

Pietro Pustina

PH.D. STUDENT IN AUTOMATIC CONTROL · CONTROL ENGINEER



Summary

I am Ph.D. student in Automatic Control, Bioengineering and Operations Research at the Department of Computer, Control and Management Engineering, Sapienza University of Rome.

My current research focuses on model-based control of continuum soft robots.

Education

Visiting Researcher

KHALIFA UNIVERSITY

Abu Dhabi, United Arab Emirates

Nov. 2022 - Dec. 2022

- **Research topic:** *Model-based control of continuum soft robots*
Supervisor: Federico Renda

Ph.D. in Automatic Control, Bioengineering and Operations Research

SAPIENZA UNIVERSITY OF ROME

Rome, Italy

Nov. 2021 - Now

- **Research topic:** *Model-based control of continuum soft robots*
Supervisors: Alessandro De Luca, Cosimo Della Santina

M.Sc. in Control Engineering , 110/110 summa cum laude (avg 30/30)

SAPIENZA UNIVERSITY OF ROME

Rome, Italy

Sep. 2019 - Oct. 2021

- **Thesis title:** *Feedback Control of Elastically Decoupled Underactuated Soft Robots*
Tutors: Alessandro De Luca, Cosimo Della Santina

B.Sc. in Computer Engineering , 110/110 summa cum laude (avg 29.84/30)

ROMA TRE UNIVERSITY

Rome, Italy

Oct. 2016 - Jul. 2019

- **Thesis title:** *Sviluppo di un'interfaccia C/C++ per stampanti 3D*
Tutor: Francesco Riganti Fulginei

Publications

JOURNALS

- [1] **P. Pustina**, P. Borja, C. Della Santina, and A. De Luca, "P-satl-D shape regulation of soft robots," *IEEE Robotics and Automation Let.*, 2022.
- [2] **P. Pustina**, C. Della Santina, and A. De Luca, "Feedback regulation of elastically decoupled underactuated soft robots," *IEEE Robotics and Automation Let.*, vol. 7, no. 2, pp. 4512–4519, 2022. doi: 10.1109/LRA.2022.3150829.

CONFERENCES

- [3] **P. Pustina**, C. Della Santina, and A. De Luca, "Recursive inverse dynamics of flexible multi-body systems based on Kane's equations," in *3rd International Nonlinear Dynamics Conference (NoDyCon), Rome, ITA, 2023*.
- [4] M. Montagna, **P. Pustina**, and A. De Luca, "Regulation by iterative learning in continuum soft robots," in *Proc. of the 4th Italian Conference on Robotics and Intelligent Machines, Rome, ITA, 2022*, pp. -.

Work Experience

Front-end web developer

ENRY'S ISLAND

Pescara, Italy

Jun. 2019 - Sep. 2019

Alarm installer

SICUREZZA ATTIVA

Rome, Italy

Jun. 2016 - Sep. 2019

Honors & Awards

2021	1st place in the Student Honors Program in Control Engineering	<i>Sapienza University of Rome</i>
2021	International thesis scholarship	<i>Sapienza University of Rome</i>
2019	Wanted The Best scholarship	<i>Sapienza University of Rome</i>
2019	Lazio DiSco scholarship	
2017	Merith scholarship	<i>Roma Tre University</i>

Presentations

Presenter for <Feedback Regulation of Elastically Decoupled Underactuated Soft Robots>

Philadelphia, USA

INTERNATIONAL CONFERENCE ON ROBOTICS AND AUTOMATION (ICRA) 2022

May. 2022

Service

REVIEWING SERVICE

Sep. 2022 - Now **IEEE Transactions on Robotics**
 Mar. 2022 - Now **IEEE Robotics and Automation Letters**
 Jan. 2022 - Now **Journal of Intelligent & Robotic Systems**

COURSE TUTORING

A.A. 2022-2023	Robotics I , Master of Science in Artificial Intelligence and Robotics	<i>Sapienza University of Rome</i>
A.A. 2021-2022	Robotics II , Master of Science in Artificial Intelligence and Robotics	<i>Sapienza University of Rome</i>

Competences

PROGRAMMING

MATLAB, Simulink, C, Python, Java, Javascript
 Familiar with: **C++, Julia, PHP, OCaml, SQL, C#**

MARKUP LANGUAGES

Latex, HTML, CSS, XML, JSON, YAML

OPERATING SYSTEMS

Debian GNU/Linux
 Familiar with: **Windows 10**

SOFTWARE, LIBRARIES AND FRAMEWORKS

Robot Operating System 2 (ROS2), LibreOffice, MQTT, Xamarin, Bootstrap, Eclipse, FreeNAS

CAD MODELING

Familiar with: **Fusion 360**

LANGUAGES

Italian (mother tongue)
English (fluent)