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Ciprian-Marius Larco

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WORK EXPERIENCE

2018 – CURRENT Bucuresti, Romania

DIRECTOR OF THE DEPARTMENT OF INTEGRATED SYSTEMS OF AVIATION AND MECHANICS
MILITARY TECHNICAL ACADEMY "FERDINAND I"

- Coordination of the study programs of the department
- Coordination of the teaching committees of the department
- Coordination of the scientific activity of the department

2020 – CURRENT București, Romania

ASSOCIATE PROFESSOR MILITARY TECHNICAL ACADEMY "FERDINAND I"

■ Didactic and research activity: Mechanics of aircraft flight, Numerical methods, Programming techniques, Unmanned aircraft.
■ Preparation of lectures, laboratory hours, didactic materials.
■ Student assessment activities.
■ Mentoring study groups.
■ Guiding degree projects.
■ Elaboration and publication of scientific articles, participation in scientific research projects.

Department Department of Integrated Systems of Aviation and Mechanics

2012 – 2020 București, Romania

UNIVERSITY LECTURER MILITARY TECHNICAL ACADEMY "FERDINAND I"

■ Didactic and research activity: Aircraft flight mechanics, Numerical methods, Programming techniques, Unmanned aircraft.
■ Preparation of lectures, laboratory hours, didactic materials.
■ Student assessment activities.
■ Mentoring study groups.
■ Guidance of diploma projects.
■ Elaboration and publication of scientific articles, participation in scientific research projects.

Department Department of Integrated Systems of Aviation and Mechanics

2007 – 2012 București, Romania

UNIVERSITY TEACHING ASSISTANT MILITARY TECHNICAL ACADEMY "FERDINAND I"

■ Didactic and research activity: Mechanics, Strength of materials, Numerical methods, Programming techniques.
■ Preparation of seminar hours, laboratory hours, course projects.
■ Mentoring study groups.
■ Elaboration and publication of scientific articles, participation in scientific research projects.

Department Department of Integrated Systems of Aviation and Mechanics

2004 – 2007 București, Romania

HEAD OF LABORATORY MILITARY TECHNICAL ACADEMY "FERDINAND I"

■ Preparation of laboratory hours, didactic materials.
■ Administrative activities in support of education.

■ Elaboration and publication of scientific articles, participation in scientific research projects.

Department Department of Integrated Systems of Aviation and Mechanics

2000 – 2004 Timisoara, Romania
HEAD OF AIRCRAFT TECHNICAL GROUP 93 AIRBASE

■ Managing operational and prophylactic maintenance if Mig 21 Lancer aircraft.
■ Participation in the organization and operation of flight activities.

EDUCATION AND TRAINING

2012 București, Romania
DOCTORAL DEGREE (PHD) CERTIFICATE Military Technical Academy

Inginerie aerospațială

2001 Toulouse, France
DIPLOMA OF ADVANCED STUDIES (DEA) INP-ENSEEIHT

Mecanica fluidelor

2000 București, Romania
BACHELOR'S DEGREE Military Technical Academy

Inginerie aerospațială

1994 Botoșani, Romania
HIGH SCHOOL DIPLOMA National College "A.T. Laurian"

LANGUAGE SKILLS

Mother tongue(s): **ROMANIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	B2	B2	B2	B2	B2
FRENCH	B2	B2	B2	B2	B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

ADDITIONAL INFORMATION

CONFERENCES AND SEMINARS

(selection)

1. Grigorie, L.T., Jula, N., Corcău, C.L., Adochiei I.R., **Larco, C.**, Mustaţă, S.M., *A positioning mechanism based on MEMS-INS/GPS and ANFIS data fusion for urban life mobility improvement*, IFMBE Proceedings, 77, pp. 767–773, 2020
2. **Larco, Ciprian-Marius**, *Numerical and Experimental Analysis of a Composite Root End Assembly Configuration*, E-Health and Bioengineering Conference (EHB), 2019
3. Mihăilă-Andres, M., Rosu, P.-V., **Ciprian Larco**, Maria Demșa, Lucian A. Constantin and Radu Pahonie, *Preliminary design of aeroelastically tailored wing box structures with bend-twist coupling*, ITM Web of Conferences, Rome, 2018
4. M Mihaila-Andres, PV Rosu, **CM Larco**, RC Pahonie, *Aeroelastic tailoring of thin-walled, closed-section wing box with bend-twist coupling*, 8th International Conference on Mechanical and Aerospace Engineering (ICMAE), 2017

