

**Sofia Hustiu**

Work permit: Romanian | **Place of birth:** Iasi, Romania | **Nationality:** Romanian | **Phone number:**

(+40) 753438760 (Mobile) | **Email address:** sofia.hustiu@academic.tuiasi.ro | **LinkedIn:**

<https://www.linkedin.com/in/sofia-hustiu-a02703166/> | **Address:** Iasi, Iasi, Romania (Home)

LANGUAGE SKILLS

Mother tongue(s): **ROMANIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	B2	B2	B2	B2	B2
SPANISH	A2	A1	A2	A2	A1
GERMAN	A2	A2	A1	A1	A1

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

WORK EXPERIENCE

SYSTEM ENGINEER – CONTINENTAL ROMANIA – 13/02/2017 – 30/09/2025 – IASI, ROMANIA

- Being the Variant Manager Coordinator by using the pure::variant tool for Variant Management to support scalable automotive product lines in line with System Engineering processes
- Developed system architecture models using SysML to represent complex automotive system behaviors and structures
- Applied System Engineering principles in an automotive project, aligning with industry standards such as ASPICE and ISO 26262
- Practiced Agile methodology within cross-functional teams, contributing to iterative development in automotive system design

EDUCATION AND TRAINING

01/10/2020 – 27/06/2025 Iasi, Romania

PHD STUDENT Faculty of Automatic Control and Computer Engineering, Technical University "Gheorghe Asachi"

Discrete Event Systems, Robotics, Path planning, High-level specifications

Website <https://ac.tuiasi.ro/en/home/> | **Field of study** System Engineering |

Thesis TEMPORAL LOGIC OBJECTIVES IN HIGH-LEVEL PATH PLANNING: DISCRETE-EVENT-BASED CONCEPTUAL FRAMEWORK

01/10/2020 – 27/06/2025 Zaragoza, Spain

PHD STUDENT University of Zaragoza

Discrete Event Systems, Robotics, Path planning, High-level specifications

Website <https://www.unizar.es/> | **Field of study** System Engineering and Computer Science |

Thesis TEMPORAL LOGIC OBJECTIVES IN HIGH-LEVEL PATH PLANNING: DISCRETE-EVENT-BASED CONCEPTUAL FRAMEWORK

25/01/2023 – 31/03/2023 Iasi, Romania

POSTGRADUATED COURSE Faculty of Automatic Control and Computer Engineering, Technical University "Gheroghe Asachi", Iasi

Cursul postuniversitar de perfecționare, denumit "Tehnici avansate în automatică și informatică aplicată"

Level in EQF EQF level 6

01/07/2022 – 30/09/2022 Stockholm, Sweden

ERASMUS SCHOLARSHIP KTH Royal Institute of Technology

Website <https://www.kth.se/en> | **Field of study** Division of Decision and Control

01/10/2021 – 30/06/2022 Zaragoza, Spain

ERASMUS SCHOLARSHIP University of Zaragoza

Website <https://www.unizar.es/>

01/10/2018 – 15/07/2020 Iasi, Romania

MASTER'S DEGREE Faculty of Automatic Control and Computer Engineering, Technical University "Gheorghe Asachi"

Website <https://ac.tuiasi.ro/en/home/> | **Field of study** Systems and Control |

Thesis Path Planning in 3D Dynamic Environments based on Rectangular Cuboid Decomposition

01/10/2014 – 15/07/2018 Iasi, Romania

BACHELOR'S DEGREE Faculty of Automatic Control and Computer Engineering, Technical University "Gheorghe Asachi"

Thesis Modeling and Control of drone Crazyflie 2.0

● **SKILLS**

Digital Skills

MATALB and Simulink | SySML | C++

Organizational Skills

Mentoring and training others | Teamwork | Communication

● **DRIVING LICENCE**

Driving Licence: B

● **HONOURS AND AWARDS**

2018

First Prize at The Student Scientific Communication Session – Faculty of Automatic Control and Computer Engineering, Technical University "Gheorghe Asachi"

2017

Silver medal for team category at the Ariel Mathematics Olympiad

2015

Honorable Mention at the County Stage of the National Mathematics Contest for Students "Traian Lalescu" – Faculty of Automatic Control and Computer Engineering, Technical University "Gheorghe Asachi"

