

## Maddalena Beccherle

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### PRIVACY (Art.15 of D.lgs. n. 33/2013)

In compliance with the Italian Legislative Decree no. 196 dated 30/06/2003, I hereby authorize the recipient of this document to use and process my personal details.

### SELF-DECLARATION AFFIDAVIT (Art.47 and Art.19 of D.P.R. N. 445/2000)

I, the undersigned, Maddalena Beccherle, aware of the consequences of making false statements, falsehood of acts and use of false facts, punishable by law according to art. 76 D.P.R. n. 445/2000 and art. 496 of the Italian Penal Code, under my own responsibility declare that the information in this Curriculum Vitae including the information on the scientific production is true.

Verona, October 02<sup>nd</sup>, 2024



### CURRENT POSITION

February 2023 - Present Research Fellowship, University of Verona

NPSY.Lab-VR, Department of Human Sciences, University of Verona, Verona (Italy)

### EDUCATION AND TRAINING

11/2019 – 04/2023 PhD in Cognitive, Social and Affective Neuroscience (CoSAN)  
*Department of Psychology, La Sapienza University, Rome*

Research Project: Virtual pleasant touch perception and Interoceptive processes in chronic clinical conditions: Immersive Virtual Reality, behavioural and psychophysiological evidence on Fibromyalgia and Spinal Cord Injured patients.  
Classification: Excellent

05–09/06/2023 3rd Bayesian Summer School for Statistical Analyses for the Human, social and cognitive sciences", University of Verona, Verona, Italy organized by NPSY-Lab.VR

22 – 26/08/2022 5th FESN Summer School, Freie Universität Berlin, Berlin, Germany

## Beccherle, M.

31/05/2021 – 05/06/2021	2 <sup>nd</sup> Bayesian Summer School Statistical Analyses for the Human, social and cognitive sciences”, University of Verona, Verona, Italy.
03 – 06/06/2019	Bayesian Summer School Statistical Analyses for the Human, social and cognitive sciences”, University of Verona, Verona, Italy.
19/01/2019	Licensed Psychologist University of Padova, Padova (Italy) Licensed Psychologist, n. 11283, Ordine degli Psicologi del Veneto, Italy
10/2011- 04/2017	Master’s Degree in Neuroscience and Neuropsychological Rehabilitation <i>Department of Psychology, University of Padova, Padova (Italy)</i> Thesis: False Memories in Multiple Sclerosis Patients: a preliminary investigation. Supervisor: Prof. Daniela Mapelli Evaluation: 110 with honour
10/2011- 09/2014	Bachelor’s Degree in Psychological, Cognitive and Psychobiological Science (109/110) <i>Department of Psychology, University of Padova, Padova (Italy)</i> Thesis: Effects of physical and cognitive activity in patients with MCI and mild to moderate Alzheimer’s Dementia. Supervisor: Prof. Daniela Mapelli Evaluation: 109/110

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## CLINICAL AND RESEARCH EXPERIENCE

12/2018- 10/2019	Civil Service with severe acquired brain damages <i>Claudio Santi Medical Centre, Centro Polifunzionale Don Calabria, Verona (Italy)</i> <ul style="list-style-type: none"><li>▪ Management, organization and planning of neuropsychological laboratories with acquired brain-injured patients and the rehabilitation unit’s personnel.</li><li>▪ Clinical research on traumatic brain injuries and cerebrovascular patients.</li></ul>
11/2018- 09/2019	Research Project with research grant, University of Verona <i>NPSY.Lab-VR, Department of Human Sciences, University of Verona, Verona (Italy)</i> Research Project “In Città in carrozzina”
10/2017 - 10/2018	Postgraduate Internship <i>NPSY.Lab-VR, Department of Human Sciences, University of Verona, Verona (Italy)</i> <ul style="list-style-type: none"><li>▪ Neuropsychological assessment and rehabilitation in traumatic brain injury, cerebrovascular disease c/o Physic Medicine and Rehabilitation Unit, IRCCS Sacro Cuore -Don Calabria, Negrar, Verona (Italy).</li><li>▪ Neuropsychological assessment and cognitive stimulation in Alzheimer’s Disease and Dementia c/o CEMS Medical Centre, Verona (Italy)</li><li>▪ Research activity in clinical and experimental neuropsychology.</li></ul>

10/2015- 02/2016

Undergraduate Internship – Master's Degree

*Multiple Sclerosis Centre, Department of Neurological Sciences and Movement, Neurology Section, Policlinico G. Rossi Borgo Roma, Verona, University of Verona (Italy)*

- Neuropsychological assessment in Multiple Sclerosis patients (MS) and Research activity in clinical and experimental neuropsychology.

