Agata **Barciś**

contact

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languages

Polish mother tongue
English fluent
German intermediate

programming

Python
C
C++

technologies

ROS 2
ROS
PX4
git
Linux
embedded Linux
Jira

publications

Google Scholar profile

interests

traveling
hiking
logic puzzles

education

2017 – 2021	**PhD** in **Robotics**	University of Klagenfurt, Austria

Thesis: *Synchronizing and Swarming Robots: Spatio-Temporal Coordination in Multi-Robot Systems*

2015 – 2016	**MEng** in **Control Engineering and Robotics**	Wrocław University of Science and Technology, Poland

Specialization in **Embedded Robotics**
Thesis: *Data processing and analysis from flight data recorder*

2012 – 2016	**BEng** in **Computer Science**	Wrocław University of Science and Technology, Poland

Specialization in **Applied Computer Engineering in Medicine**
Thesis: *Computer application for diagnosis of melanocytic skin lesions*

2011 – 2015	**BEng** in **Control Engineering and Robotics**	Wrocław University of Science and Technology, Poland

Specialization in **Robotics**
Thesis: *Flight parameters measurement sensor system for the airplane*

awards

2023	**Digitalisierungsstipendium**	Carinthia, Austria

Award for the best dissertations in Carinthia on the topic related to digitalization.

2022	**1st place in IMAV 2022: Nanocopter AI challenge**	IMAV 2022, Delft, The Netherlands

Nanodrone challenge organized during IMAV 2022 conference.

2021	**1st place in Deep Drone Challenge: Dronebot track**	DDC 2020, Ingolstadt, Germany

Drone competition organized by brigkAIR and Airbus.

2019	**Best paper award**	SASO 2019, Umeå, Sweden

13th IEEE International Conference on Self-Adaptive and Self-Organizing Systems.

2017	**2nd place in University Rover Challenge**	Utah, USA

International Mars rover competition.

2015	**5th place in Top10, Wrocław University of Science and Technology**	Wrocław, Poland

The contest for the best graduates of the Faculty of Electronics.

experience

04.2021 – now	**Technology Innovation Institute**	Abu Dhabi, United Arab Emirates

Senior Researcher

- Swarm behaviors of fixed-wing drones: Led a team of 4 people developing PoCs and integration with client's platforms. The main focus of the group was on synchronization and formation control with minimal communication.
- Autopilot-agnostic interface for drones (vehicle_gateway): Proposed and supervised a project executed with Open Robotics (Intrinsic). The developed solution was successfully used in multiple internal projects.
- Self-organized chain formation of nano-drones: Developed and tested a solution for subterranean exploration.

10.2017 – 07.2021	**University of Klagenfurt**	Klagenfurt, Austria

Senior Scientist

Worked on a project focused on creating a 3D model of an unknown environment with a fleet of UAVs. Main research focus: self-organization in temporal and spatial coordination of multi-robot systems.

12.2016 – 09.2017	**Telic AG**	Wrocław, Poland

Embedded software developer

Part of a company specializing in IoT and M2M solutions. Responsible for embedded software development in C and projects based on embedded Linux.

06.2016 – 07.2017	**The Continuum Student Research Group**	Wrocław, Poland

Control engineer

Member of the team that created *Aleph 1* Mars rover at the University of Wrocław. Responsible mainly for the design and implementation of control algorithms for the manipulator. The biggest achievement: the 2nd place in the University Rover Challenge 2017 — international Mars rover competition.