



# ALESSANDRO CORSINI

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 [github.com/AlessandroCorsini](https://github.com/AlessandroCorsini)

## Current Position

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I am a Ph.D. student in Translational Neuroscience and Neurotechnology at the *Center for Translational Neurophysiology of Speech and Communication* of the Istituto Italiano di Tecnologia located in Ferrara, Italy. Here, I study the nature of human speech processing and perception: the way humans extract, store and integrate information about speech streams.

## Education

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**Istituto Italiano di Tecnologia, Università di Ferrara** Sept 2022 – Present

*Ph.D. in Translational Neuroscience and Neurotechnology*

**Politecnico di Milano** Sept 2023 – Present

*M.Sc. Course: Artificial Neural Networks and Deep Learning*

**Technische Universität Berlin** Oct 2020 – Sept 2023

*M.Sc. in Innovation in Information and Communication Technology, Final grade: 1.5/1.0*

**Politecnico di Milano** Sept 2020 – Sept 2022

*M.Sc. in Computer Science and Engineerig, Final grade: 110/110 cum Laude*

**Politecnico di Milano** Sept 2017 – Sept 2020

*B.Sc. in Engineering of Computing Systems, Final grade: 104/110*

## Job Positions

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**Teaching Assistant** Jul 2024 – Jul 2024

*Neuromatch Academy*

- Group leading
- Computational Neuroscience

**Research and development intern** Mar 2022 – Aug 2022

*Organic Bioelectronics Srl*

- Electrophysiological Data Analysis (EEG,EMG)
- Scientific Writing

## Certifications

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**Neuromatch Academy** Jul 2023

*Computational Neuroscience*

- Machine and Deep Learning
- Dynamical Systems
- Stochastic Processes
- ECoG Motor Imagery of Tongue and Hand Gestures

**EIT Digital Master School** Nov 2022

*EIT Label in Human-Computer Interaction and Design*

*Minor: Innovation and Entrepreneurship*

**EIT Digital & School of Economics and Business of Lubljana** Aug 2021

*EIT Summer School in Digital Transformation for Organisational Resilience*

- Lean Start-up Approach
- Business Model
- Innovation and Entrepreneurship

**NECSTLab** Nov 2020

*Hack the NECSTCamp, Hackathon Software Development for a Smart Alarm*

## Some Github Projects

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### PyPID\_mvn

*Python package for Partial Information Decomposition*

### ArticEncod\_difficulty

*Complementary Neural Encoding of Invisible Articulatory Synergies*

### NMA\_2023\_MotorImagery

*ECoG Motor Imagery of tongue and hand gestures*

## Publications

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**An Organic Artificial Soma for Spatio-temporal Pattern Recognition via Dendritic Integration** 2024

*Neuromorphic Computing and Engineering*

**Speech Perception Difficulty Modulates Theta-band Encoding of Articulatory Synergies** 2024

*Journal Of Neurophysiology*

**Complementary Neural Encoding of Invisible Articulatory Synergies** 2023

### M.Sc. Thesis

*EEG Encoding of Speech Acoustics and Articulatory Features: A Partial Information Decomposition Study*

2022

## Funding

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**Bando 5xmille Università di Ferrara** 2024

### EIT Scholarship

*Full tuition fee waiver*

2021

## Language

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English: Advanced, Italian: Native

## Programming Languages and Tools

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Python, PyTorch, Matlab, C, Java