



Costanza Iester

PhD Student – Engineer

Nationality: | (+39) | _____ |

Date of birth: Oct 30, 1997

EDUCATION

- Genoa, Italy**
Nov 2021 – Present
PhD Student in Neuroscience – University of Genoa
Project: "Neuroimaging techniques to explore neural substrates of sensorimotor learning"
- Genoa, Italy**
Sep 2019 – Jul 2021
Neuroengineering master's degree – University of Genoa
110/110 with honors
Thesis: "Perceptual learning in visual tasks after active and passive training"
- Genoa, Italy**
Sep 2016 – Jul 2019
Biomedical engineering bachelor's degree – University of Genoa
110/110 with honors
Thesis: "Behavioral and neural correlates of dual tasks negotiation in MS using fNIRS"

EXPERIENCE

- Padua, Italy**
Jun 2022
Visiting PhD Student – University of Padua
Research period on the analysis of signals recorded by functional near-infrared spectroscopy (fNIRS), for the study of cortical activity at rest and during cognitive and motor tasks.
- London, UK**
Sep 2019
Research internship – City, University of London
OCT Image Analysis: Manual and Automatic Retinal Layer Segmentation

PUBLICATIONS

- Bonzano, L., Biggio, M., Brigadoi, S., Pedullà, L., Pagliai, M., **Iester, C.**, Bricchetto, G., Cutini, S., & Bove, M. Don't plan, just do it: Cognitive and sensorimotor contributions to manual dexterity. *NeuroImage*, 2023; 120348. doi:10.1016/j.neuroimage.2023.120348
- Iester, C.**, Biggio, M., Cutini, S., Brigadoi, S., Papaxanthis, C., Bricchetto, G., Bove, M., Bonzano, L.. Time-of-day influences resting-state functional cortical connectivity. *Front Neurosci*, 2023; 17, 1192674. doi: 10.3389/fnins.2023.1192674
- Bonzano, L., Bortoletto, M., Zazio, A., **Iester, C.**, Stango, A., Gasparotti, R., Miniussi, C., Bove, M. The hand motor hotspot for seed-based functional connectivity of hand motor networks at rest. *Front Neurosci* 2022; 16:896746. doi:10.3389/fnins.2022.896746
- Montesano, G., Ometto, G., Higgins, B. E., **Iester, C.**, Balaskas, K., Tufail, A., Chakravarthy, U., Hogg, R., Crabb, D. P. Structure function analysis in macular drusen with mesopic and scotopic microperimetry. *Transl Vis Sci Technol* 2020;9(13):43–57 doi: 10.1167/tvst.9.13.43.

CONFERENCES

The Organization for Human Brain Mapping (OHBM) 2023 Annual Meeting

July 22–26, 2023, Montréal, Canada

- **Costanza Iester**, Leonardo Nacci, Monica Biggio, Ambra Bisio, Simone Cutini, Sabrina Brigadoi, Laura Bonzano and Marco Bove. Cortical correlates of action observation combined with proprioceptive stimulation: An fNIRS study.
- **Costanza Iester**, Laura Bonzano, Monica Biggio, Simone Cutini, Sabrina Brigadoi and Marco Bove. Resting-state functional connectivity during the day: A functional Near Infrared Spectroscopy study.



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- **Costanza Iester**, Monica Biggio, Laura Bonzano, Marco Bove, Simone Cutini and Sabrina Brigadoi. The impact of motion correction techniques in fNIRS resting-state functional connectivity analysis.
- Monica Biggio, **Costanza Iester**, Laura Bonzano, Sabrina Brigadoi, Marco Bove and Simone Cutini. Cortical correlates of bimanual coupling investigated with functional Near-Infrared Spectroscopy.
- Monica Biggio, Ludovico Pedullà, **Costanza Iester**, Tacchino Andrea, Giampaolo Brichetto, Ambra Bisio, Marco Bove and Laura Bonzano. Cortical differences between linear and curvilinear walking tasks in people with multiple sclerosis.
- Laura Bonzano, Monica Biggio, Sabrina Brigadoi, Ludovico Pedullà, Monica Pagliai, Giampaolo Brichetto, **Costanza Iester**, Simone Cutini and Marco Bove. Cognitive and sensorimotor contributions to manual dexterity: An fNIRS study during 9HPT performance.

