



Maria CASAPU (DEMŞA)

Date of birth: | **Nationality:** Romanian | **Phone number:**
(+40) 213354660 (Work) | **Email address:** maria.demsa@mta.ro |

Address: Bd. George Cosbuc, nr. 39-49, Sector 5, 050141, Bucharest, Romania
(Work)

WORK EXPERIENCE

07/2017 – CURRENT Bucarest, Romania

**SPECIALIST OFFICER AT THE AEROSPACE TECHNOLOGIES AND SYSTEMS LABORATORY /
AEROSPACE ENGINEER** MILITARY TECHNICAL ACADEMY FERDINAND I

- set up laboratories for student classes
- didactic activity
- participate in research projects
- organize activities within the laboratory
- maintenance of laboratory equipment

31/03/2019 – 29/06/2019 Brest, France

ERASMUS INTERNSHIP ENSTA BRETAGNE

Project: Dynamic characterization of fiber-reinforced composite materials
Coordinating professor: Michel Arrigoni

Field: numerical methods, shock waves generated by laser impact, composite materials

08/2015 – 12/2015 Bruxelles, Belgium

ERASMUS INTERNSHIP ECOLE ROYALE MILITAIRE

Project: Simulation in a Matlab environment of fluid interaction - structure
Coordinating Professor: Rob Haelterman
Domain: numerical methods, CFD

EDUCATION AND TRAINING

2020 – CURRENT Brest, France

PHD STUDENT - COTUTORSHIP ENSTA Bretagne

10/2019 – CURRENT Bucharest, Romania

PHD STUDENT - COTUTORSHIP National University for Science and Technology Politehnica
Bucharest

Field of study Aerospace Engineering |

Thesis Study of the mechanical response of ply-level hybrid composites under quasi-static and dynamic loadings

2017 – 2019 Bucharest, Romania

MASTER OF ENGINEERING Military Technical Academy „Ferdinand I”

Field of study Aerospace Systems Engineering

- Aerospace engineering
- Jet engines
- Aircraft Structures

Field of study Aerospace Engineering

● LANGUAGE SKILLS

Mother tongue(s): **ROMANIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	B2	B2	B2
FRENCH	B1	B2	B1	B1	B1

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

● DIGITAL SKILLS

Catia v5 | ANSYS Workbench | MATLAB+Simulink | Mathcad | Good knowledge of Microsoft Office

● ADDITIONAL INFORMATION

EMPLOYMENT-RELATED SKILLS

Tutoring skills

I taught seminar and laboratory classes held at different specializations in the Military Technical Academy Ferdinand I in Bucharest:

- Mechanics: Statics and Dynamics
- Theory of Jet Engines
- Design and Construction of Jet Engines
- Automation and Control of Jet Engines

Organizational skills

- coordinate activities that are held within the laboratory
- project manager of a research project

Leadership skills

- coordinate and supervise a class of students

Teamwork skills

- developed by working in research project teams

Time management skills

- developed by managing overlapping activities from different work areas: seminar classes, administrative tasks, research projects

Research skills

- Writing scientific articles, project reports
- Research activity

Data management

- collect, organize and analyze data

PUBLICATIONS

[Damage assessment through cyclic load-unload tensile tests for ply-level hybrid carbon fiber composites](#)

– 2024

Maria Casapu, Ion Fuiorea, Michel Arrigoni, *Damage assessment through cyclic load-unload tensile tests for ply-level hybrid carbon fiber composites*, Express Polymer Letters, 18, 1, 41-60 (2024)

[Off-axis response and shear characterization of unidirectional ply-level hybrid carbon-fiber-reinforced polymer materials](#)

– 2023

Maria Casapu, Michel Arrigoni, and Ion Fuiorea, *Off-axis response and shear characterization of unidirectional ply-level hybrid carbon-fiber-reinforced polymer materials*, INCAS BULLETIN, **15**, 3, 31-46 (2023).

[Experimental Characterization of Internal Structure and Physical Properties of Unidirectional Ply-Level Hybrid Carbon Composite Material](#)

– 2023

Maria Casapu, Ion Fuiorea, Michel Arrigoni, *Experimental Characterization of Internal Structure and Physical Properties of Unidirectional Ply-Level Hybrid Carbon Composite Material*, Advanced Engineering Materials, 25: 2201447 (2023)

[Preliminary design of aeroelastically tailored wing box structures with bend-twist coupling](#) – 2019

Mihai Mihaila-Andres, Paul-Virgil Rosu, Ciprian Larco, Maria Demsa, Lucian Constantin and Radu Pahonie, *Preliminary design of aeroelastically tailored wing box structures with bend-twist coupling*, ITM Web Conf., 24, 02010 (2019)

CONFERENCES AND SEMINARS

03/07/2022 – 07/07/2022 – Florence, Italy

15th International Conference on Advanced Computational Engineering and Experimenting – ACEX2022 "Experimental characterization of internal structure and physical properties of unidirectional ply-level hybrid carbon composite material", Casapu M., Fuiorea I., Arrigoni M.

PROJECTS

2020 – 2022

Miniaturized onboard platform for optical sensor stabilization Project within PNCDI - 435PED/2020/UEFISCDI

- Team member

2020 – 2020

Development of prototypes for ventilators with parameters adapted for assisting patients infected with the SARS-CoV-2 virus Project within PNCDI - 23-SOL/2020/UEFISCDI

- Team member

2020 – 2020

Solutions and systems for airborne monitoring and support activities in the context of the COVID-19 pandemic using UAS (Unmanned Aerial Systems) technology Project within PNCDI - 19-SOL/2020/UEFISCDI

- Team member

01/2018 – 12/2018

Study on the formation and prevention of icing Project within the Sectoral Research and Development Plan of the Ministry of National Defense in Romania - PSCD 107/2018

- Project director
-