5. Pahonie, Radu Calin; **Larco, Ciprian**; Mihaila-Andres, Mihai, *Experimental Characterisation of Hyperelastic Materials for Use in a Passive-Adaptive Membrane on MAVs Wing*, Materiale Plastice, vol. 54/4, p. 768-772, 2017
6. M Mihaila-Andres, **C Larco**, PV Rosu, C Rotaru, *Aeroelastic tailoring of composite aircraft wings*, American Institute of Physics (AIP) Conference, Roma, 2017
7. **Larco, Ciprian**; Constatin, Lucian; Demşa, Maria; Mustață, Ştefan, *Wing lift-drag ratio optimization*, Scientific Research & Education in the Air Force - AFASES, 2018
8. Pahonie, Radu Călin; **Larco, Ciprian**; Mustață, Ştefan-Mircea, *Aspects on a cubesat project*, Scientific Research & Education in the Air Force - AFASES, Brașov, 2018
9. **C Larco**, R Pahonie, M Mihaila-Andres, *Experimental study on mode I fracture of fibredux unidirectional prepeg*, AIP Conference, Roma, 2017
10. **Larco, C.,** Stefan, A., Mustaţă Şt., "*Stiffness matrix damage analysis of a composite lamina*", 1st International Conference "New Challenges In Aerospace Sciences –NCAS 2013", Bucharest, 2013
11. **Ciprian Larco**, Radu Călin Pahonie, Ioana Edu, *The Effects of Fibre Volume Fraction on a Glass-Epoxy Composite Material*, Conferences "Caius Iacob", Bucharest, 2015
12. **C. Larco**, *New Technologies for Monitoring the Damage of Composite Structures in Aviation*, Impactul transformărilor socio-economice și tehnologice la nivel national, european si mondial; Pitești, 2015
13. A. Ştefan, **Ciprian Larco**, R. Pahonie, I. Nicolaescu, *Coupled Transient Analysis of a UAV Composite Wing*, Scientific Research & Education in the Air Force - AFASES . Brașov, 2015
14. **Larco, C.,** Stefan, A.,*"Numerical and Experimental Determination of Mechanical Properties Plain Weave Fiber Glass Fabric*", International Conference On Military Technologies, Brno, 2013
15. **Larco, C**. M., Ştefan, A., Mustaţă Şt. M.,"*Some aspects of microcracks analysis for laminated composites*", Proceedingul Sesiunii de comunicări ştiinţifice internaţionale „AFASES 2010 – Scientific Research and Education in the Air Force", Braşov, 2010.
16. **Larco Ciprian**, „*Analyse des instabilités dans l'écoulement transsonique*", Research And Education In An Innovation Era – Engineering Sciences, 2nd ed., Arad, 2008