fNIRS Italy

July 6-7, 2023, Genoa, Italy

- **Costanza Iester**, Monica Biggio, Laura Bonzano, Sabrina Brigadoi, Ambra Bisio, Simone Cutini, and Marco Bove. Investigation of Bimanual Coupling: Behavioral and Hemodynamic Evidence of Interference Effects. [Oral presentation](#)
- **Costanza Iester**, Sabrina Brigadoi, Monica Biggio, Simone Cutini, Giampaolo Brichetto, Marco Bove and Laura Bonzano. Resting-state functional connectivity using fNIRS: From methodological optimization to exploring daily variations in healthy controls.

28th Rehabilitation in Multiple Sclerosis (RIMS) annual conference

May 4-6, 2023, Genoa, Italy

- **Costanza Iester**, Monica Biggio, Sabrina Brigadoi, Simone Cutini, Marco Bove and Laura Bonzano. Resting-state functional connectivity through fNIRS in healthy subjects and people with multiple sclerosis. [Poster express presentation](#)
- Valeria Bergamaschi, **Costanza Iester**, Monica Biggio, Giampaolo Brichetto and Marco Bove. Is Circle-line paradigm an effective tool to assess callosal connectivity in Multiple Sclerosis?

IRCCS Network of Neuroscience and Neurorehabilitation (RIN) annual meeting

December 15-16, 2022, Bologna, Italy

- **Costanza Iester**, Monica Biggio, Sabrina Brigadoi, Simone Cutini, Marco Bove and Laura Bonzano. Resting-state functional connectivity through functional near infrared spectroscopy.
- Monica Biggio, Laura Bonzano, Ludovico Pedullà, Andrea Tacchino, **Costanza Iester**, Giampaolo Brichetto, Ambra Bisio and Marco Bove. Innovative techniques for monitoring and improving the effects of lower limb rehabilitation treatment: a study of people with multiple sclerosis.

Biennial meeting of the Society for fNIRS

October 9-12, 2022, Boston, USA

- **Costanza Iester**, Monica Biggio, Laura Bonzano, Marco Bove, Simone Cutini and Sabrina Brigadoi. Comparing motion correction techniques for resting-state functional connectivity analysis in compliant healthy adults. [Oral blitz](#)
- Monica Biggio, **Costanza Iester**, Laura Bonzano, Ambra Bisio, Sabrina Brigadoi, Marco Bove and Simone Cutini. Study of bimanual coupling effect with functional Near Infrared Spectroscopy.
- Laura Bonzano, **Costanza Iester**, Monica Biggio, Sabrina Brigadoi, Simone Cutini and Marco Bove. Daily variations of resting-state functional Near Infrared Spectroscopy.

fNIRS workshop

May 4, 2022, Padua, Italy

"From experimental design to signal analysis methods."



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RESEARCH PROJECT

Annual call of Italian multiple sclerosis association (2022)

Title: Unraveling active ingredients of neurorehabilitation: investigating cortical activity during task-oriented exercises

Grant Start Date: March 01, 2023

Grant Duration: 24 months

Role: Participant

Foundation: Italian Multiple Sclerosis Foundation

SUMMER SCHOOLS

Summer school of the PhD Course in Neuroscience at the University of Genoa. June 26–30, 2023.

Summer school of the PhD Course in Neuroscience at the University of Genoa. September 19–23, 2022.

Summer school of the PhD Course in Neuroscience at the University of Genoa. July 18–22, 2022.

LANGUAGE SKILLS

Mother tongue: **ITALIAN**

Other languages: **ENGLISH** (B2 level) | **FRENCH** (B1 level)

SKILLS

Microsoft Package | Advanced in MATLAB | Teamwork | Problem-Solving | Strong time management

DRIVING LICENCE

Driving Licence : **B**