

CURRICULUM VITAE

CHIARA BAGATTINI

PERSONAL DETAILS

Date of birth: 12th June, 1984

Place of birth: Negrar (Verona), Italy

Nationality: Italian

E-mail: cbagattini@fatebenefratelli.eu
chiara.bagattini@gmail.com

ORCID ID: 0000-0002-9193-3345

Scopus Author ID: 56572900100

RESEARCH INTERESTS

Application of non-invasive brain stimulation techniques as possible treatments strategies in clinical populations; combination of transcranial magnetic stimulation with electroencephalography (i.e. TMS-EEG) in order to develop novel connectivity-based biomarkers for diagnosis and prognosis of neurodegenerative disorders.

I am currently collaborating in several TMS treatment projects and I am involved in two projects financed by the Italian Ministry of Health aimed at assessing the efficacy of a MRI-tailored rTMS treatment in Alzheimer's disease patients (GR-2016-02364718; PI Dr. Debora Brignani) and at establishing the potential of TMS-EEG measures as diagnostic and prognostic markers of Alzheimer's disease (GR-2016-02364132; PI Dr. Marta Bortoletto). My contribution mainly concerns the project coordination, patients recruitment, neuropsychological assessment, collection and analysis of neurophysiological and behavioral measures.

PROFESSIONAL POSITIONS

- 2014-present Post-doc researcher at Neurophysiology Lab/Cognitive Neuroscience Section, IRCCS Centro San Giovanni di Dio Fatebenefratelli, Brescia.
- 2016-2019 Professional collaboration as psychologist at the Neurophysiology Unit of the European Foundation for biomedical research (Trescore Balneario, Bergamo, Italy) for a research project titled: "Neurorehabilitation clinic for patients with cognitive disorders" (PI Prof. Carlo Alberto Defanti). Main activities: research project coordination and supervision; neuropsychological assessments; data analysis.
- 2011-2013 PhD student in Psychological and Psychiatric Sciences at the University of Verona, department of Neurological and Movement Sciences (Physiology and Psychology section) under the supervision of Prof. Silvia Savazzi. Main activities: neuropsychological assessments of brain tumor patients before and after neurosurgery; TMS-EEG co-registration in healthy subjects and brain-damaged patients.

ACADEMIC AND PROFESSIONAL QUALIFICATIONS

- 2017-2020 Cognitive-Behavioral Psychotherapy training (APC Verona).
- May 2014 PhD in Psychological and Psychiatric Sciences (University of Verona). Final thesis: "*Neural correlates of visual and spatial awareness*". Supervisor: Prof. S. Savazzi.
- 2010 National license to practice as a psychologist (University of Padova, second session).
- October 2009 Master Degree in Clinical Psychology (110/110 cum laude) at University of Padua (Italy). Final thesis: "*Adolescence and immigration. Psychological well-being, acculturative stress and social support*". Supervisor: Prof. A. Vieno and Prof. F. Cristini.

July 2006 Bachelor Degree in Psychological Sciences of Personality and Interpersonal Relationships (106/110) at University of Padua (Italy). Final thesis: *“Onset of borderline psychopathology during adolescence and issues related to diagnosis”*. Supervisor: Prof. G. Ferlini.

TEACHING

- 2020-2021 Teaching assistant in Physiology at the University of Brescia, Brescia, Italy.
- 2016-2017 Teaching for the professional development and updating course “Cognitive disorders in neurologic patients and the role of the equipe” of the University of Verona, with a seminar titled “Dementias: clinical manifestations, assessment and rehabilitation”.
- 2015-2016 Adjunct professor for Neuropsychology and Cognitive Neuroscience practice course (BD in Psychological Sciences and Techniques) at the Catholic University of the Sacred Heart, Brescia, Italy.
- 2015-2016 Teaching assistant in Neuropsychology and Cognitive Neuroscience at the Catholic University of the Sacred Heart, Brescia, Italy.
- 2016 Teaching for the course “The use of transcranial electric stimulation in the neuropsychological rehabilitation of dementia”. Fondazione Onlus Mons. A. Mazzali, Mantova.
- 2015 Teaching for the course “Neurorehabilitation of neglect: tDCS and TMS”. SIRN training school, Rome.
- 2015 Teaching for the summer school “Integrated methods and techniques for research, clinic and rehabilitation in psychophysiology and neuroscience”. Catholic University of the Sacred Heart, Milan.

