

Francesca Patarini

PhD Student in Bioengineering



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Rome, Italy

RESEARCH EXPERIENCE

01/22-10/2023

Research Fellowship | Fondazione Santa Lucia IRCSS

Activity research at Neuroelectrical Imaging and Brain Computer Interface laboratory (NEILab) within the project "INTER-RO-GAIT. Patient-therapist INTERaction during RObotic GAIT rehabilitation after Spinal Cord Injury: clinical, instrumental and hyperscanning study" (GR-2019-12369207) funded by the Italian Ministry of Health

07/22-08/22

Visiting Period | G.tec Medical Engineering (GmbH)

Visiting period supported by the European DoCMA project (MSCA-RISE2017 - Horizon 2020)

11/21-12/21

Biomedical Engineering | Fondazione Santa Lucia IRCSS

Occasional self-employment at Neuroelectrical Imaging and Brain Computer Interface laboratory (NEILab)

EDUCATION

11/23- PRESENT

PhD student in Automatic Control, Bioengineering and Operations Research (ABRO) | Sapienza University of Rome

PhD student in Bioengineering at Department of Computer, Control and Management Engineering. Part of the research activity is carried on at Neuroelectric Imaging and Brain Computer Interface laboratory (NEILab) of Fondazione Santa Lucia IRCCS due to the bilateral agreement signed between the Foundation and the University.

Research Interest and Activities:

- Multivariate analysis and integration of multimodal signals (EEG, Eye-tracking and Kinematics)
- Technology-based approaches for neurorehabilitation and the study of related neuroplasticity

09/18-07/21

M.Sc. in Biomedical Engineering | Sapienza University of Rome

Final grade: 110/110

Title thesis: " A computerized algorithm to shape a personalized electrode for transcranial electric stimulation"

09/13-03/18

B.Sc. in Clinical Engineering | Sapienza University of Rome

Final grade: 94/110

Title thesis: " Experimental investigation of the steady-state flow field in an axisymmetric aneurysm model"

ACADEMIC ACTIVITY

Co-supervisor to Master thesis in Biomedical Engineering

01/23-07/23

"Evaluation of therapist-patient interaction during robotic gait rehabilitation in patients with spinal cord injury by means of eye-tracking system"

AWARDS	11/23 03/23 12/21	License for Operator Level 1 on the GRAIL Award for the best Master thesis on disability a.y. 2020/2021 - Sapienza University of Rome License for Professional Practice in Civil and Industrial Engineering
CONFERENCES AND COURSES	10/23 11/23 03/23	The annual congress of the Italian Society of Clinical Movement Analysis (SIAMOC), Rome, Italy Training course of GRAIL Basic for research activity Learning course about artificial intelligence and deep learning
PUBLICATIONS	<u>Abstract in International and National Conferences</u> [1] F.Patarini , F. Pichiorri, F.Tamburella, A.Ranieri, M.Lorusso, G.Serratore, A.Bigioni, M.Masciullo, G. Scivoletto, D.Mattia and J. Toppi. "Impact of visual feedback on patient-therapist interaction during robotic gait rehabilitation in individuals with spinal cord injury: a multimodal eyetracking and HD-EEG study", XXIII Congresso SIAMOC, 4-7 Oct. 2023, Rome,Italy [2] F.Tamburella, F. Pichiorri, A.Ranieri, F.Patarini , M.Lorusso, G.Serratore, A.Bigioni, I. Pisotta, M.Masciullo, D.Mattia,G. Scivoletto, and J. Toppi. "Inter-ro-gait: patient-therapist interaction during robotic gait rehabilitation in individuals with spinal cord injury. An eye-tracking and HD-EEG study", 62rd ISCos Annual Scientific Meeting, 8-11 Oct. 2023, Edinburgh,Scotland [3] F. Pichiorri, F.Tamburella, A.Ranieri, F.Patarini , M.Lorusso, G.Serratore, A.Bigioni, I. Pisotta, M.Masciullo, D.Mattia,G. Scivoletto, and J. Toppi. "Inter-ro-gait:studio di eye-tracking ed EEG per la valutazione dell'interazione terapistapaziente durante la riabilitazione robotica del cammino in pazienti con lesioni midollari", XXII Congresso NAZIONALE SIRN, 16-18 April. 2023, Riva del Garda, Italy <u>Submission in International Journal Papers</u> [1] V.De Seta, E.Colamarino, F. Pichiorri, G. Savina, F.Patarini , A.Riccio, F.Cincotti, D.Mattia, J.Toppi, "Comparing different EEG-based features for simple hand motor tasks discrimination in a rehabilitative context: study on healthy and post-stroke individuals" (submitted to <i>Journal of Neural Engineering</i>)	
IT SKILLS	Matlab, Lab Streaming layer (LSL) system, Basic knowledge of Python and C programming language, BrainVision Software, 3D-Slicer, Tobii Pro Lab, Microsoft office: Microsoft Word, Microsoft Power Point, Microsoft Excel.	
TECHINICAL SKILLS	EEG recordings, EMG recordings, Eye-gaze recordings, Kinematic data recordings (Vicon system and IMU)	
LANGUAGE	Italian: Nativa Language; English: B2 level; Spanish: A2 level	

I give consent to process my personal data, with the purpose of the recruitment process, in accordance to the Legislative Decree n°196/03 and to art. 13 GDPR 679/16 UE Regulation, regarding the protection of personal data

DATE

ROME, 08/03/2024

SIGNATURE

Francesca Patarini