Jon Arrizabalaga

Email: jon.arrizabalaga@tum.de, Portfolio: jonarriza96.github.io

Education

- **Technical University of Munich** — Munich, Germany
  PhD Student - 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

- **Robert Bosch GmbH - Corporate Research** — Renningen, Germany
  MSc Thesis - 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
  Student Researcher (Part-time) — *September 2017 - January 2018*

Publications

- *Spatially Constrained Time-Optimal Motion Planning*; J. Arrizabalaga, M. Ryll; Under review, 2022 — Preprint
- *Spatial Motion Planning with Pythagorean Hodograph curves*; J. Arrizabalaga, M. Ryll; IEEE Conference on Decision and Control (CDC), Cancun, Mexico, 2022 — Paper, Video
- *Towards Time-Optimal Tunnel-Following for Quadrotors*; J. Arrizabalaga, Markus Ryll; IEEE International Conference on Robotics and Automation (ICRA), Philadelphia, USA, 2022 — Paper, Video
- *Real-time 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; Under review, 2022 — Preprint, 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

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 Semester 21-22*
- **Dynamics Motion and Control** — KTH Royal Institute of Technology
  Assistant — *Winter Semester 19-20*
- **Robust Mechatronics** — KTH Royal Institute of Technology
  Assistant — *Winter Semester 19-20*

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)

Skills

- **Programming**: Python, C/C++, ROS, Linux
- **Optimization**: CasADi, Acados, Gurobi, CVXPY
- **Artificial Intelligence**: Pytorch
- **Symbolic Mathematics**: Mathematica, Sympy