PUBLICATIONS

- **Bagattini C**, Cid-Fernandez S, Bulgari M, Miniussi C, Bortoletto M (*in preparation*) Age-related differences in tDCS modulation of episodic memory: evidence from behavioral and neurophysiological measures.
- **Bagattini C**, Esposito M, Ferrari C, Mazza V, Brignani D (*in preparation*) Connectivity alterations underlying the breakdown of pseudoneglect: new insights from healthy and pathological aging.
- Bertazzoli G, Canu E, Calderaro D, **Bagattini C**, Agosta F, Fracassi C, Marizzoni M, Nicolosi V, Filippi M, Bortoletto M (*in preparation*) TEP component P20 predicts DTI measures of white matter integrity in healthy aging.
- **Bagattini C**, Brignani D, Bonni S, Gasparotti R, Pievani M (**2021**) Functional imaging to guide network-based TMS treatments: toward a tailored medicine approach in Alzheimer’s disease. *Frontiers in Neuroscience*, 15:687493. doi: 10.3389/fnins.2021.687493.
- Brignani D, **Bagattini C** (**2020**) Transcranial magnetic stimulation: from basic mechanisms to clinical application for addiction medicine. *Encyclopedia of Behavioral Neuroscience*, 2nd edition. doi: 10.1016/B978-0-12-819641-0.00083-9
- **Bagattini C**, Zanni M, Barocco F, Caffarra P, Brignani D, Miniussi C, Defanti CA (**2020**). Enhancing cognitive training effects in Alzheimer’s disease: rTMS as an add-on treatment. *Brain Stimulation*, 13 (6), 1655-1664. doi: 10.1016/j.brs.2020.09.010.
- **Bagattini C**, Mutanen T, Fracassi C, Manenti R, Cotelli M, Ilmoniemi R, Miniussi C, Bortoletto M (**2019**). Predicting Alzheimer’s disease severity by means of TMS-EEG co-registration. *Neurobiology of Aging*, 80, 38-45. doi: 10.1016/j.neurobiolaging.2019.04.008.

- Brignani D, **Bagattini C**, Mazza V (2018). Pseudoneglect is maintained in aging but not in mild Alzheimer's disease: new insights from an enumeration task. *Neuropsychologia*, 111, 276-283. doi: 10.1016/j.neuropsychologia.2018.02.008.
- Saviola D, De Tanti A, Conforti J, Posteraro L, Manfredini A, **Bagattini C**, Basagni B (2017). Safe return to driving following severe acquired brain injury: role of a short neuropsychological assessment. *Eur J Phys Rehabil Med*, 54 (5), 717-723. doi: 10.23736/S1973-9087.17.04905-X.
- **Bagattini C**, Mazza V, Panizza L, Ferrari C, Bonomini C, Brignani D (2017). Neural Dynamics of Multiple Object Processing in Mild Cognitive Impairment and Alzheimer's Disease: Future Early Diagnostic Biomarkers? *Journal of Alzheimer's disease*, 59(2), 643-654. doi: 10.3233/JAD-161274.
- Mazzi C, **Bagattini C**, Savazzi S. (2016). Blind-sight vs. degraded-sight: different measures tell a different story. *Frontiers in Psychology*, 7, 1-11. doi: 10.3389/fpsyg.2016.00901.
- Tagliabue CF, Mazzi C, **Bagattini C**, Savazzi S (2016). Early Local Activity in Temporal Areas Reflects Graded Content of Visual Perception. *Frontiers in Psychology*, 7, 1-10. doi: 10.3389/fpsyg.2016.00572.
- **Bagattini C**, Mazzi C, Savazzi S (2015). Waves of awareness for occipital and parietal phosphenes perception. *Neuropsychologia*, 70, 114-125. doi: 10.1016/j.neuropsychologia.2015.04.010.
- **Bagattini C**, Mele S, Brignani D, Savazzi S (2015). No causal effect of left hemisphere hyperactivity in the genesis of neglect-like behavior. *Neuropsychologia*, 72, 12-21. doi: 10.1016/j.neuropsychologia.2015.02.021.