Supervisor: Dr. Marco Pitteri

02/2014-09/2014

Undergraduate Internship - Bachelor's Degree

*Functional Rehabilitation Unit, Department of Neurological Sciences and Movement, Neurology Section, Policlinico G. Rossi di Borgo Roma, University of Verona (Italy)*

- Neuropsychological assessment and rehabilitation in neurodegenerative disease and Cerebrovascular disease
- Cognitive stimulation in Alzheimer disease and patients with Mild Neurocognitive disorders.
- Research project about the effects of physical and cognitive activity in AD patients and patients with mild NCD.

Supervisor: Dr. Cristina Fonte

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## RESERACH PROJECTS

2024

Research Project, University of Verona

*NPSY.Lab-VR, Department of Human Sciences, University of Verona, Verona (Italia) & IRCCS Sacro Cuore Don Calabria di Negrar, Verona (Italia)*

Single Case study: *Gerstmann's Syndrome and limb apraxia: a single case study (Submitted, Cognitive Neuropsychology)*

2024

Research Project, University of Verona

*NPSY.Lab-VR, Department of Human Sciences, University of Verona, Verona (Italia)*

Studio clinico: Controllare il respiro riduce il dolore? Un protocollo di bio-feedback visivo per il trattamento del dolore cronico

2023

Research Project, University of Verona

*NPSY.Lab-VR, Department of Human Sciences, University of Verona, Verona (Italia) & IRCCS Sacro Cuore Don Calabria di Negrar, Verona (Italia)*

Single Case study: *Illusory hand movements in the absence of asomatognosia, spatial neglect and anosognosia for hemiplegia (Published in Cortex)*

2021 - 2023

Ph.D. Research project, La Sapienza University of Rome and University of Verona

*NPSY.Lab-VR, Department of Human Sciences, University of Verona, Verona (Italia) & SCN-Lab, Department of Psychology, La Sapienza University, Rome*

- Project:  
*Interoceptive abilities and corporeal awareness in spinal cord injuries*
- Literature Review:  
*Massive body-brain disconnection consequent to spinal cord injuries drives profound*

- Project:  
*Virtual vicarious social and pleasant touch in Fibromyalgia*
- Project:  
*Error recognition in stroke patients: the role of perspective, social context and belief updating*

2018- 2019	Research Project (with research grant), University of Verona <i>Department of Human Sciences, University of Verona (Italy)</i>  Research Project “In Città in carrozzina”: Impact of visible and invisible barriers on the exploration of the city in spinal cord Injuries Analysis of literature, data collection
2018- 2019	Research Project, University of Verona <i>Department of Human Sciences, University of Verona (Italy)</i>  Italian validation of the Geronto-Psychomotor Exam (Albaret, et al.,) Data collection in Alzheimer’s Disease patients and healthy controls
2018	Research Project, University of Verona-NPSY.Lab-VR <i>Department of Human Sciences, University of Verona (Italy)</i>  Single case study project about Theory of Mind in TBI Systematic review of the literature and meta-analysis
2018	Research Project, University of Verona-NPSY.Lab-VR <i>Department of Human Sciences, University of Verona (Italy)</i>  Research project investigating the possible integration of different body areas in peripersonal space representations (data collection in healthy participants)

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## TEACHING ACTIVITIES

A.Y 2024/2025	<b>Laboratory of Neuropsychology, University of Verona</b> <i>Department of Human Sciences, University of Verona, Verona (Italy)</i>  Lectures for bachelor’s and master’s degree Courses on clinical neuropsychology Frontal lessons and practical sessions (12 hours)
A.Y. 2023/2024 (November 2024)	<b>Corso di Formazione Iniziale Docenti 60 CFU</b> <i>Dipartimento di Scienze Umane, Università di Verona, Verona (Italia)</i> Frontal lessons with primary and secondary school teachers (12 hours)
A.Y. 2023/2024 (June 2024)	<b>Corso di Formazione Iniziale Docenti 30 CFU</b> <i>Dipartimento di Scienze Umane, Università di Verona, Verona (Italia)</i> Frontal lessons with primary and secondary school teachers (12 hours)

