

CONFERENCE PROGRAM

Wednesday 26.10.2016 – “ELIE CARAFOLI” Amphitheatre

8.³⁰ - 9.³⁰ **REGISTRATION**

Coffee Break

9.³⁰ - 10.⁰⁰ **OPENING SESSIONS**

Welcome speech:

- **Catalin NAE**, General Manager, INCAS – National Institute for Aerospace Research “Elie Carafoli”, Bucharest, Romania
- **Anton ANTON**, Technical University of Civil Engineering Bucharest, Romania

PLENARY SESSIONS

PL **Chairman:**

Catalin NAE

10.⁰⁰ - 10.³⁰

PL 1 **Jochen WILD** (German Aerospace Center, Institute of Aerodynamics and Flow Technology, Lilienthalplatz 7, 38108 Braunschweig, Germany), *On the most common misunderstandings of high-lift flows.*

10.³⁰ - 11.⁰⁰

PL 2 **Hans BARNERSSOI** (Ex-Project Manager, Airbus Helicopters Germany, Industriestrasse 4, 86609 Donauwörth, Germany), *Setting up of a Fast Rotorcraft Project. Experience gained by a Project Manager.*

11.⁰⁰ - 11.³⁰

Coffee Break

11.³⁰ - 12.⁰⁰

PL 3 **Eric COUSTOLS** (Director of Clean Sky 2 Programme at ONERA, ONERA Centre of Toulouse, 2 Avenue Edouard Belin FR-31055 Toulouse CEDEX 4, France), *“Review of Research Activities conducted at ONERA on Laminar Flows and Wing Buffet Control”.*

12.⁰⁰ - 12.³⁰

PL 4 **Adriana NASTASE** (RWTH, Aachen University, Germany), *Theoretical and Experimental Exploration of Supersonic Flow (Part 1).*

12.³⁰ - 13.⁰⁰

PL 5 **Octavian Thor PLETER, Cristian Emil CONSTANTINESCU** (“POLITEHNICA” University of Bucharest, Faculty of Aerospace Engineering, Gh. Polizu Street 1-5, 011061, Bucharest, Romania), *Global Air and Maritime Co-operative Surveillance.*

13.⁰⁰ - 14.⁰⁰

Lunch

“ELIE CARAFOLI” Amphitheatre

Wednesday 26.10.2016. Afternoon session

PLENARY SESSIONS

PL **Co-Chairman:**

Sorin RADNEF

Mircea BOSCOIANU

14.⁰⁰ - 14.³⁰

PL 6 **Horia DUMITRESCU, Vladimir CARDOS** (“Gheorghe Mihoc – Caius Iacob” Institute of Mathematical Statistics and Applied Mathematics of the Romanian Academy, Calea 13 Septembrie no. 13, 050711 Bucharest, Romania), *Issues of Paradigmatic Nature of Origin of Turbulence*

Wednesday 26.10.2016 – “ELIE CARAFOLI” Amphitheatre

Section 1: Aerodynamics

Wednesday 26.10.2016. Afternoon session

SI.2 Co-Chairman:

Sterian DANAILA
Florin FRUNZULICA

14.³⁰ - 14.⁵⁰

SI.2.1 *Numerical illustration of the global and local stability and instability of the constant spatially developing 1D gas flow*, Agneta M. BALINT¹, Stefan BALINT^{*.2} (¹West University of Timisoara, Department of Physics, Bulv. V. Parvan 4, 300223 Timisoara, Romania, ²West University of Timisoara, Department of Computer Science, Bulv. V. Parvan 4, 300223 Timisoara, Romania).

14.⁵⁰ - 15.¹⁰

SI.2.2 *Numerical illustration of the global and local stability and instability of the constant spatially developing 2D gas flow*, Agneta M. BALINT¹, Stefan BALINT^{*.2} (¹West University of Timisoara, Department of Physics, Bulv. V. Parvan 4, 300223 Timisoara, Romania, ²West University of Timisoara, Department of Computer Science, Bulv. V. Parvan 4, 300223 Timisoara, Romania).

15.¹⁰ - 15.³⁰

SI.2.3 *Assessment of some high-order finite difference schemes on the scalar conservation law with periodical conditions*, Alina BOGOI, Dragos ISVORANU, Sterian DANAILA* ("POLITEHNICA" University of Bucharest, Department of Aerospace Engineering, Splaiul Independenței 313, 060042, Bucharest, Romania).

15.³⁰ - 15.⁵⁰

SI.2.4 *Ice Accretion Prediction for 2D Geometries in the Presence of Ice Crystals*, Marius Gabriel COJOCARU*, Mihai Leonida NICULESCU, Dumitru PEPELEA, Mihaita Gilbert STOICAN, Mihai Victor PRICOP (INCAS – National Institute for Aerospace Research “Elie Carafoli”, Flow Physics Department, Numerical Simulation Unit, B-dul Iuliu Maniu 220, Bucharest 061136, Romania).