CONFERENCE PRESENTATIONS

- **Bagattini C**, Cid-Fernandez S, Bulgari M, Miniussi C, Bortoletto M. Age-related differences in tDCS modulation of episodic memory: evidence from behavioral and neurophysiological measures. Brainbox Initiative Conference (Virtual; 21-24 September 2021).
- **Bagattini C**, Cid-Fernandez S, Bulgari M, Miniussi C, Bortoletto M. Age-dependent effects of tDCS on episodic memory. XXIX National Congress Italian Society of Psychophysiology and Cognitive Neuroscience (SIPF). Palermo, Italia (30 September-2 October 2021).
- Bertazzoli G, Canu E, Calderaro D, **Bagattini C**, Agosta F, Fracassi C, Marizzoni M, Nicolosi V, Filippi M, Bortoletto M. On the network specificity of the TMS-evoked potentials. XXIX National Congress Italian Society of Psychophysiology and Cognitive Neuroscience (SIPF). Palermo, Italia (30 September-2 October 2021).
- **Bagattini C**, Brignani D, Bonni S, Gasparotti R, Pievani M. Combining functional imaging and neurostimulation to design network-based TMS treatments for Alzheimer's disease. Alzheimer's & Parkinson's Disease Conference, AD/PD 2021 (Virtual; 9-14 March 2021).
- **Bagattini C**, Pievani M, Fracassi C, Bonni S, Brignani D. Toward personalized rTMS treatments in Alzheimer's disease: a novel MRI-tailored network-based approach. 7th International Conference on Non-invasive Brain Stimulation. Baden-Baden, Germany (Virtual; 10-14 November 2020).
- **Bagattini C**, Zanni M, Barocco F, Caffarra P, Brignani D, Miniussi C, Defanti CA. Add-on effect of rTMS on face-name associative memory training in Alzheimer's disease. 8th Winter Seminar on Dementia and Neurodegenerative Disorders (SINdem4juniors). Bressanone, Italy (22-24 January 2020).
- Bortoletto M, Mutanen T, Fracassi F, Manenti R, Cotelli M, Miniussi C, **Bagattini C**. TMS-EEG coregistration to track Alzheimer's disease progression. 8th Winter Seminar on Dementia and Neurodegenerative Disorders (SINdem4juniors). Bressanone, Italy (22-24 January 2020).
- **Bagattini C**, Mutanen T, Fracassi F, Manenti R, Cotelli M, Miniussi C, Bortoletto M. Connectivity alterations in Alzheimer's disease progression: evidence from TMS-EEG coregistration. Transcranial brain stimulation in cognitive neuroscience workshop. Rovereto, Italia (6-7 December 2018).