*Beccherle, M.*

A.Y. 2022/2023

Orientation Course for Secondary School students, University of Verona

*Department of Human Sciences, University of Verona, Verona (Italy)*

Course: "Studiare il cervello per scoprire la mente: la neuropsicologia tra neuroscienze, psicologia e filosofia"; (15 hours)

A.Y. 2022/2023

Laboratory of Neuropsychology, University of Verona

*Department of Human Sciences, University of Verona (Italy)*

Lectures for bachelor's and master's degree Courses on clinical neuropsychology  
Frontal lessons and practical sessions; (18 hours)

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## RESEARCH GROUPS AND ASSOCIATIONS

Spinal Cord Injuries Research Group – SCI Research Group

International research group on spinal cord injuries

Body Representation Network – BRNet

International network of researchers investigating psychology and neuroscience of body representation

Associazione Italiana di Psicologia (AIP) – Sezione Sperimentale

Italian Association of Psychology, experimental psychology section

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## SCIENTIFIC EVENTS ORGANIZATION

VI Meeting of the Body Representation Newtok – BRNet6, University of Verona, 12-13 September 2024  
Member of the Organizing Committee (Beccherle, M., Salvato, G., Scandola, M.)

XI Meeting of the Spinal Cord Injuries Research Group, University of Verona, February 16th 2024  
Member of the Scientific Committee (Beccherle, M., Bertagnoli, S.)

VIII Meeting of the Spinal Cord Injuries Research Group, University of Verona, February 10th 2023  
Member of the Scientific Committee (Beccherle, M., Scandola, M., Bertagnoli, S., Schepisi, M., Moro, V.)

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## PERSONAL SKILLS

Mother tongue	Italian				
Foreign Language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken Interaction	Spoken Production	
English	B2	B2	B2	B2	B2
FCE-B2 - Cambridge University					

Digital skills

SELF-ASSESSMENT				
Information Processing	Communication	Content creation	Safety	Problem solving
Proficient user	Proficient user	Independent user	Independent user	Independent

Research and Laboratory skills

- Independent in neuropsychological assessment and good knowledge of neuropsychological tests
- Management of neuropsychological laboratories and cognitive stimulation sessions with neurologic patients
- Theoretical and practical (laboratories) formative activities with neuropsychologists and rehabilitation teams' personnel
- Teaching experience with University and secondary school students
- Matlab and R softwares
- EEG montage, recording and preprocessing (Brainstorm and EEGLab softwares)
- Psychophysiological recordings (EDA, ECG, EEG)
- Basic knowledge of MRIcron and BCB-Toolkit
- Good knowledge of OpenSesame software and Python scripting
- Expert knowledge of the Pubmed, Scopus and Google Scholar research engines

PUBLICATIONS

Bertagnoli, S., Moro, V., Danese, R., Bulgarelli, C., Gobetto, V., Vianello, G., Rossato, E., Beccherle, M. (2024). Gerstmann's Syndrome and limb apraxia: A single Case Study. *Submitted*

Scandola, M., Beccherle, M., Polati, E., Petroni, G., Rossato, E., Schweiger, V., Moro, V. (2024). Pain and the perception of space in fibromyalgia: effects of chronic and temporary pain in estimations of distance. *Under revision*

**Beccherle, M.**, Scandola, M. (2024). How pain and body representations transform each other: a narrative review. *Journal of Neuropsychology*. <https://doi.org/10.1111/jnp.12390>

Moro, V., Scandola, M., Gobetto, V., Bertagnoli, S., Beccherle, M., Besharati, S., Ponzo, S., Fotopoulou, A., & Jenkinson, P. M. (2024). Examining the role of self-reported somatosensory sensations in body (dis)ownership: A scoping review and empirical study of patients with a disturbed sense of limb ownership. *Neuropsychologia*, 194, 108776. <https://doi.org/10.1016/j.neuropsychologia.2023.108776>

Scandola, M., Beccherle, M., Togni, R., Caffini, G., Ferrari, F., Aglioti, S. M., & Moro, V. (2024). Topographic mapping of the sensorimotor qualities of empathic reactivity: A psychophysiological study in people with spinal cord injuries. *Psychophysiology*, e14547. Advance online publication. <https://doi.org/10.1111/psyp.14547>

**Beccherle, M.**, Gobetto, V., Bertagnoli, S., Bulgarelli, C., Rossato, E., & Moro, V. (2023). Illusory hand movements in the absence of asomatognosia, spatial neglect and anosognosia for hemiplegia. *Cortex*, 168, 176–180. Advance online publication. <https://doi.org/10.1016/j.cortex.2023.08.010>