● **PUBLICATIONS**

2026

A time Petri net framework for heterogeneous robots and MITL specifications

in 2026 IFAC World Congress, IFAC, 2026

Authors: I. Hustiu, S. Hustiu, A.-A. Toader, M. Kloetzer, and C. Mahulea

2025

BiSpiral: A Geometric Approach to Convex Surfaces Coverage

In 29th International Conference on System Theory, Control and Computing (ICSTCC), Cluj-Napoca, Romania, 2025

Authors: B-G. Roman, A. -A. Toader, F-A. Braşoveanu and S. Huştiu

2025

Comparative study of classical coverage methods applied to trapezoidal environments

In 29th International Conference on System Theory, Control and Computing (ICSTCC), Cluj-Napoca, Romania, 2025

Authors: C. Țicloş, S. Huştiu

2025

Multi-robot motion planning based on Nets-within-Nets modeling and simulation☆

Robotics and Autonomous Systems, p.105287.

Authors: Hustiu, S., Ezpeleta, J., Mahulea, C. and Kloetzer, M.

2024

On Multirobot Path Planning Based on Petri Net Models and LTL Specifications

IEEE Transactions on Automatic Control vol. 69, no. 9, pp. 6373-6380, Sept. 2024

Authors: Hustiu, S., Mahulea, C., Kloetzer, M. and Lesage, J.J

2024

Integration of MITL for Cobots Workflow in a Manipulating Application

In 2024 IEEE 29th International Conference on Emerging Technologies and Factory Automation (ETFA) (pp. 1-8). IEEE.

Authors: Hustiu, S., Iancu, A.I. and Brasoveanu, F.A.

2023

Multi-robot Motion Planning under MITL Specifications based on Time Petri Nets

In 2023 European Control Conference (ECC) (pp. 1-8). IEEE.

Authors: Hustiu, S., Dimarogonas, D.V., Mahulea, C. and Kloetzer, M

2022

Parallel Motion Execution and Path Rerouting for a Team of Mobile Robots

16th IFAC Workshop on Discrete Event Systems (WODES) IFAC-PapersOnLine, 55(28), pp.73-78.

Authors: Hustiu, S., Mahulea, C. and Kloetzer, M

2022

Whitening of greenhouse's roof using drones and Petri net models

In 2022 IEEE 27th International Conference on Emerging Technologies and Factory Automation (ETFA) (pp. 1-8). IEEE.

Authors: Hustiu, S., Kloetzer, M., López-Martínez, A. and Mahulea, C

2021

LTL Task Decomposition for 3D High-Level Path Planning

Journal of Control Engineering and Applied Informatics, 23(3), pp.76-87

Authors: Hustiu, S., Hustiu, I., Kloetzer, M. and Mahulea, C

2021

Prerequisites to Design a Collision Free Trajectory in a 3D Dynamic Environment for an UAV

Authors: Hustiu, S

2021

Mission assignment and 3D path planning for a team of UAVs

In 2021 25th International Conference on System Theory, Control and Computing (ICSTCC) (pp. 401-406). IEEE.

Authors: Hustiu, S., Kloetzer, M. and Mahulea, C

2020

Collision Free Path Planning for Unmanned Aerial Vehicles in Environments with Dynamic Obstacles

In 2020 24th International Conference on System Theory, Control and Computing (ICSTCC) (pp. 520-525). IEEE.

Authors: Hustiu, S., Kloetzer, M. and Burlacu, A.

2019

Path Planning for Autonomous Drones using 3D Rectangular Cuboid Decomposition

In 2019 23rd International Conference on System Theory, Control and Computing (ICSTCC) (pp. 119-124). IEEE.

Authors: Lupascu, M., Hustiu, S., Burlacu, A. and Kloetzer, M.

2018

Stable hovering architecture for nanoquadcopter applications in indoor environments

In 2018 22nd International Conference on System Theory, Control and Computing (ICSTCC) (pp. 659-663). IEEE.

Authors: Hustiu, S., Lupascu, M., Popescu, S., Burlacu, A. and Kloetzer