- **Bagattini C**, Mazza V, Ferrari C, Brignani D. Connectivity alterations underlying the breakdown of pseudoneglect in Alzheimer's disease. XXVI National Congress Italian Society of Psychophysiology and Cognitive Neuroscience (SIPF). Torino, Italia (15-17 November **2018**).
- Barocco F, **Bagattini C**, Zanni M, Miniussi C, Defanti CA. Cognitive training combined with repetitive transcranial magnetic stimulation in the treatment of mild cognitive impairment. XLIX National Congress Italian Society of Neurology (SIN). Roma, Italia (27-30 October **2018**).
- Barocco F, **Bagattini C**, Zanni M, Miniussi C, Defanti CA. Cognitive training combined with repetitive transcranial magnetic stimulation in the treatment of Alzheimer's disease: a randomized placebo controlled clinical trial. XXIII National Congress SINdem (SIN for dementia). Firenze, Italia (19-21 April **2018**).
- Barocco F, **Bagattini C**, Zanni M, Miniussi C, Defanti CA. Repetitive transcranial magnetic stimulation (rTMS) combined with cognitive training in Alzheimer's disease and mild cognitive impairment: a randomized controlled clinical trial. 48° National Congress Italian Society of Neurology (SIN). Napoli, Italia (14-17 October **2017**).
- **Bagattini C**, Pellicciari MC, Fracassi C, Miniussi C, Bortoletto M. "Linking connectivity alterations with cognitive decline in Alzheimer's disease: the contribution of TMS-EEG coregistration" XXIV National Congress Italian Society of Psychophysiology and Cognitive Neuroscience (SIPF). Milano, Italia (27-29 October **2016**).
- Savazzi S, **Bagattini C**, Mele S, Manganotti P, Sanchez Lopez J, Mazzi C. "The effect of rTMS over right parietal cortex on resting-state EEG oscillatory dynamics" Cognitive Neuroscience Society (CNS) 23th Annual Meeting. New York Hilton Midtown, USA (2-5 April **2016**).
- Tagliabue CF, Mazzi C, **Bagattini C**, Savazzi S. "Neural correlates of graded visual awareness: an ERP study" Cognitive Neuroscience Society (CNS) 23th Annual Meeting. New York Hilton Midtown, USA (2-5 April **2016**).
- **Bagattini C**, Panizza L, Miniussi C, Bonomini C, Mazza V, Brignani D. "Multiple object processing in Alzheimer's disease: behavioural and electrophysiological evidence" XXIII National Congress Italian Society of Psychophysiology and Cognitive Neuroscience (SIPF). Lucca, Italia (19-21 November **2015**).
- **Bagattini C**, Panizza L, Miniussi C, Bonomini C, Mazza V, Brignani D. "Multiple object processing in Alzheimer's disease: behavioural and electrophysiological evidence" Rovereto Attention Workshop (RAW). Rovereto, Italia (5-8 November **2015**).
- Mazzi C, Sanchez-Lopez J, **Bagattini C**, Mele S, Savazzi S. "Modulation of the Resting State Oscillatory Activity as effect of rTMS stimulation" Rovereto Attention Workshop (RAW). Rovereto, Italia (5-8 November **2015**).
- **Bagattini C**. "Neurorehabilitation in Alzheimer's disease: neurophysiological markers of neuroplasticity" 3rd Science Factory TMS-EEG Summer School. Helsinki, Finlandia (7-12 September **2015**).
- **Bagattini C**, Panizza L, Mazza V, Miniussi C, Brignani D. "Neural and cognitive dynamics of multiple-object processing in Alzheimer's disease" 3rd Winter Seminar on dementia – Sindem for juniors. Bressanone, Italy (21-23 January **2015**).
- **Bagattini C**, Mele S, Brignani D, Savazzi S. "No causal effect of left hemisphere excitability in the genesis of neglect" XXII National Congress Italian Society of Psychophysiology and Cognitive Neuroscience (SIPF). Firenze, 27-29 November **2014**.
- Mazzi C, **Bagattini C**, Savazzi S. "Is blindsight really blind? Alternative measures of assessing visual awareness" 2nd International workshop on Neuro-cognitive mechanisms of conscious and unconscious visual perception. Institute for Advanced Studies, Delmenhorst, Germany (30 June-2 July **2014**).

