

MEHMET HASANZADE

Research Assistant - PhD Candidate @ Aerospace Engineering

@ abduallahmeh@itu.edu.tr, hasanzade.mehmet@gmail.com

📍 Istanbul, Turkey

🌐 <https://web.itu.edu.tr/abduallahmeh/>

EXPERIENCE

Senior Research Engineer

Istanbul Technical Uni. - Aerospace Research Center

📅 June 2016 – Present 📍 Istanbul, Turkey

- Aggressive Collision Avoidance - Deep Reinforcement Learning
- RF Target Localization with State Estimation Techniques
- Target Tracking w/ Image Processing Tools and Guidance of UAV
- Design of Multi-UAV Operation Planner
- Fixed Wing Multi-UAV for Coverage Path Planning
- Leader and Manager roles at the UAV Team

Research Assistant

Istanbul Technical University

📅 Feb 2016 – Present 📍 Istanbul, Turkey

- Highly Agile Trajectory Planning, Re-planning and Tracking (Ph.D. Thesis)
- Development of inertial navigation system with applications for airborne collision avoidance (M.Sc. Thesis)
 - Inertial navigation system for basic autonomous tasks
 - Collision Avoidance for different thread levels
- Assisted Courses: Avionic Systems, C/C++, Python and Matlab

Research Engineer

ITU-CAL Lab

📅 June 2013 – June 2016 📍 Istanbul, Turkey

- Hardware and Software Design for Unmanned Aerial Vehicle
- Autopilot Design for Multi-rotor Platforms
- Long-range communication design for video streaming and telemetry

EDUCATION

Doctor of Philosophy - Aerospace Engineering

Istanbul Technical University (3.36/4.00 GPA)

📅 Sept 2016 – continues

Master of Science - Automation Control Engineering

Istanbul Technical University (3.19/4.00 GPA)

📅 July 2014 – Sept 2016

Bachelor of Science - Telecommunication Engineering

Istanbul Technical University (3.27/4.00 GPA)

📅 Sept 2009 – June 2014

SKILLS

- **Skills:** C/C++, Python, Tensorflow, Matlab/Simulink, ROS, Motion Capture System, Ardupilot, Jetson TX2, Raspberry-pi, ST microcontroller, Altium Board Design, OpenCV
- **OS:** Linux, Windows

References: Asst. Prof. Emre Koyuncu (ITU)
Prof. Gokhan Inalhan (Cranfield University)

CERTIFICATES & AWARDS

- Best Presentation Award (ICMAE)
- Best Presentation Award (ICNS)
- ITU- Big Bang Start-up Challenge Third Place
- Tubitak Formula-G - Solar Car Race Third Place
- Tubitak Formula-G - Best Design Award
- Mini-MBA - Applied Entrepreneurship Education (ITU ARI Technopark)
- KOSGEB Applied Entrepreneurship Education

PUBLICATIONS

- **Hasanzade, M., Shadeed, O., Koyuncu E.** "Deep Reinforcement Learning based Aggressive Collision Avoidance with Limited FOV under Dynamic Constraints", in 2020 IEEE/RSJ International Conference On Intelligent Robots and Systems (IROS), Oct 2020 (under review)
- **Hasanzade, M., Koyuncu E.** "A Dynamically Feasible Fast Replanning Strategy with Deep Reinforcement Learning", Journal of Intelligent and Robotic Systems (under review)
- **Herekoglu, Ö., Hasanzade, M., Saldiran, E., Cetin, A., Ozgur, I., Kucukoglu, A., Ustun, M. B., Yuksek, B., Yeniceri, R., Koyuncu, E., Inalhan, G., 2019.** Flight Testing of a Multiple UAV RF Emission and Vision Based Target Localization Method, AIAA Scitech 2019 Forum, January 7-11, 2019 San Diego, California, USA.
- **Hasanzade, M., Herekoglu, O., Yeniceri, R., Koyuncu, E., Inalhan, G., 2018.** RF Source Localization using Unmanned Aerial Vehicle with Particle Filter, 2018 9th International Conference on Mechanical and Aerospace Engineering (ICMAE), pp. 284–289, July 10-13, 2018 Budapest, Hungary.
- **Hasanzade, M., Herekoglu, O., Ure, N. K., Koyuncu, E., Yeniceri, R., Inalhan, G., 2017.** Localization and tracking of RF emitting targets with multiple unmanned aerial vehicles in large scale environments with uncertain transmitter power, 2017 International Conference on Unmanned Aircraft Systems (ICUAS), pp. 1058-1065, June 13-16, 2017 Miami, Florida, USA.
- **Tarhan, A. F., Koyuncu, E., Hasanzade, M., Ozdemir, U., Inalhan, G. (2014, May).** Formal intent based flight management system design for unmanned aerial vehicles. In 2014 International Conference on Unmanned Aircraft Systems (ICUAS) (pp. 984-992). IEEE.
- **Yeniceri, R., Hasanzade, M., Koyuncu, E., Inalhan, G. (2017, April).** Enabling Centralized UTM services through cellular network for VLL UAVs. In 2017 Integrated Communications, Navigation and Surveillance Conference (ICNS) (pp. 2E1-1). IEEE.