Andrei-Carlo Papuc

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Education

Ph.D Robotics   *Delft, The Netherlands*
Delft University of Technology   *Aug 2025 - Present*
- **Advisors:** Prof. Javier Alonso-Mora and Prof. Laura Ferranti

M.Sc. Robotics   *Delft, The Netherlands*
Delft University of Technology   *Sept 2022 - March 2025*
- **Relevant Coursework:** Machine Learning for Robotics, Deep Learning, Computer Vision by Deep Learning, Machine Perception, Planning & Decision Making, Model Predictive Control, Intelligent Control Systems, Cyber Risk Management, Deep Reinforcement Learning

B.Sc. Aerospace Engineering   *Delft, The Netherlands*
Delft University of Technology   *Sept 2018 - Jul 2022*
- **Minor:** Computational Science and Engineering
- **Relevant Coursework:** Object Oriented C++, Control Theory; Systems Design; Parallel Computing; Computational Modelling; Numerical Methods for PDE's; Scientific Programming; Simulation, Verification & Validation.

Publications

UNDER SUBMISSION

Strategizing at Speed: A Learned Model Predictive Game for Multi-Agent Drone Racing
  Andrei-Carlo Papuc, Lasse Peters, Sihao Sun, Laura Ferranti, Javier Alonso-Mora
  Under submission for RA-L (2026). 2026

Work Experience

HUBS | On-demand Manufacturing   *Amsterdam, The Netherlands*
R&D Software Engineer   *May 2021 – Jul 2023*
- Improved and maintained meshing and CAD conversion algorithms for reliable processing across diverse 3D formats
- Built C++ tools for mesh analysis to support geometry evaluation and engineering workflows
- Worked on machine learning models for pricing, including feature engineering and hyperparameter tuning
- **Tech:** C++, CMake, PyTorch, NumPy, Matplotlib, Pandas, Scikit-learn, Rust

MX3D | Robotic 3D Metal Printing   *Amsterdam, The Netherlands*
Full Stack Software Developer   *May 2019 – Aug 2020*
- Developed geometry processing and slicing algorithms for wire arc additive manufacturing (WAAM) using Python, Trimesh, and NumPy
- Built a robotic arm simulation web app with live feedback for printing progress and planning
- Worked on mesh analysis tools, including naked edge and overhang detection
- **Tech:** Python, Trimesh, NumPy, React, TypeScript, Node.js, Electron, Three.js, Django, Express

Teaching Experience

TU Delft | Planning and Decision Making (RO47005)   *Delft, The Netherlands*
Teaching Assistant   *Nov 2023 - Present*
- Organizing course logistics, designing lecture material (slides, assignments, exams), and leading discussion sessions accompanying the class "Planning & Decision-Making" of the TU Delft Robotics Master program.

International Computer High School of Bucharest   *Bucharest, RO*
Teaching assistant   *Jan 2018 - Jun 2018*
- Held short courses on engineering to 20 first and second year students on CAD, Physics, Programming.

Volunteering

Makerspace Delft   *Delft, NL*
Facilities Manager   *Oct 2020 - Apr 2021*
- Co-founded a shared working space for students and startups embarking on innovative engineering projects.
- Interior design and construction of co-working space, organizing acquisition, maintenance of tools and machinery.

References available upon request.