15.⁵⁰ - 16.¹⁰

SI.2.5 *Hybrid Methods for Design and Analysis for Small UAV Rotor Blades*, Alexandru DUMITRACHE, Florin FRUNZULICA, Alexandru MITREA (“Gheorghe Mihoc – Caius Iacob” Institute of Mathematical Statistics and Applied Mathematics of the Romanian Academy, Bucharest, Calea 13 Septembrie no. 13, 050711 Bucharest, Romania and “POLITEHNICA” University of Bucharest, Faculty of Aerospace Engineering, Gh. Polizu Street 1-5, 011061, Bucharest, Romania).

16.¹⁰ - 16.⁴⁰

Coffee Break

16.⁴⁰ - 17.⁰⁰

SI.2.6 *Numerical Investigation of a Vertical-Axis Wind Turbine with Variable-Pitch*, Florin FRUNZULICĂ^{*.1,2}, Ciprian OLTEANU³ (^{*.1}POLITEHNICA University of Bucharest, Faculty of Aerospace Engineering, Polizu 1-6, RO-011061, Bucharest, Romania; ²Institute of Statistics and Applied Mathematics, 13 Septembrie 13, sect.5, RO-050711, Bucharest, Romania; ³Turbomecanica S.A., Iuliu Maniu 244, sect 6, RO-061126, Bucharest, Romania).

Wednesday 26.10.2016 – “ELIE CARAFOLI” Amphitheatre

Section 3: Astronautics and Astrophysics

Wednesday 26.10.2016. Afternoon session

S3.2 **Co-Chairman:**

Corneliu BERBENTE

Dan N. DUMITRIU

17.⁰⁰ - 17.²⁰

S3.2.1 *A Possible Universe in Pulsation by Using a Hydro-Dynamical Model for Gravity*, Corneliu BERBENTE (“POLITEHNICA” University of Bucharest, Faculty of Aerospace Engineering, Department “Elie Carafoli” Aerospace Science, Polizu Street 1-7, postal code 011061, sector 1, Bucharest).

17.²⁰ - 17.⁴⁰

S3.2.2 *General Oscillatory Motion of a Large Spacecraft around its Equilibrium Attitude Posture, due to the Gravitational Moments Effect*, Ion STROE¹, Dan N. DUMITRIU² (¹“POLITEHNICA” University of Bucharest, 313 Splaiul Independenței, Bucharest 060042, Romania; ²Institute of Solid Mechanics of the Romanian Academy, Str. Constantin Mille 15, Bucharest 010141, Romania).

17.⁴⁰ - 18.⁰⁰

S3.2.3 *Using Binet type of equation for relative motion*, Roxana Alexandra PETRE*, Thien Van NGUYEN, Ion STROE (“POLITEHNICA” University of Bucharest, Department of Mechanics, 313 Splaiul Independentei, Bucharest, Romania).

18.⁰⁰ - 18.²⁰

S3.2.4 *Concept Study of Radio Frequency (RF) Plasma Thruster for Space Propulsion*, Anna-Maria Theodora ANDREESCU¹, Maximilian-Vlad TEODORESCU², Jeni Alina POPESCU¹, Valeriu-Alexandru VILAG¹, Adrian STOICESCU¹ (¹Romanian Research and Development Institute for Gas Turbines COMOTI, <http://www.comoti.ro>; ²National Institute for Laser, Plasma and Radiation Physics INFLPR, <http://www.inflpr.ro>).

18.²⁰ - 18.⁴⁰ **Q & A**

19.⁰⁰ **GALA DINNER**

Thursday 27.10.2016 – “ELIE CARAFOLI” Amphitheatre

8.³⁰ - 9.⁰⁰ **REGISTRATION**
Coffee Break

9.⁰⁰ - 10.⁰⁰ The “Nicolae Tîpei” Prize Award Ceremony

PLENARY SESSIONS

PL **Co-Chairman:**

Catalin NAE
Sorin RADNEF

10.⁰⁰ - 10.³⁰

PL 7 **Ruxandra Mihaela BOTEZ** (ETS, University of Quebec, Laboratory of Applied Research in Active Controls, Avionics and AeroServoElasticity LARCASE, www.larcase.etsmtl.ca, 1100 Notre Dame West, Montreal, Canada), *New Methodologies for Missed Approach Computing in Terms of Fuel Consumption and Emissions for a Boeing B-737-400.*

10.³⁰ - 11.⁰⁰

PL 8 **Adi ADUMITROAIE** (Institute for Constructional Lightweight Design, JOHANNES KEPLER, UNIVERSITY LINZ, Altenberger Straße 69, Science Park I, MT0220, 4040 Linz, Austria), *Synergy between Safety Concepts and Damage Tolerance Capabilities of FRP Composite Structures.*

11.⁰⁰ - 11.²⁰

Coffee Break

11.²⁰ - 11.⁵⁰

PL 9 **Virgil STANCIU** (“POLITEHNICA” University of Bucharest, Faculty of Aerospace Engineering, Gh. Polizu Street 1-5, 011061, Bucharest, Romania), *Design, the Way to Aerospace Metaengineering.*

11.⁵⁰ - 12.²⁰

PL 10 **Yassir ABBAS** (Aeronautical Engineering Department, Engineering College, Karary University, Khartoum, Sudan), *Aerodynamic of Damaged Aircraft.*

Thursday 27.10.2016 – “ELIE CARAFOLI” Amphitheatre

Section 1: Aerodynamics

Thursday 27.10.2016. Morning session

S1.1 Co-Chairman:

Ruxandra Mihaela BOTEZ
Virgil STANCIU

12.²⁰ - 12.⁴⁰

S1.1.7 Holistic Treatment of Double Flow Turbofan Performance Using Harmonic Hyperbolic Law, Virgil STANCIU, Cristina PAVEL (“POLITEHNICA” University of Bucharest, Faculty of Aerospace Engineering, Gh. Polizu Street 1-5, 011061, Bucharest, Romania).

