

PERSONAL INFORMATION



Alexandru-Vasile Pusca

 Baznei, 3, Medias, 551086, Romania

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Gender Male | Date of birth 27/09/1996 | Nationality Romanian

WORK EXPERIENCE

Oct 2022 - Present

Teaching assistant

Technical University of Cluj-Napoca, Romania

- Teaching computer skills like Windows, Office, Matlab, C #;
- Preparing materials for laboratory's sessions;
- Participating to theoretical sessions;

Business or sector Education and research

Oct 2021 - Present

Research assistant

Technical University of Cluj-Napoca, Romania

- The main activities is research in parallel robotics and medical robotics field with focus in the minimal invasive surgery.

Business or sector Research

Jan 2021 – Sep 2021

Working Student

Bosch Engineering Center Cluj (ECC), Cluj-Napoca

- The main activities were based on providing support for the Technical and Security department, the Facility Construction Management (FCM) group within the Robert Bosch Engineering Center, Cluj-Napoca. Skills and competencies acquired: CCTV Systems, Electrical Installations, Sensors, Fire Detection Systems, Sprinklers systems, Water pumps systems and HVAC systems.

Business or sector Technical and Security

Jun 2018 – Sep 2018

Technician in plastic injection molding

SC.DRESSEL+HOFNER INTERNATIONAL.SRL, Medias

- The main activities are based on adjustment, change and parameter setting operations plastic injection machines and gantry robots.

Business or sector Production

EDUCATION AND TRAINING

2021 - Present

PhD in Engineering Mechanical Systems

Technical University of Cluj-Napoca, Cluj-Napoca

- Researches in mechanical engineering;
- Researches in parallel robotics and medical robotics
- Field of study: Medical robotics

2019 - 2021

Master's Degree

Technical University of Cluj-Napoca, Cluj-Napoca

2015 - 2019

- Field of study: Mechatronics and Robotics
- Engineer Degree**
- Technical University of Cluj-Napoca, Cluj-Napoca
- Field of study: Mechatronics and Robotics

PERSONAL SKILLS

Mother tongue(s) Romanian

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B1	B2	B1	B1	B1

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Communication skills

- Good communication, socialization, and organization skills.
- Open with people, understanding, ability to work in a team.

Organisational / managerial skills

- Self-confidence and teammates, mastery of current situations, punctuality, seriousness, creativity, able to coordinate teams and open to accept ideas, innovative spirit

Job-related skills

- Knowledge of robotic systems, HVAC systems, CCTV system, analysis of mechanical components.

Digital competence

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

Computer skills

- Catia V5R20, RoboDK, Delmia, Inventor, Siemens NX, MathCAD, SolidWorks, Office 365 pack, Qualica, Arduino, MATLAB, AutoCAD, C#, FEM analysis.

Other skills, competences and diplomas

2019 – Diploma Young Hope, Patriot Fest 2019, Bucharest, Romania.
2019 – IMPULSE – Industry-Academia Problem Solving Tournament, Cluj-Napoca, Romania.

Driving licence

- Driving licence category B since 2015

Hobbies

Kickboxing, football, fishing, walks in the nature

ADDITIONAL INFORMATION

- Publications
1. Calin V., Gabriela R., Bogdan G., **Alexandru P.**, Paul T., Ionut U., Doina P., DEVELOPEMENT OF AN AUGMENTED REALITY SIMULATOR FOR A ROBOTIC SYSTEM USED IN SILS, Proceedings of the Romanian Academy.
 2. **Pusca, A.**, Rus, G., Birlescu, I., Vaida, C., Pislă, A., Schonstein, C., Gherman, B., Tucan, P., Pislă, D., WORKSPACE ANALYSIS OF TWO INNOVATIVE PARALLEL ROBOTS FOR SINGLE INCISION LAPAROSCOPIC SURGERY, 2022, Acta Tehnica Napocensis, 2022.

Publications

3. Pisla, D., Gherman, B., Tucan, P., Birlescu I., **Pusca, A.**, Vaida, C., Rus, G., Pisla, A., APPLICATION ORIENTED MODELLING AND SIMULATION OF AN INNOVATIVE PARALLEL ROBOT FOR SINGLE INCISION LAPAROSCOPIC SURGERY, Proceedings of the ASME 2022 International Design Engineering Technical Conferences and Computers and Information in Engineering Conference, August 14-17, 2022, St. Louis, Missouri.
4. Birlescu I., Vaida, C., **Pusca, A.**, Rus, G., Pisla, D., A New Approach to Forward Kinematics for an Orientation Platform based on Perturbation Theory, International Symposium on Advances in Robot Kinematics, ARK 2022, 171-178, 2022.
5. Vaida, C., Birlescu I., **Pusca, A.**, Gherman, B., Tucan, P., Pisla, D., Geometric modeling of a new modular spherical robotic system for SILS, International Conference on Robotics in Alpe-Adria Danube Region, RAAD-2022, 367-374, 2022.
6. Pisla, D., Birlescu, I., Crisan, N., **Pusca, A.**, Andras, I., Tucan, P., Radu, C., Gherman, B., Vaida, C., Singularity analysis and geometric optimization of a 6-DOF parallel robot for SILS, Machines, 2022.
7. Pisla, D., Birlescu, I., **Pusca, A.**, Tucan, P., Gherman, B., Vaida, C., KINEMATICS AND WORKSPACE ANALYSIS OF AN INNOVATIVE 6-DOF PARALLEL ROBOT FOR SILS, Proceedings of the Romanian Academy, Series A, 2022, accepted for publications.

Projects

1. New frontiers in robotic assisted single port surgery: a novel robotic system with dexterous instruments
Call name: P 4 PN-III-P4-ID-PCE-2020-0572 2021 – 2023
2. CeS-UTCN – Scientific Excellence and Intelligence Specialization through the creation of a Support Center dedicated to facilitating the access of public and private entities to CDI
Call name: Horizon 2022 - 2021-2023
3. Digital platform for older people to transfer knowledge to the industrial environment - WisdomOfAge
Call name: AAL-CP-AAL-2020-7-83-CP-WisdomOfAge - 2021- 2023

Cluj-Napoca, 10/01/2023

PhD Student Eng. Alexandru-Vasile Pusca

