

## curriculum vitae



### PERSONAL INFORMATION

Surname	<b>Lambranzi</b>
Name	<b>Chiara</b>
Address	<b>Via Montello 12, 35010, Vigonza, Italy</b>
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Skype	

Nationality	Italian
Date of birth	20/10/1997

### Education and training

Master's degree in biomedical engineering (Bioinformation Engineering track)  
Bachelor's degree in biomedical engineering  
High school diploma ("Liceo classico")

• Date (from – to)	September 2019 – December 2022
• Name and type of organisation providing education and training	Politecnico di Milano
Duration of the program of study	two years
• Principal subjects/occupational skills covered	Biomedical Engineering
• Title of qualification awarded	Laurea Magistrale (equivalent to Master of Science)
Final mark obtained	107/110

### graduation thesis

Title	Path Planning via Reinforcement Learning for Robotic Catheters performing Percutaneous Coronary Interventions in a Deformable Environment
Language	English
Supervisor	Prof. Elena De Momi
Thesis Summary	Percutaneous Coronary Intervention (PCI) is a procedure that delivers a stent in the occluded artery. The sinuosity of the path and the deformable environment require a path planning strategy compliant with the physical constraints of the catheter and able to perform replanning. The thesis proposes a path planning algorithm that exploits Reinforcement Learning to improve the manoeuvrability of a steerable catheter during PCI. The proposed algorithm uses both Learning From Demonstrations and Reinforcement Learning. The experiment consists of two phases: the catheter is trained in a static environment to tune the parameters, then it is tested in

	the deformable environment where cardiac motion is introduced. The proposed method succeeds in completing the task, reaching a moving target and in a complex dynamic environment. The results show that generated path grants an accurate navigation, even though the success rate is smaller in the deformable environment and the catheter needs more time to complete the task.
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• Date (from – to)	September 2016 – September 2019
• Name and type of organisation providing education and training	Università degli Studi di Padova
Duration of the program of study	three years
• Principal subjects/occupational skills covered	Biomedical Engineering
• Title of qualification awarded	Laurea di primo livello (equivalent to Bachelor of Science)
Final mark obtained	100/110

### graduation thesis

Title	Analisi ed elaborazione di segnali EEG per uno studio sulla dislessia evolutiva
Language	Italian
Supervisor	Prof. Alessandra Bertoldo
Thesis Summary	One of the theories of the cause of dyslexia is a deficit in the visual system that should occur at the level of the dorsal magnocellular pathway. The work presented an EEG preprocessing pipeline to optimize the cleaning of visual evoked potentials obtained in a study on children with dyslexia. The statistical analysis of amplitude, latency and slope of P300, the characteristic peak of visual evoked potential, was used to chose the cut frequency of a high-pass filter.

• Date (from – to)	September 2011 – July 2016
• Name and type of organisation providing education and training	Liceo Classico Tito Livio
Duration of the program of study	five years
• Principal subjects/occupational skills covered	Latin, Greek, Italian literature
• Title of qualification awarded	High school diploma ("maturità classica")
Final mark obtained	92/100

### Certifications

Certifications of language knowledge	IELTS, 1/12/2022, score 8
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### Personal skills and competences

Mother tongue	<b>Italian</b>
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#### Other language(s)

	<b>English</b>
• reading	excellent
• writing	excellent
• speaking	excellent

Social skills and competences	Good communications abilities, leadership, conflict management and team working acquired by being national councilor, then vice-president of FUCI (student association) for 3 years.
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Organisational skills and competences	Good management, seminar organization, work team coordination skills acquired by being figure of responsibility in FUCI for 3 years.
Technical skills and competences	<p>Software:</p> <ul style="list-style-type: none"> <li>• Matlab</li> <li>• Microsoft Office, LaTeX</li> <li>• Unity 3D</li> </ul> <p>Programming languages:</p> <ul style="list-style-type: none"> <li>• C#</li> <li>• Python</li> </ul> <p>Operative Systems:</p> <ul style="list-style-type: none"> <li>• Windows</li> <li>• Linux</li> </ul>
Artistic skills and competences	I am very fond of singing and writing.