Moro, V., Beccherle, M., Scandola, M., & Aglioti, S. M. (2023). Massive body-brain disconnection consequent to spinal cord injuries drives profound changes in higher-order cognitive and emotional functions: A PRISMA scoping review. *Neuroscience and biobehavioral reviews*, 154, 105395. Advance online publication. <https://doi.org/10.1016/j.neubiorev.2023.105395>

## *Beccherle, M.*

Pyasik M, Beccherle M, Faraoni F, Pezzetta R, Moro V (2023). Effects of the social context on the neurophysiological correlates of observed error monitoring. *Neuropsychologia*, 181, 108503. <https://doi.org/10.1016/j.neuropsychologia.2023.108503>

Pacella V, Scandola M, B   M, Smania N, Beccherle M, Rossato E, Volpe D, Moro V (2022). Time In Action: Temporal Judgments of Actions Following unilateral brain damage. *Scientific Reports*, 12, 21668 (2022). <https://doi.org/10.1038/s41598-022-26070-9>

**Beccherle**, M., Facchetti, S., Villani, F., Zanini, M., & Scandola, M. (2022). Peripersonal Space from a multisensory perspective: the distinct effect of the visual and tactile components of Visuo-Tactile stimuli. *Experimental Brain Research*, 10.1007/s00221-022-06324-8. <https://doi.org/10.1007/s00221-022-06324-8>

Moro V, Facci E, Beccherle M, Scandola M, (2022).Una citt   in carrozzina: fragilit   e risorse per la mobilit   delle persone con disabilit   motoria. Fragilit   contemporanee. Fenomenologie della violenza e della vulnerabilit   (Mimesis Editore)

Pacella V, Scandola M, Beccherle M, Bulgarelli C, Avesani R, Carbognin G, Agostini G, Thiebaut de Schotten M, Moro V (2020). Anosognosia for Theory of Mind deficits: a single case study and a review of the literature. *Neuropsychologia*, 148. <https://doi.org/10.1016/j.neuropsychologia.2020.107641>

Pitteri M, Vannucci, M., Ziccardi, S., Beccherle, M., Semenza, C., & Calabrese, M. (2020). False memories in relapsing remitting multiple sclerosis patients: A preliminary investigation with the DRM paradigm. *Multiple sclerosis and related disorders*, 37, 101418. <https://doi.org/10.1016/j.msard.2019.101418>

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## PEER-REVIEWING

Scientific Reports

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## GRANTS

ERA-NET NEURON, Network of European Funding for Neuroscience Research 2024

Project: Bidirectional Brain-Body Interaction (Project delineation and proposal writing)

### PRIN2022 (Funded)

Project: Deep-body pathways to bodily self-consciousness: behavioural, neurophysiological, and neuroanatomical studies of cardiac, respiratory, and gastro-intestinal interoception in healthy and diseased people (Project delineation and proposal writing)

Bando Ricerca E Sviluppo 2022 Fondazione Cariverona E Caritro

Project: The Brain in Pain: Virtual Reality Environment to reduce chronic pain (Project delineation and proposal writing)

Avvio alla Ricerca 2020, Sapienza, University of Rome, Italy (Funded)

Project: Interocezione e consapevolezza corporea nella lesione spinale: indagare l'influenza della respirazione nella consapevolezza corporea tramite l'illusione di Embreathment (1.000 €) (Principal Investigator)

## TALKS AND PRESENTATIONS

### Invited Talks

07/10/2022 "Rappresentazione visuo spaziale di sé e dell'ambiente nello Spazio", XXXII Congresso Associazione Italiana Medicina Aeronautica e Spaziale -AIMAS, Reggio Calabria

09/04/2022 "Il riconoscimento dell'errore nel paziente con cerebrolesione", Approccio riabilitativo multidisciplinare al deficit cognitivo nella demenza e nell'ictus, Centro Riabilitativo Veronese, Marzana, Verona

### Oral Presentations

04/09/2024 "Investigating the perception of virtual touch in chronic pain: Explicit and implicit responses to virtual social and pleasant touch in Fibromyalgia", XXXII Congresso Nazionale Società Italiana di Psicofisiologia, Cesena, Italy

07/05/2024 "Error Recognition in Stroke: the role of perspective and social context" (Poster), Meeting Per La Disseminazione Dei Risultati Dello Spoke 4 Del Progetto MNESYS, Bologna, Italy

