PERSONAL INFORMATION

Costin ENE

WhatsApp, Messenger

Sex Male | Date of birth | Nationality Romanian

JOB APPLIED FOR
POSITION
PREFERRED JOB
STUDIES APPLIED FOR
PERSONAL STATEMENT

Control Systems Specialist

WORK EXPERIENCE

Oct 2012 – Today

Assistant Professor

University "Polithenica" of Bucharest, Department "Nicolae Tipei"; Polizu Street 1-7, postal code 011061, sector 1, Bucharest, Polizu Building; email: inginerie.aerospatiala@upb.ro ; website: www.aero.pub.ro ;

Responsible for teaching students the following classes:

- Programming Languages (MATLAB, C++, Fortran)
- On-board Equipment and Aerial Navigation(Laboratory testing of mechanical sensors: Altimeter, Vertical speed indicator, Air speed indicator, Capacitive fuel level sensor, Thermoresistance, Thermocouple)
- Digital Avionics (Laboratory programming and testing of analog/digital sensors that use serial communication, SPI, I2C, etc.: RTC, Temperature Sensors, Inertial Sensors, Accelerometer, Gyroscope, Magnetometer, Barometric pressure sensor, etc.)
- Dynamic Systems and Control Theory (introductive notions regarding stability, robustness margins, pole placement, controllability, observability, state estimators)
- Aircraft Stability and Control (classical aircraft autopilots design for longitudinal and lateral-directional linearized dynamics, gain scheduling, PID, etc)
- Automatic Flight Control Systems and Synthesis of Guidance Laws (advanced aircraft autopilots design for longitudinal and lateral-directional linearized dynamics, LQR, LQI, LQG, H-infinity, etc.)

Nov 2012 – Jun 2013

- Doctoral research stage at CRANFIELD UNIVERSITY, School of Aerospace

Jul 2019 – Feb 2021

- Member of the UPB team in the framework of the project called "Advanced Control Techniques for Future Launchers" in collaboration with ESA. Partially responsible for micro-launcher verification and validation, mathematical modeling, control algorithms development, guidance algorithms. This project also included designing and simulation of a demonstrator 6-DOF model for which I collaborated in the development of the control architecture.

Oct 2021 – Today

- Member of the UPB team in the framework of the project called "SISTEM INOVATIV PENTRU COMBATEREA TRANSFRONTALIERA A TERORISMULUI, CRIMEI ORGANIZATE, TRAFICULULUI ILEGAL DE BUNURI SI PERSOANE". Partially responsible for: Technical specification, design and implementation of the fixed wing UAV used for monitoring and the rotating wing UAV used for intervention, programing autopilots (MAVLink communication protocol), data acquisition, sensor integration.

EDUCATION AND TRAINING

Oct 2003 – Jun 2008 **Bachelor of Science in Aerospace Engineering 8.54 / 9.50**

Replace with EQF (or other) level if relevant

University "Polithenica" of Bucharest

- Launch vehicle Modelling
- Multi-dimensional aerodynamic coefficient interpolation.

Oct 2008 – Jun 2010 **Master of Science in Aerospace Engineering 8.98 / 9.50**

Replace with EQF (or other) level if relevant

University "Polithenica" of Bucharest

- Avionics and Aerial Navigation
- Adaptive Control

Oct 2010 – Jun 2016 **Doctor of Science in Aerospace Engineering**

Replace with EQF (or other) level if relevant

- PhD. Thesis "Application of L1 Adaptive Controller to the Dynamics of F18-HARV" in June 2016
- Automatic Flight Control Systems
- L_1 Norm Computation
- L_1 Adaptive Control Design
- Rank Minimization with Application to Systems Theory
- Aircraft Modelling; Thrust Vectoring

Nov 2019 – Oct 2021 **Post-doc research**

- Entrepreneurial studies in the framework of the project "BeAntreprenor"
- Mathematical modelling for micro-launchers
- Guidance optimization for launch vehicles
- Flexible modes and sloshing attenuation
- H-infinity control architectures

PERSONAL SKILLS

Mother tongue(s): Romanian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
	Replace with name of language certificate. Enter level if known.				
French	B1	B1	A1	A1	B1
	Replace with name of language certificate. Enter level if known.				
Spanish	B1	B1	B1	B1	A1
	Replace with name of language certificate. Enter level if known.				