PROJECTS

Projects 1. Boardable Miniaturized Platform for Stabilizing Optical Sensors, 435PED/2020, PN-III-P2-2.1-PED-2019-5340, Project Director, 2020-2022
2. National participation strategy in the new European research coordination context in the fields of security and space industry, 26SOL, PN-III-P2-2.1-SOL-2020-3-0415, project manager, November 2020 - August 2021
3. Solutions and systems for monitoring activities and aerial work in support of the public health system in case of the COVID-19 pandemic using UAS systems, 19SOL, PN-III-P2-2.1-SOL-2020-2-0329, project manager, 2020
4. Stratospheric microsystems platform for aerospace observation, testing and research, STAR-CDI-170/20.07.2017, project manager, 2018-2019
5. Multi-disciplinary design optimization of aeroelastic tailoring for composite fixed wings, Projects for Young Research Teams, PN-II-RU-TE-2014-4-2825, 2015 - 2017
6. Integrated system for the protection of ventilation installations in buildings of strategic national interest in case of attack with chemical and biological agents, 2007–2010
7. Security of military and civil-military systems and actions in the management of crises and armed conflicts, CEEX program, contract no. 16/2006, 2006–2008
8. Biometric equipment and systems for identifying and authenticating people for authorizing access to computer networks and objectives of major importance, CEEX program, contract no. 13/2006, 2006–2008
9. Modeling and realization of a conventional combat component for the generation of an electromagnetic pulse intended to block C4I systems, CEEX program, contract no. 14/2006, 2006–2008
10. Advanced research on intermetallic nanocompounds at the interface of aluminum-carbon fiber composites, CEEX program, contract no. 127/2006, 2006–2008
11. Innovative method of noninvasive investigation of functional morphological alterations in joint pathology based on thermal vibroacoustic spectra, CEEX program, contract no. 118/2006, 2006–2008
12. The aerial micro-vehicle with vertical take-off and combined propulsion, for developments at low speeds intended for the monitoring and surveillance of dangerous areas - CUMULUS 2, CEEX program, contract no. 8/2005, 2005–2007
13. Multipurpose modular miniplane with combined propulsion, vertical takeoff and autonomous navigation intended for equipping the NIMBUS-2 armored vehicles, SECURITY PROGRAM 2005, MEC CODE PC-D07-PT01-1289, 2005–2006
14. Procedures for making load-bearing surfaces from composite materials for mini-planes, contract no. CR1229 PSCD MapN/2013, Project Director, 2013
15. Realization of numerical models of load-bearing surfaces from composite materials for miniplanes, contract no. CR117 of PSCD MapN/2012, Project Director, 2012
16. Integrated system for the protection of ventilation installations in buildings of strategic national interest in case of attack with chemical and biological agents, PN II program, contract no. 81-016/2007, 2007

ORGANISATIONAL SKILLS

Leadership

- Managerial skills developed as head of motor cell (35 people), head of laboratory (5 people), head of department (10 people) and director/responsible for scientific research projects (8-20 people) .
- Mentoring skills developed as a teacher, coordinator of training activities for bachelor's, master's, PhD study cycles.

COMMUNICATION AND INTERPERSONAL SKILLS

Teamwork and communication

- Experience: maintenance group (Air Base 93), international exercises (Air Base 93, missions with Armée de l'Air Française), research teams (Military Technical Academy "Ferdinand I").
- Communication skills practiced and developed during seminars, courses, national and international conferences, international training forms and as a leader or member of work teams.

SKILLS ACQUIRED IN THE WORKPLACE

Research and educational skills

- Research skills (director/responsible/member of programs and development projects/scientific research)
- Methodological and educational skills (teaching staff)
- Pedagogical skills (supervisor of groups of students/masters)
- Organizational and communication skills (Erasmus)

PUBLICATIONS

Books

1. Jenica-Ileana Corcau, Liviu Dinca and **Ciprian-Marius Larco**, ”Modeling and Simulation of APU Based on PEMFC for More Electric Aircraft”, Aeronautics-New Advances, IntechOpen, 2022.

2. **Larco Ciprian Marius**, Mihăilă-Andres Mihai, "Flight Mechanics I", Publishing House of Military Technical Academy "Ferdinand I", (ISBN 978-606-569-053-0) Bucharest 2020.

3. Mustăţă Ş. M., **Larco C.M.**, Mihăilă-Andres M., Nechifor R.G., "Materials and technologies with special purpose", Publishing House of the Military Technical Academy "Ferdinand I", Bucharest 2019, (ISBN: 978-973-640-306-4).

4. **Larco Ciprian Marius**, "Numerical and experimental analysis of a degradation mechanism of composite materials reinforced with fiber fabrics", PRINTECH Publishing House, Bucharest 2019.

5. Răzvan Nechifor, **Ciprian Larco**, et al., "Mechanics, statics and kinematics", Univers Scientific Publishing House, 2009, (ISBN 978-973-1944-27-3).