23<sup>rd</sup> May, 2025**

**9:00 – 10:00 Registration of participants – “Henri Coandă” Air Force Academy’s Auditorium**

**10:00 - 10:15 CONFERENCE OPENING – “Henri Coandă” Air Force Academy’s Auditorium**

Brig Gen(AF) Assoc Prof **Marius ȘERBESZKI, PhD** (Rector of “Henri Coandă” Air Force Academy)

**10:15 - 11:45 PLENARY LECTURES - “Henri Coandă” Air Force Academy’s Auditorium**

General (Ret) **Ștefan DĂNILĂ** (Former Chief of General Staff/ Integrated Intelligence Defence and Security Solutions, Bucharest, Romania)

**Nick McCARTER** (Chief Executive Officer, Chartis Federal/ Periscope Aviation, McLean, VA, United States of America)

**Ella Magdalena CIUPERCĂ** (National Institute for Research and Development in Informatics, ICI, Bucharest, Romania)

**11:45 - 12:00 Coffee Break**

**12:00 - 13:30 PARALLEL PANELS**

**13:30 - 14:30 Lunch Break/ Officers’ Dining Facility**

**14:30 - 16:00 PARALLEL PANELS**

**16:15 - 17:30 PARALLEL PANELS**

**18:00 - 23:00 Conference Dinner, The Columns Hall, Officers’ Club**

**Saturday, 24<sup>th</sup> May, 2025**

**10:00 - 14:00 Guided tour. The Black Church, The First Romanian School**

**14:00 Departure of participants**

The 26<sup>th</sup> Edition of the International Conference AFASES, 2025

# Scientific Research and Education in the Air Force

## AFASES 2025 CONFERENCE PROGRAMME

**Friday, 23<sup>rd</sup> May, 2025 12:00-13:30**

MILITARY SCIENCES. HISTORY OF MILITARY SCIENCE & TECHNOLOGY / ROOM F.E.3-4	HUMANITIES & SOCIAL SCIENCES/ ROOM F.E.2-10
<p><b>Chairs: Tiberiu TĂNASE &amp; Traian OSTAIE</b></p> <p><b>1. Sevladin STOYKOV, Ivo RADULOV, Zhivo PETROV</b> (Rakovski National Defence College, Sofia) – The Role of the Rakovski National Defence College in Increasing the Resilience of the National Security System</p> <p><b>2. Traian OSTAIE</b> (Romanian Committee for the History and Philosophy of Science and Technology, CRIFST, of the Romanian Academy, Bucharest) – Learned Lessons through Clausewitz Perspective</p> <p><b>3.Tiberiu TĂNASE, Camelia-Elena GOLEANU</b> (Romanian Committee for the History and Philosophy of Science and Technology, CRIFST, of the Romanian Academy, Bucharest) – Information, a Weapon of War</p>	<p><b>Chairs: Marius MILANDRU &amp; Cristian DRAGOMIR</b></p> <p><b>1. Angela-Karina AVĂDĂNEI</b> (“Mihai Viteazul” National Intelligence Academy, Bucharest), <b>Adrian LESENCIUC</b> (“Mihai Viteazul” National Intelligence Academy, Bucharest/ “Henri Coandă” Air Force Academy, Braşov) – Hungarian Language Media in Romania: Setting Minority Perceptions of Russia’s War Against Ukraine</p> <p><b>2. Margarita GAVRILOVA</b> (“Georgi Benkovski” Air Force Academy, Dolna Mitropolia) – Proactive Learning-Shifting Towards a More Innovative Higher Education</p> <p><b>3. Pavlin TSONEV</b> (“Georgi Benkovski” Air Force Academy, Dolna Mitropolia) – Enhancing Student Assessment: a Dual-Method Approach</p> <p><b>4. Valya TSVETANOVA</b> (“Georgi Benkovski” Air Force Academy, Dolna Mitropolia) – Framing Aerodynamic Terminology: a Linguistic Approach  Preliminary Study </p> <p><b>5.Marius MILANDRU</b> (“Henri Coandă” Air Force Academy, Braşov) – Implementation of Project Management within the Military Organization</p>