12.⁴⁰ - 13.⁰⁰

S1.1.8 The Development of a Reduced Order Model for The Aeroelastic Analysis of a Test Wing Used for Wind-Tunnel Aeroelastic Experiments, Marius STOIA-DJESKA (“POLITEHNICA” University of Bucharest, Faculty of Aerospace Engineering, Gh. Polizu Street 1-5, 011061, Bucharest, Romania).

13.⁰⁰ - 14.⁰⁰

Lunch

Thursday 27.10.2016 – “ELIE CARAFOLI” Amphitheatre

Section 1 – Aerodynamics

Thursday 27.10.2016. Afternoon session

S1.2 Co-Chairman:

Doru SAFTA
Valentin Adrian Jean BUTOESCU

14.⁰⁰ - 14.²⁰

S1.2.9 Evaluation of the Cmark Panel Method Software for the Solution of Flow Around Airfoils, Yassir ABBAS^{*1}, Ahmed ABBAS², Qussay ALSANOSI² (¹Aeronautical Engineering Department, Engineering College, Karary University, Khartoum, Sudan; ²Aeronautical Research Centre, Khartoum, Sudan).

14.²⁰ - 14.⁴⁰

S1.2.10 Study on the aerodynamic forces acting on a passenger train consisting of two railcars Siemens Desiro, Sorin ARSENE*, Ioan SEBESAN "POLITEHNICA" University of Bucharest, Transport Faculty, Depart Rolling Stock Railway, Splaiul Independentei no. 313, Sector 6, 060042, Bucharest, Romania).

14.⁴⁰ - 15.⁰⁰

S1.2.11 Influence of the Rigid Wind Tunnel Walls on a Harmonically Oscillating Wing, Valentin Adrian Jean BUTOESCU (INCAS – National Institute for Aerospace Research “Elie Carafoli”, B-dul Iuliu Maniu 220, Sector 6, Bucharest 061126, Romania).

15.⁰⁰ - 15.²⁰

S1.2.12 Towards The Effects of Initial Grain Temperatures and Erosive Burning on Homogeneous Solid Propellant Combustion, Doru SAFTA¹, Ioan ION² (¹MTA - Military Technical Academy, B-dul George Cosbuc 81-83, Bucharest 050141, Romania; ²University “Eftimie Murgu”, Piata Traian Vuia 1-4, Resita 320085, Romania).

15.²⁰ - 15.⁴⁰

SI.2.13 QUASI-3D 1D Quasi-Steady Flow Solid Rocket Motor Grain Burnback Analysis, Alexandru IONEL, Mihaela NASTASE (INCAS – National Institute for Aerospace Research “Elie Carafoli”, B-dul Iuliu Maniu 220, Sector 6, Bucharest 061126, Romania).

15.⁴⁰ - 16.⁰⁰

Coffee Break

SI.2 Co-Chairman:

Valentin Adrian Jean BUTOESCU

Marius Gabriel COJOCARU

16.⁰⁰ - 16.²⁰

SI.2.14 Hypersonic Aerodynamics for Several Test Cases, Mihai Leonida NICULESCU, Maria Cristina FADGYAS, Marius Gabriel COJOCARU, Mihai Victor PRICOP, Dumitru PEPELEA, Mihaita Gilbert STOICAN INCAS – National Institute for Aerospace Research “Elie Carafoli”, B-dul Iuliu Maniu 220, Sector 6, Bucharest 061126, Romania.

16.²⁰ - 16.⁴⁰

SI.2.15 Simulation Tool for Predicting Ground Test Performance of a Turbofan Propulsion System Air Inlet, Andreea CERNAT, Alexandru IONEL, Irina-Carmen ANDREI, Stefan PALAS, Adrian MIHAI, Tiberiu SALAORU (INCAS – National Institute for Aerospace Research “Elie Carafoli”, B-dul Iuliu Maniu 220, Sector 6, Bucharest 061126, Romania).

16.⁴⁰ - 17.⁰⁰

SI.2.16 2D 0-D Unsteady Flow Numerical Modelling of Solid Rocket Motor Grain Burnback of Complex Propellant Geometries, Mihaela NASTASE, Alexandru IONEL (INCAS – National Institute for Aerospace Research “Elie Carafoli”, B-dul Iuliu Maniu 220, Sector 6, Bucharest 061126, Romania).

18.⁰⁰ **CLOSING SESSIONS**