Mario Coppola

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SKILLS

Scientific
Artificial Intelligence • Machine Learning • Robotics • State estimation • Sensor fusion

Programming
Python • C++ • C • MatLab

Languages
English (Fluent) • Italian (Fluent) • Dutch (Intermediate) • Spanish (Intermediate)

EDUCATION

PhD ROBOTICS
DELFT UNIVERSITY OF TECHNOLOGY
2013-2020 | Delft, Netherlands
Thesis: ***Designing provable robotic swarms.***

MSc AEROSPACE ENGINEERING
DELFT UNIVERSITY OF TECHNOLOGY
2013-2016 | Delft, Netherlands
Honors student, specialized in Control and Simulation. Thesis: ***On-board relative localization for collision avoidance in micro air vehicle teams.***

EXCHANGE MINOR ROBOTICS
NANYANG TECHNOLOGICAL UNIVERSITY
Fall semester 2012 | Singapore
Focus on robotics, real-time programming, and embedded systems.

BSc AEROSPACE ENGINEERING
DELFT UNIVERSITY OF TECHNOLOGY
2010-2013 | Delft, Netherlands
Thesis: ***Design of a controllable system for the guided atmosphere-assisted deceleration of a human-rated precursor vehicle to Mars.***
Supervised by NASA Langley Research Center.

INTERNATIONAL BACCALAUREATE
INTERNATIONAL SCHOOL EINDHOVEN
2008-2010 | Eindhoven, Netherlands

ADDITIONAL ACTIVITIES

2019	Delft University PhD council member
2019	Multi-Robot Systems Summer School at Czech Technical University, Prague
2018	Lecturer at BEST Summer School
2017	International Graduate Summer School in Aeronautics and Astronautics at Beihang University, Beijing

EXPERIENCE

PhD CANDIDATE | DELFT UNIVERSITY OF TECHNOLOGY
Sep. 2016 – Current | Delft, Netherlands

- Expected graduation date: September 2020.
- Research topic: ***Designing provable robotic swarms.***
- Developed novel **machine learning** solutions to automatically design, optimize, and verify the on-board controllers of distributed robotic systems.
- Developed **distributed intelligence** such that a team of robots can collaborate to complete a cooperative task.
- Developed **on-board relative localization technologies** to enable swarms of tiny drones to localize each other during flight.

RESEARCHER (INTERN) | MAX PLANCK INSTITUTE
Feb. 2015 – Jun. 2015 | Tübingen, Germany

- Autonomous Robotics and Human-Machine Systems group.
- Developed an **approximate reinforcement learning** procedure to teach quadrotors to perform evasive maneuvers when faced with moving obstacles such as people or other drones.

R&D SCIENTIST (INTERN) | HONEYWELL
Jul. 2014 – Dec. 2015 | Brno, Czech Republic

- Project 1: **Software developer** for next generation flight-decks featuring multi-modal pilot interaction.
- Project 2: Surveyed potential benefits and limitations of model-based design tools in order to improve flight software development procedures.
- From Feb. 2015 to Dec. 2015, remote part-time consultant.

TEACHING ASSISTANT | DELFT UNIVERSITY OF TECHNOLOGY
Aug. 2013 – Jul. 2014 & Aug. 2015 – Jan. 2016 | Delft, Netherlands

- Taught classes, supervised, and/or graded students for the following courses: *'Simulation, Verification, and Validation'*, *'Computational Modeling'*, *'Exploring Aerospace Engineering'*.

SELECTED AWARDS

2017	System Design award at the 2017 International Micro Air Vehicle (IMAV) competition and conference
2017	Excellent Student award at the International Graduate Summer School in Aeronautics and Astronautics of Beihang University, Beijing
2014	3^{rd} place at BestGraduates International Edition
2014	Winner of the Critical Reflections in Technology essay award from Delft University of Technology