

Ignacio Alzugaray

Curriculum Vitae

Unterfeldstrasse 104, Zürich 8050, Switzerland

Birthdate: 10/11/1992 | Nationality: Spanish

☎ +41(0)765124418

✉ alzugaray.ign@gmail.com

Education

2016 Master Degree with honors in Automatic Control and Robotics.

Polytechnic University of Catalonia (UPC), Spain. GPA – 8.70/10

Master Thesis: *Path planning for MAVs with vision in the loop*

Top student in Master's degree program (2014-2016).

- Advisor: Prof. Margarita Chli. Grade: 5.75/6. ETH Zürich – International student exchange.
- Accepted as a paper in the *International Conference on Robotics and Automation* (ICRA 2017).

2014 Bachelor Degree with honors in Industrial Engineering.

University of Malaga (UMA), Spain. GPA – 8.49/10

Top student in Bachelor's degree program (2010-2014). Best Bachelor Thesis' Award.

Thesis: *Teleoperation of Robotic Manipulators applied to Laparoscopic Surgery*.

- Advisor: Dr. Carlos Perez del Pulgar. Grade: 9.5/10.

Experience

Research Experience

Present Research Assistant.

09/2016 ETH Zürich – Vision for Robotics Lab (V4RL), Switzerland

Research on CPU-only event-based SLAM and Active Monocular-Inertial SLAM systems.

Supervisor: Prof. Margarita Chli.

02/2016 Research Assistant Intern.

06/2015 Institute of Robotics and Industrial Informatics (IRI - UPC - CSIC), Spain

Research on improvement of path planning algorithms learning from expert pilots' experience.

Paper accepted in International Conference on Intelligent Robots and Systems (IROS 2016).

Supervisor: Prof. Alberto Sanfeliu.

07/2014 Undergraduate Research Assistant.

10/2013 Andalusian Institute of Advanced Automation and Robotics (IA3R), Spain

Research on trajectory control algorithms for robotic arms applied to laparoscopic surgery.

Supervisor: Dr. Carlos Perez del Pulgar.

Teaching Experience

Present Master's Thesis Student Supervisor.

09/2016 ETH Zürich – Vision for Robotics Lab (V4RL), Switzerland

- *Path planning for UAVs with Visual-Inertial SLAM*. Collaboration with IBM Zürich.
- *Improved Visual SLAM with event-based cameras*.

07/2015 Teaching Assistant Intern.

01/2015 Polytechnic University of Catalonia (UPC), Spain

Department of Mechanical Engineering and Department of Thermal Engines and Machines.

Creation, updating and maintenance of digital content for new courses.

09/2014 Undergraduate Teaching Assistant Intern.

07/2014 Department of Applied Mathematics. University of Malaga (UMA), Spain

Simulation of numerical methods applied to differential equations for teaching purposes.

Supervised by: Prof. Jose Manuel Gonzalez Vida.

Vocational

- 07/2013 **Contestant in Spanish Control Committee (CEA-IFAC) XXXIV Competition.**
12/2012 *Department of Systems Engineering and Automatics. University of Malaga (UMA), Spain*
Modelling of multirotor UAVs and designing of way-point path planning algorithms.
Supervisor: Anthony Mandow.

Awards and Scholarships

- 2016 **Best Master's Degree Academic Record (2014-2016).**
Polytechnic University of Catalonia (UPC), Spain
Award granted to the student with the top academic performance during the Master's degree program according. The recipient is granted with an internship sponsored by KUKA AG.
- 2016 **International Student Scholarship.**
ETH Zürich, Switzerland. Swiss-European Mobility Programme.
Competitive scholarship granted to students in an international exchange programme.
- 2014 **Excellence scholarship in Master's Programme.**
Polytechnic University of Catalonia (UPC) and Catalunya-La Pedrera Foundation, Spain.
Two-years scholarship granted to the student with the best academic record applying to a Master's degree program.
- 2014 **Best Graduate Academic Record and Best Bachelor's Thesis (2010-2014).**
University of Malaga (UMA), Spain.
Award granted to the top student in the Bachelor's Degree program according to academic performance and quality of the undergraduate thesis.
- 2013 **Undergraduate Research Scholarship.**
University of Malaga (UMA) and Spanish Ministry of Education, Spain.
Competitive national six-months scholarship to conduct short research projects granted to undergraduate students with high academic performance.

Publications

- [C2] I. Alzugaray, L. Texeira and M. Chli. **Short-term UAV Path-Planning with Monocular-Inertial SLAM in the Loop.** In *Proceedings of the IEEE International Conference on Robotics and Automation (ICRA)*. Singapore, 2017.
- [C1] I. Alzugaray and A. Sanfeliu. **Learning the Hidden Human Knowledge of UAV Pilots when navigating in a cluttered environment for improving Path Planning.** In *Proceedings of the IEEE/RSJ Conference on Intelligent Robots and Systems (IROS)*. Daejeon, Korea, 2016.

Languages

Spanish	Native	
English	Fluent	B2.2 University of Cambridge (2013)
German	Basic	A2.2 University of Zürich (2016)

Skills

Languages	C++, MATLAB, SIMULINK, L ^A T _E X, Python
Tools	Linux, Ubuntu, ROS, Gazebo, OpenCV, PCL, Git
Industrial	NI LabView, Beckhoff TwinCAT, ARENA, Stäubli VAL3, SolidEdge