AERONAUTICAL AND ATMOSPHERIC SCIENCES [I]/ ROOM F.E.3-4	ENGINEERING AND APPLIED SCIENCES/ ROOM F.E.2-10
<p><b>Chairs: Vasile PRISACARIU &amp; Danail DAMYANOV</b></p> <p><b>1. George-Răzvan BUICAN, Robert APREOTESEI</b> (Transilvania University, Brasov) – Design and Experimental Evaluation of an Ion Wing Prototype</p> <p><b>2. George-Răzvan BUICAN, Alexandrina IVAȘCU, Andrei BENCZE</b> (Transilvania University, Brasov) – Bio Composite Materials as a Sustainable Solution for Modern Industries</p> <p><b>3. Andrei BENCZE, George-Răzvan BUICAN</b> (Transilvania University, Brasov) – Design Optimization Using FEM for Cargo Floor Strut</p> <p><b>4. Andrei BENCZE</b> (Transilvania University, Brasov) – Study on the Use of 3D Printed Parts for Aircrafts and Drones</p> <p><b>5. Darius BOGHIEZ, George-Răzvan BUICAN</b> (Transilvania University, Brasov) – Design and Experimental Evaluation of an Ion Engine Prototype.</p> <p><b>6. Danail DAMYANOV</b> (“Georgi Benkovski” Air Force Academy, Dolna Mitropolia) – Structural Analysis. The Malfunctions of the Gas Turbine Engine Ai-25TI</p> <p><b>7. Vasile PRISACARIU, Alexandru-Ioan CIUR,</b> (“Henri Coandă” Air Force Academy, Brașov) – Aerodynamic Analysis Regarding the Flight Parameters of Modern Jet Trainers</p> <p><b>8. Alexandru-Nicolae TUDOSIE</b> (University of Craiova), <b>Elena-Elisa DRAGOMIR</b> (In Flight Test Research and Innovation Center, Craiova), <b>Daniel-Cristian DRAGOMIR</b> (University of Craiova) – Automatic Control of a Supersonic Air Inlet with Variable Inner Cross-Section</p>	<p><b>Chairs: Cornel ARAMĂ &amp; Liviu GĂINĂ</b></p> <p><b>1. Gabriel ANASTASIU</b> (“Dragos Voda” National College, Câmpulung Moldovenesc), <b>Andreea Valentina ANASTASIU</b> (Polytechnic University, Cluj-Napoca), – Aspects of Hamming Encryption Using Raspberry PI Pico</p> <p><b>2. Cornel ARAMĂ</b> (“Henri Coandă” Air Force Academy, Brașov) – A Study on Methods to Apply the Energy Conservation Theorem in the Investigation of Traffic Accidents Using Detailed Breakdown of Energies</p> <p><b>3. Nicolae CONSTANTIN, Anișor NEDELCU</b> (Transilvania University, Brasov) – Enhancing Flood Response in Romania: The Role of AI and Integrated Alarm Systems</p> <p><b>4. Andrei LUCHIAN</b> (Transilvania University, Brasov) – Cybersecurity in Airports – Challenges, Technologies, and Protection Strategies for Critical Infrastructure</p> <p><b>5. Liviu GĂINĂ, Alin MECLEA</b> (“Henri Coandă” Air Force Academy, Brașov) – Energy Independence: An Essential Pillar for Critical Infrastructure Resilience</p>

**Friday, 23<sup>rd</sup> May, 2025 16:15-17:30**

AERONAUTICAL AND ATMOSPHERIC SCIENCES [II]/ ROOM F.E.3-4	AERONAUTICAL AND ATMOSPHERIC SCIENCES [III]/ ROOM F.E.2-10
<p style="text-align: center;"><b>Chairs: Ionică CÎRCIU &amp; Mihai PRICOP</b></p> <p><b>1. Ionică CÎRCIU</b> (“Henri Coandă” Air Force Academy, Braşov) – Versatility, Adaptability and Flexibility of Helicopter Armament Variants</p> <p><b>2. Constantin Adrian MIHAI, Romulus LUNGU</b> (Polytechnic University, Bucharest) – Nonlinear Dynamics and Adaptive Control Using The Dynamic Inversion Concept and Neural Networks for a Guidance Gyrosystem (GG) With One Gyroscope and Two Suspension Gimbals (GAR) Part 1. Obtaining the Nonlinear Dynamic Model</p> <p><b>3. Constantin Adrian MIHAI, Romulus LUNGU</b> (Polytechnic University, Bucharest) – Nonlinear Dynamics and Adaptive Control Using The Dynamic Inversion Concept and Neural Networks for a Guidance Gyrosystem (GG) With One Gyroscope and Two Suspension Gimbals (GAR) Part 2. Adaptive Control Architecture Design and Validation</p> <p><b>4. Mihai PRICOP, Ionuţ BUNESCU, Vlăduţ HOTHAZIE, Mihăiţă Gilbert STOICAN, Leonida NICULESCU</b> (“Elie Carafoli” National Institute for Aerospace Research and Development, Bucharest) – Impact Theory Applied for Hypersonic Vehicles</p> <p><b>5. Mihai PRICOP, Ionuţ BUNESCU, Vlăduţ HOTHAZIE, Mihăiţă Gilbert STOICAN</b> (“Elie Carafoli” National Institute for Aerospace Research and Development, Bucharest) – Identification of Optimal Dihedral Angle of an X-Wing Loitering Munition</p>	<p style="text-align: center;"><b>Chairs: Adrian PITICAR &amp; Eduard MIHAI</b></p> <p><b>1. Adrian PITICAR, Alexandru TUDOR</b> (“Henri Coandă” Air Force Academy, Braşov) – Increase in freezing level height in Romania over the 1980-2024 period</p> <p><b>2. Marilena-Ioana ZUZEAC, Bogdan ANTONESCU</b> (University of Bucharest) – The Climatology of Aviation Hazards Impacting Romanian Airports</p> <p><b>3. Vasile PRISACARIU, Răzvan MĂNESCU</b> (“Henri Coandă” Air Force Academy, Braşov) – Considerations for of Atmospheric and Environmental Data Acquisition with Quadcopter UAV</p> <p><b>4. Simona ANDREI, Mariana ADAM, Alexandru DANDOCSE</b> (National Institute for Research and Development in Optoelectronics - INOE 2000) – The use of CAMS products for supporting the atmospheric monitoring and air quality assessment in Romania.</p> <p><b>5. Marius TUTUNEA</b> (“Henri Coandă” Air Force Academy, Braşov) – Research of the Ground Mobile UAV Stations Used in Search and Rescue Missions</p> <p><b>6. Eduard MIHAI</b> (“Henri Coandă” Air Force Academy, Braşov) – The Future of Air Navigation in the Context of Evolving Artificial Intelligence</p>