16/02/2024 "Interoception and corporeal awareness in spinal cord injury: results from the Embreathment Illusion study, Oral Presentation, IX Symposium of the Spinal Cord Injury Research Group, University of Verona

15/09/2023 "Touching a painful body: behavioural and physiological responses to Virtual social and pleasant touch in chronic pain", Oral presentation, Body Representation Network 5 – BRNet5, Palma de Mallorca, Spain

29/09/2022 "Virtual social touch on embodied avatars in patients with Fibromyalgia", XXX Congresso Nazionale Associazione Italiana di Psicologia -AIP, Padova

09/09/2022 "Virtual pleasant touch and pain modulation in patients with Fibromyalgia", Body Representation Network 4 – BRNet4, Sion (poster presentation)

22/08/2022 "Error recognition in stroke patients: the role of perspective and social context", 5th FESN Summer School, Freie Universität Berlin, Berlin (poster presentation)

16-18/03/2022 "Virtual social touch on embodied avatars in patients with Fibromyalgia", 9<sup>th</sup> MindBrainBody (MBB) Symposium 2022, Max Planck Institute, Leipzig, Germany (Virtual)

12/11/2021 "nteroception and Corporeal Awareness in Spinal Cord Injury: The Embreathment illusion", 7<sup>th</sup> Annual Meeting of the SCI – Research group Body awareness and motor representations in SCI rehabilitation, University of Verona, Verona, Italy

12/10/2021 Error recognition in stroke patients: the role of perspective and social context: preliminary behavioural and neurophysiological data. University of Verona, Verona, Italy

22/09/2021 Interoception in chronic diseases. Sapienza University, Rome, Italy

08/09/2021 "Error recognition in stroke patients: the role of perspective and social context", XXII Congresso Nazionale Associazione Italiana Psicologia- Sezione Sperimentale (AIP2021)

02/07/2021 1) The emerging science of interoception: sensing, integrating, interpreting, and regulating signals within the self; 2) Interoception and corporeal awareness in Spinal Cord Injury: The Embreathment illusion, University of Verona, Verona, Italy

25/11/2020 "Understanding the influence of interoception on corporeal awareness in clinical populations: immersive virtual reality, psychophysiological and behavioural studies, Sapienza University, Rome, Italy

## ATTENDED CONFERENCES AND SEMINARS

04/09/2024 XXXII Congresso Nazionale Società Italiana di Psicofisiologia, Cesena, Italy

07/05/2024 Meeting Per La Disseminazione Dei Risultati Dello Spoke 4 Del Progetto MNESYS, Bologna, Italy

04/05/2024 "La nuova Neuropsicologia Clinica: dalla valutazione alla riabilitazione, più psicologia e meno neuro?", Padova, Italy

16/02/2024 IX Symposium of the Spinal Cord Injury Research Group, University of Verona

14-15/09/2023 Body Representation Network 5 – BRNet5, Palma de Mallorca, Spain

02/02/2023 8<sup>th</sup> Annual Meeting of the Spinal Cord Injury Research Group - From the sensorimotor system to cognition, University of Verona, Verona, Italy

27/09/2022 – 29/09/2022: XXX Congresso Nazionale Associazione Italiana di Psicologia -AIP, Padova, Italy

09/09/2022: Body Representation Network 4 – BRNet4, Sion, Switzerland

22/08/2022 – 28/08/2022: 5th FESN Summer School, Freie Universität Berlin, Berlin, Germany

16-18/03/2022: 9<sup>th</sup> MindBrainBody(MBB) Symposium 2022, Max Planck Institute, Leipzig, Germany (Virtual)

12/11/2021: 7<sup>th</sup> Annual Meeting of the SCI – Research group Body awareness and motor representations in SCI rehabilitation, University of Verona, Verona, Italy

08/09/2021: XXII Congresso Annuale Associazione Italiana di Psicologia Sperimentale (AIP2021)

16/07/2021: Body Representation: a review of the literature, University of Verona, Verona, Italy

12/07/2021: BRNet 3: the changing body (online)

02/11/2020: 6<sup>th</sup> Annual Meeting SCI Research Group Platform – *My mind is stronger than my spine: cognition as a rehabilitative tool in SCI* , University of Verona, Verona, Italy

04/09/2020: XXI Congresso Nazionale Associazione Italiana di Psicologia sperimentale (AIP2020)