ANTONIO RAPUANO

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SUMMARY

I'm an engineer driven by the desire to turn rigorous theory into practical systems. I enjoy "full-stack" robotics — working across the entire development pipeline, from mathematical modeling and control design to embedded implementation and experimental validation. I'm dedicated to advancing the capabilities of autonomous systems through research and hands-on engineering.

EXPERIENCE

(Details and media at r-rapuano.com/about)

Research Engineer (Research Fellow) Summer 2025 - Present
Sapienza University of Rome (uniroma1.it)
Highlights: Design and implementation of novel aerial interaction control strategies • Development of tactile sensing models using machine learning • Experimental validation on a hexarotor platform

Autopilot Control Systems Engineer Fall 2024 - Present
Sapienza Flight Team (sasa-aerospace.it/flight-team)
Highlights: Design and implementation of path planning and hybrid control algorithms • Development of state estimation and filtering modules • Experimental testing on VTOL prototype

Race Timing Specialist and Team Lead Fall 2018 - Present
ICRON (icron.it)
Highlights: Coordination of race logistics and technical setup • Supervision of start/finish line operations • Management of ranking and award procedures

EDUCATION

(Details and media at r-rapuano.com/about)

Ph.D. in Automatic Control, Bioengineering and Operations Research Fall 2025 - Present
Sapienza University of Rome, Rome, Italy

M.Sc. in Control Engineering Fall 2022 - Summer 2025
Sapienza University of Rome, Rome, Italy Final grade: 110/110 with honors
Thesis: Nonlinear predictive control of the continuum and hybrid dynamics of a suspended deformable cable for aerial pick and place (Supervisor: Prof. Antonio Franchi)
Relevant coursework: Analysis, modeling and control of nonlinear, hybrid, multivariable, networked systems • Basic and advanced robotics • Estimation • Optimal control • Machine learning • Robust control

B.Sc. in Electronic Engineering for Automation and Telecommunications Fall 2018 - Winter 2022
University of Sannio, Benevento, Italy Final grade: 110/110 with honors
Thesis: Implementation on FPGA of an electronic circuit controlling a mechanical arm (Supervisor: Prof. Marco Pisco)
Relevant coursework: Analog and digital electronics • Analysis, modeling and control of linear systems • Digital design • Electronic measurements • Signal processing • Telecommunications

SKILLS

Software and tools: Arduino • Blender • Fusion 360 • LTSpice • Office • Quartus Prime • Simulink • Stateflow

Programming and formatting: C/C++ • Java • HTML/CSS • LaTeX • MATLAB • Python • Verilog

Hardware: 3D printing • Circuit board soldering • Measuring

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