ANTONIO RAPUANO

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SUMMARY

Engineer with deep expertise in control systems, robotics, electronics, and software. Passionate about driving innovation through research and development, seeking a role where I can apply advanced technical skills to design, prototype, and optimize next-generation technologies.

EDUCATION

M. Eng. equivalent, Control Engineering Fall 2022 - present
Università degli Studi di Roma "La Sapienza", Rome, Italy Expected final grade: 110/110 with honors
Thesis: Modeling, approximation, and nonlinear predictive control of suspended deformable cable continuum dynamics for aerial pick and place (Advisor: Prof. Antonio Franchi)
Relevant coursework: Modeling and control of nonlinear systems, hybrid systems, multi-agent systems • Estimation • Optimal control • Robust control • Basic and advanced robotics

B. Eng. equivalent, Electronic Engineering for Automation and Telecommunications Fall 2018 - Winter 2022
Università degli Studi del Sannio, Benevento, Italy Final grade: 110/110 with honors
Thesis: Implementation on FPGA of a circuit controlling a mechanical arm (Advisor: Prof. Marco Pisco)
Relevant coursework: Modeling and control of linear systems • Analog and digital electronics • Digital design • Signal processing • Telecommunications

SKILLS

Modeling and simulation tools: Fusion 360 • LTSpice • Simulink • Stateflow

Design and productivity software: Adobe Illustrator • Adobe Photoshop • Blender • Microsoft Office

Programming and scripting languages: Arduino • C/C++ • CSS • Java • HTML • LaTeX • MATLAB • Python • Verilog HDL

Other technical skills: Circuit board soldering

Personal skills: Attention to detail • Autonomy and initiative • Critical thinking • Curiosity and continuous learning • Problem-solving attitude • Project planning • Technical writing • Time management

LANGUAGES

Italian, native

English, proficient
Cambridge English C1 Advanced - Score 207 (Grade A, CEFR Level C2) Summer 2022

ACADEMIC PROJECTS

(Details and media at ntonioa.github.io/projects)

- Design and build of a tilt-tricopter VTOL UAV for SUAS Competition 2025 Fall 2024 - present
- Control of underactuated robots via input-constrained receding-horizon differential dynamic programming Winter 2023 - Fall 2024
- Fault-tolerant formation control of passive multi-agent systems using energy tanks Summer 2024
- Decentralized PEV charging control based on a subgradient method for mixed-integer programming problems Winter 2023 - Spring 2024
- Modeling and controlling the Mars helicopter 'Ingenuity' Fall 2023 - Spring 2024
- Two-wheeled self-balancing robot Fall - Winter 2023
- Control of a video-game race car using a convolutional neural network Winter 2023
- Signal acquisition through an A/D converter Spring 2021