- **Bagattini C**, Mazzi C, Savazzi S. “Electrophysiological correlates of parietal phosphene perception” Cognitive Neuroscience Society (CNS) 21th Annual Meeting. Marriott Copley Place Hotel, Boston, USA (5-8 april **2014**).
- Savazzi S, **Bagattini C**, Mazzi C. “Is blindsight really blind? How different measures of subjective experience can modulate awareness in the blind field” Cognitive Neuroscience Society (CNS) 21th Annual Meeting. Marriott Copley Place Hotel, Boston, USA (5-8 april **2014**).
- **Bagattini C**, Mazzi C, Savazzi S. “Electrophysiological correlates of parietal phosphene perception” 2nd Cognitive Science Arena for Beginners Meeting (CSAB). Bressanone, 28 february-1 march **2014**.
- Savazzi S, Mele S, Brignani D, **Bagattini C**. “Is the contralesional hemisphere hyperactivated in neglect?” Cognitive Neuroscience Society (CNS) 20th Annual Meeting. San Francisco Hyatt Regency Hotel, San Francisco, USA. (13-16 april **2013**).
- **Bagattini C**, Mele S, Brignani D, Savazzi S. “Is the contralesional hemisphere hyperactivated in neglect?” 1st Cognitive Science Arena for Beginners Meeting (CSAB). Bressanone, 8-9 january **2013**.
- Savazzi S, **Bagattini C**, Mazzi C. “Does art shape our perceptual world?” 1st Visual Art Science Conference, ECVF (European Congress on Visual Cognition). Alghero, Italia (1-2 september **2012**).
- **Bagattini C**, Emanuele B, Talacchi A, Santini B, Turazzi S, Savazzi S. “Incidence of visuo-spatial disorders and neglect syndrome in right brain tumor patients” XVII National Congress Italian Association of Psychology (AIP). Catania, Italia (20-13 september **2011**).

TRAINING COURSES

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| 2015 | 3rd Science Factory TMS-EEG Summer School. Aalto University School of Science, Helsinki (Finlandia; 7 th -12 th September). |
| 2014 | Workshop “New frontiers in cognitive neuroscience from neuromodulation to NIRS. Transcranial electrical stimulation (tDCS, tACS, tRNS) and Near-Infrared Spectroscopy (NIRS)”, The Saint John of God Clinical Research Centre, Brescia (Italy; 26 th -28 th June). |
| 2014 | Workshop “Assessment and diagnosis of dementia”, SINP Italian Society of Neuropsychology, Treviso (Italy; 3 rd -5 th June). |
| 2011 | Training course “Neuropsychological rehabilitation”, Italian Association of Neuropsychology (Turin, Italy). |
| 2011 | Training course “Clinical Neuropsychology of neurologic and psychiatric disorders: dementia, cognitive psychopathologies, head injuries”, directed by dr. I. Innocenti (Prato, Italy). |
| 2010 | Training course in Clinical Neuropsychology “Clinical Neuropsychology: main phases and tools in the assessment of cognitive disorders”, directed by dr. I. Innocenti (Prato, Italy). |
| 2009 | Training course “Neuropsychological rehabilitation of dementia”, C.S.N. (Laboratorio di Consulenza e Supervisione Neuropsicologica) and L.C.N.L. (Lifespan Cognitive Neuroscience Laboratory), directed by Prof. P. Bisiacchi. |

EDITORIAL AND REVIEWING ACTIVITIES

Ad-hoc Journal Reviewing: Neurobiology of Aging, Neuropsychologia, Journal of Alzheimer's Disease, eLife, PLOS ONE, Frontiers in Aging Neuroscience, Frontiers in Neurology, BioMed Research International, The scientific world journal, Journal of Neural Transmission, Scientific Reports.

EXPERTISE

- Application of non-invasive brain techniques (TMS, TBS, tES);
- EEG and TMS-EEG acquisition and analysis (BrainVision, Matlab);
- Neuronavigation (Softaxic);
- Eye movement recording and analysis (Eyelink);
- Programming experimental paradigms (E-Prime);
- Statistical analysis (SPSS);
- Neuropsychological assessment;
- Neuropsychological rehabilitation.

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