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
Common European Framework of Reference for Languages

Communication skills

- good communication skills gained through experience as Assistant Professor
- good communication gained through several article presentations at both national and international conferences.
- open minded
- humble
- emphatic

Organisational / managerial skills

- leadership
- self-motivation
- team spirit and team work

Job-related skills

- innovation and creativity
- understanding and explaining
- problem solving and implementation
- modelling dynamics and control systems

Digital competence

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Proficient user	Proficient user	Proficient user	Proficient user	Proficient user

Levels: Basic user - Independent user - Proficient user
Digital competences - Self-assessment grid

Replace with name of ICT-certificate(s)

- MATLAB, SIMULINK, Simscape, Appdesigner
- Visual Studio C++
- Fortran
- FlightGear
- DroneKit-Phyton with APM Planner
- Arduino
- AutoCAD
- Microsoft Office
- LaTeX
- Ubuntu

Other skills

- Good and pleasant communication when interacting with people regarding different topics, not only work related

Driving licence

B

ADDITIONAL INFORMATION

Publications
Presentations
Conferences

- C. Ene, **Nonlinear Control Law Design for Lateral Aircraft Dynamics at High Angles of Attack**, Applied Mechanics and Materials, Vols. 325-326, pp. 1210-1214, 2013
- C. Ene, **Integral Sliding-Mode Control with Applications to Aircraft Dynamics**, Applied Mechanics and Materials, Vol. 245, pp. 340-345, 2013
- C. Ene, J. F. Whidborne, A.-M. Stoica, **Application of L1 Adaptive Controller to Longitudinal Dynamics of a High Manoeuvrability Aircraft**, 19th IFAC ACA 2013
- C. Ene, A. M. Stoica, **Application of L1 Adaptive Control to a High Maneuverability Aircraft**, Applied Mechanics and Materials, Vol. 772, pp. 418-423, 2015, Awarded, Best Paper
- C. Ene, A.-M. Stoica, **A static output feedback approach for inverting a dynamic system**. Applied Mechanics & Materials. 2016, Vol. 841, p338-343. 6p.
- Costin Ene, **Path Following for the F-18 HARV aircraft**, U.P.B. Sci. Bull., 2016
- Costin Ene, Adrian-Mihail Stoica, Petrisor-Valentin Parvu, **Autopilot Design for the Lateral-Directional Motion of an UAV**, AFASES 25-27 May 2017, Brasov
- Costin Ene, **Application of L1 Adaptive Controller to the Dynamics of F18-HARV**, LAMBERT Academic Publishing, ISBN-13: 978-613-4-95856-1, March 2018.
- Adrian-Mihail Stoica, Costin Ene, and Istvan-Barna Jakab, **A discrete-time Kalman filtering method for launch vehicle under parametric modelling uncertainty**, MATEC Web of Conferences 304, 07008 (2019), https://doi.org/10.1051/matecconf/201930407008, EASN 2019
- Costin ENE, Valentin PANA, **H∞ robust control design for lateral-directional dynamics of the Rockwell B-1 aircraft**, Virtual International Conference on Aerospace Sciences "AEROSPATIAL 2020", 15-16 October 2020, Bucharest, Romania. Session title: Systems, Subsystems and Control in Aeronautics, Room 1, S5.6. ISSN 2067-8614, ISSN-L 2067-8614
- Costin ENE , Valentin PANA, **H∞ ROBUST CONTROL DESIGN FOR A LARGE FLEXIBLE AIRCRAFT,** U.P.B. Sci. Bull., Series D, Vol. 83, Iss. 3, 2021 ISSN 1454-2358
- Chelaru, T.V., Pana, V., Ene, C. **Performance Evaluation for Launcher Testing Vehicle,** Aerospace, Volume: 9, Issue: 9, Published Sept. 2022, ISI, WOS:000857621200001.
- Chelaru T-V, Constantinescu CE, Pană V, Ene C, Chelaru A. **Stability of Single-Channel Homing Rolling Aerospace Vehicle**. *Aerospace*. 2024; 11(8):660. https://doi.org/10.3390/aerospace11080660

ANNEXES

Data:

19.08.2025

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Lista de lucrari As.Dr.Ing. Costin Ene

- C. Ene, **Nonlinear Control Law Design for Lateral Aircraft Dynamics at High Angles of Attack**, Applied Mechanics and Materials, Vols. 325-326, pp. 1210-1214, 2013
- C. Ene, **Integral Sliding-Mode Control with Applications to Aircraft Dynamics**, Applied Mechanics and Materials, Vol. 245, pp. 340-345, 2013
- C. Ene, J. F. Whidborne, A.-M. Stoica, **Application of L1 Adaptive Controller to Longitudinal Dynamics of a High Manoeuvrability Aircraft**, 19th IFAC ACA 2013
- C. Ene, A. M. Stoica, **Application of L1 Adaptive Control to a High Maneuverability Aircraft**, Applied Mechanics and Materials, Vol. 772, pp. 418-423, 2015, Awarded, Best Paper
- C. Ene, A.-M. Stoica, **A static output feedback approach for inverting a dynamic system**. Applied Mechanics & Materials. 2016, Vol. 841, p338-343. 6p.
- Costin Ene, **Path Following for the F-18 HARV aircraft**, U.P.B. Sci. Bull., 2016
- Costin Ene, Adrian-Mihail Stoica, Petrisor-Valentin Parvu, **Autopilot Design for the Lateral-Directional Motion of an UAV**, AFASES 25-27 May 2017, Brasov
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- Costin ENE , Valentin PANA, **H∞ ROBUST CONTROL DESIGN FOR A LARGE FLEXIBLE AIRCRAFT,** U.P.B. Sci. Bull., Series D, Vol. 83, Iss. 3, 2021 ISSN 1454-2358
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