europass

# 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**., Brichetto, 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., Brichetto, 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**