Zdeněk Bouček

PERSONAL DETAILS

Email zboucek@gmail.com
LinkedIn linkedin.com/in/zboucek
GitHub github.com/zboucek

SUMMARY

Robotics Researcher and Control Systems Engineer with over 9 years of experience in aerial robotics. Proven track record in developing and deploying optimization-based control strategies for autonomous drones. Dedicated to pushing the boundaries of UAV capabilities through rigorous research and practical application in projects like Comp4Drones.

WORK EXPERIENCE

Postdoctoral Researcher 2025-Present
NTIS - University of West Bohemia in Pilsen
Focusing on advanced control algorithms for UAVs as member of Identification and Decision Making Group.

Ph.D. Researcher 2015-2024
NTIS - University of West Bohemia in Pilsen
Developer for the H2020 Comp4Drones project. Designed and implemented a drone commander and mission planner module improving autonomous mission reliability.

Lecturer 2024-Present
Faculty of Applied Sciences - University of West Bohemia in Pilsen
Taught *Introduction to MATLAB* university course.

Tutor 2015-Present
Faculty of Applied Sciences - University of West Bohemia in Pilsen
Robotic summer school Campo Arduino & Campo Lampone

EDUCATION

Doctor of Philosophy - PhD 2015-2024
Faculty of Applied Sciences - University of West Bohemia in Pilsen
Research in Aerial Robotics, Optimal Control, Pseudospectral Methods, Interpolating Control
Dissertation: "Trajectory Planning and Tracking for Unmanned Aerial Vehicles"

Bachelor's & Master's degree 2010-2015
Faculty of Applied Sciences - University of West Bohemia in Pilsen
Cybernetics and Control Engineering with specialization in Automatic Control

SPECIALIZED TRAINING

The IEEE RAS Summer School on Multi-Robot Systems 2020, 2022
Czech Technical University in Prague
Attendance of lectures with emphasis on multi-robot systems, practical solution of UAV leader-follower task and inspection of power lines using two UAVs.

Self-Driving Cars with Duckietown 2021
massive open online course
Completed an online MOOC on autonomous vehicle algorithms, including computer vision, state estimation, reinforcement learning, and planning, using Duckietown simulation tools.

E-Knot training course on Multi-Sensors Navigation 05/2017

The European Global Navigation Satellite Systems Agency (GSA), Prague

Covered GNSS principles, challenges, and state-of-the-art, explored methods to improve navigation quality, including INS and SLAM techniques.

SKILLS

Languages	English (upper intermediate) Czech (native speaker) German (lower intermediate)
Knowledge	Aerial Robotics, Optimal and Model Predictive Control, Robotics
Software	Matlab, Python, ROS/ROS2, GIT, Ubuntu, LaTeX
Optimization Tools	Pyomo, CVXPY, YALMIP, Multi-Parametric Toolbox
Platforms	Bitcraze Crazyflie, PX4 Autopilot