

Jon Arrizabalaga

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EDUCATION

- **Technical University of Munich** Munich, Germany
PhD - Robotics; Advisor: Prof. Markus Ryll November 2020 - Present
- **KTH Royal Institute of Technology** Stockholm, Sweden
Master of Science - Mechatronics September 2018 - July 2020
- **Shanghai Jiao Tong University - University of Michigan** Shanghai, China
Bachelor of Science - Mechanical Engineering September 2017 - January 2018
- **University of Navarre** San Sebastian, Spain
Bachelor of Science - Mechanical Engineering September 2014 - July 2018

EXPERIENCE

- **Bosch Research** Renningen, Germany
MSc Thesis - Robotics Researcher; Advisors: Dr. Niels van Duijkeren, Dr. Ralph Lange January 2020 - July 2020
- **Porsche AG** Weissach, Germany
Intern - Test Field; Advisor: Eric Preising May 2019 - September 2019
- **General Electric** Shanghai, China
Working student - Aviation September 2017 - January 2018
- **Irizar** Ormaiztegui, Spain
Intern - Research Engineer May 2017 - September 2017

PUBLICATIONS

- *Pose-Following with Dual Quaternions*; J. Arrizabalaga, M. Ryll; Under review — Preprint
- *SCTOMP: Spatially Constrained Time-Optimal Motion Planning*; J. Arrizabalaga, M. Ryll; IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Detroit, USA, 2023 — Paper, Video
- *Spatial Motion Planning with Pythagorean Hodograph curves*; J. Arrizabalaga, M. Ryll; IEEE Conference on Decision and Control (CDC), Cancun, Mexico, 2022 — Paper, Video, Talk
- *Towards Time-Optimal Tunnel-Following for Quadrotors*; J. Arrizabalaga, M. Ryll; IEEE International Conference on Robotics and Automation (ICRA), Philadelphia, USA, 2022 — Paper, Video
- *Neural-MPC: Deep learning model predictive control for quadrotors and agile robotic platforms*; T. Salzmann, E. Kaufmann, J. Arrizabalaga, M. Pavone, D. Scaramuzza, M. Ryll; Robotics and Automation Letters (RA-L), 2022 — Paper, Code
- *A caster-wheel-aware MPC-based motion planner for mobile robotics*; J. Arrizabalaga, N. van Duijkeren, M. Ryll, R. Lange; IEEE International Conference on Advanced Robotics (ICAR), Ljubljana, Slovenia, 2021 — Paper, Video, Thesis

TEACHING

- **Engineering Mechanics I** Technical University of Munich
Lecturer; Enrolled students: 200 (21-22) and 350 (22-23) Winter Semesters 21-22 and 22-23
- **Introduction to ROS (Robot Operating System)** Technical University of Munich
Lecturer; Enrolled students: 50 Summer Semesters 21-22 and 22-23
- **Dynamics Motion and Control** KTH Royal Institute of Technology
Teaching Assistant Winter Semester 19-20
- **Robust Mechatronics** KTH Royal Institute of Technology
Teaching Assistant Winter Semester 19-20
- **Computer Science** University of Navarre
Teaching Assistant Winter Semester 14-15

AWARDS

- **Best PhD Lecturer Award** Technical University of Munich
Recognizes the PhD lecturer who has received the highest evaluations from students within the Aerospace and Geodesy faculty Winter Semester 21-22
- **Outstanding End-of-Degree Award (finalist)** University of Navarre
Honors BSc. students who have excelled in both their academic and extracurricular endeavors Years 14-18

EXTRACURRICULAR PROJECTS

- **The Juggling Robot Project** KTH Royal Institute of Technology
Software and Control Engineer; Video (year 21-22) Winter Semester 19-20
- **Formula Student** University of Navarre
Dynamics Engineer; Team: Tecnum eRacing Seasons 16-17 and 17-18

INVITED TALKS

- **Institute of Flight Systems** German Aerospace Center, DLR
Prof. Stefan Levedag January 23
- **Robotics and Perception Group** University of Zurich
Prof. Davide Scaramuzza April 22

REVIEW ACTIVITIES

- IEEE Robotics and Automation Letters (RA-L)
- IEEE International Conference on Robotics and Automation (ICRA)
- IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)
- IEEE Conference on Decision and Control (CDC)

SKILLS

- **Programming:** Python, C/C++, ROS, Linux
- **Optimization:** CasADi, Acados, Gurobi, CVXPY
- **Artificial Intelligence:** Pytorch
- **Symbolic Mathematics:** Mathematica, Sympy
- **Languages:** Basque, Spanish, English, French, German