

CURRICULUM VITAE

Experience in Micro-CT scan, Segmentation, 3D anatomical reconstruction, CAD modeling, FEM simulation in static structural environment, Manufacturing of soft mechatronics and soft materials, 3D Printing of polymers.

Good knowledge of Amira software, SolidWorks, Ansys, Processing of silicone materials, Soft actuators (i.e., Pneumatic, SMA, Jamming transition).

Future interests Functional Morphology, Evolutionary Biology, Biomimetics and Bioinspiration, Fluid flow Simulation, Artificial Organs, Soft Materials.

WORK EXPERIENCE

Oct. 2021 –

PhD in BioRobotics

Project “Study and Development of a Biomimetic Soft Total Artificial Larynx”

Soft Mechatronics for BioRobotics Lab

The BioRobotics Institute, Scuola Superiore Sant’Anna, Pisa, Italy

The Department of Excellence in Robotics & AI, Scuola Superiore Sant’Anna, Pisa, Italy

Sept. 2024 – Feb. 2025

Internship

Bioacoustics Lab; Southern Denmark University (SDU) (Denmark)

Study of the evolution of birds’ and reptiles’ larynges, through the development of a dinosaur vocal apparatus

May 2021 – July 2021

European Solidary Corps, LIFE project “LifeESC360: Monitoring for forest biodiversity in the Italian Natura 2000 Network”

Riserva naturale di Fogliano, Parco Nazionale del Circeo (Sabaudia)

EDUCATION

Oct. 2018 – Feb. 2021

Master’s Degree in Biodiversity and Evolutionary Biology (LM-6)

University of Milan (MI)

Master Thesis “Anatomical and functional adaptation of the mole rat vestibular system to an underground lifestyle”

Sep. 2019 – May 2020

Internship

Functional Morphology Lab; University of Antwerp (Belgium)

Study of the evolution of animal systems from a mechanistic approach

Sep. 2019 – May 2020

Erasmus+ Scholarship

University of Antwerp, Belgium

Oct. 2015 – Oct. 2018	Bachelor's Degree in Biology (L-13) University of Milan – Bicocca (MI) Thesis "Microplastic particles cause intestinal damage and other adverse effects in zebrafish <i>Danio rerio</i> and in nematode <i>Caenorhabditis elegans</i> "
Feb. 2018 – Apr. 2018	Internship Neurophysiology Lab., University of Milan – Bicocca (MI) Electrophysiological study of nicotinic receptors' regulation in cortical functions and epilepsy with the "patch clamp" method
Oct. 2014 – Sep. 2015	Course in Techniques of Cardiocirculatory Pathophysiology and Cardiovascular Perfusion Centro cardiologico Monzino – University of Milan (MI) Internship in the operating room; intensive care; emergency room

LANGUAGE SKILLS

Italian	C2	English	C1
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ADDITIONAL INFORMATION

Congresses, Publications, and Dissemination Activities	• 15 - 19 July 2024	Mimicking Human Laryngeal Tissues for a Soft Artificial Prosthesis The 46 th Annual International Conference of the IEEE Engineering in Medicine and Biology Society- <i>EMBC 2024</i> .
	• 26 May 2024	The Robotics Festival Pisa Stand: "Soft Mechatronics for BioRobotics"
	• 12 Jan. 2024	Variable Stiffness Structure Inspired by Seashell <i>Smart Materials and Structures</i> , 33(2), 025004. https://doi.org/10.1088/1361-665X/ad1b27
	• 27 Sep. – 20 Oct. 2023	2nd place at the Hackathon on Epilepsy Project "A virtual reality headset to break down the stigma of the disease" <i>Firenze - 20 Oct. 2023</i>
	• 10 – 13 July 2023	Towards a Soft Artificial Larynx: A Biomimetic Design The 12 th International Conference on Biomimetic and Biohybrid Systems - <i>Living Machines 2023</i> . 1 st place at the poster presentation awards https://doi.org/10.1007/978-3-031-39504-8_4
	• 3 – 7 April 2023	Seashell bioinspired variable stiffness mechanism enabled by hybrid jamming transition 6th IEEE-RAS International Conference on Soft Robotics – <i>RoboSoft 2023</i> https://doi.org/10.1109/RoboSoft55895.2023.10121930

- 17 Oct. 2022 **Parallel evolution of semicircular canal form and sensitivity in subterranean mammals**
Journal of Comparative Physiology A (2022) 208:627–640
<https://doi.org/10.1007/s00359-022-01578-7>
- 30 Sep. 2022 **The Bright Night – La Notte Europea dei Ricercatori**
Pisa
Stand: “ Artificial Organs in Soft Robotics”
- 29 June – 8 July 2021 **Society for the Experimental Biology (SEB) 2021 Annual Conference**
Abstract “Adaptation of the vestibular system to the underground lifestyle of naked mole-rats”