### Giulia Stefanelli

Date of birth 1.12.1998 Nationality Italian

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#### Education

October 2023- to date PhD student

Psychological Sciences, University of Padua **Enrollment in the Order of Psychologists of Emilia-Romagna** June 2023

I-Master's Degree in Psychology and Clinical Neuroscience September 2020-September 2022

Vita-Salute San Raffaele University, Milan, Italy

Dissertation: "The effect of bifocal  $\beta$  -tACS on letter crowding in peripheral vision"

September 2017-July 2020 Bachelor's Degree in Psychological Sciences and Techniques

Catholic University of the Sacred Heart, Milan, Italy

Dissertation: "Questioni etiche relative all'applicazione di tecniche di stimolazione cerebrale non invasiva nel neurosviluppo" or "Ethical issues related to the application of non-invasive brain stimulation techniques in

neurodevelopment."

Bologna, September 2012 - July

2017

Santa Barbara, California, United

States

September 2015 - June 2016

Scientific High SchoolEnrico Fermi Bologna, Italia

High School Diploma

San Marco's High School, (CA) US. High School Diploma (Graduation class '16)

Attended the final year of high school and obtained the diploma.

### Languages and Expertise

Italian Native

English **Proficient** 

Cambridge C1 Certificate - December 2019

SAT Exam - March 2016

Spanish Intermediate

Scientific expertise Full command of Microsoft Office suite and of the navigation in Scientific Databases (es. Pubmed, Embase, Web of

Science, Scopus, PROquest etc.) and of Rayyan software platform, basic programming (MATLAB, R-studio, Python) and data analysis skills (R-studio, EEGLAB, Brainstorm, SPSS) e basic knowledge of MRIcron. Basic understanding of the operation of Non-invasive transcranial brain stimulation machinery (tACS, TMS).

## **Professional Experience**

Padua, October 2023- to date

# PhD student in Psychological Sciences, University of Padua

My main research interests are in Developmental Cognitive Neuroscience. In particular my reserch concern is in the identification of indices of individual variability associated with adaptive cognitive control and

their characterization at the neuro-endophenotypic level, in a perspective of the neurophysiological and behavioural development of typical, atypical (i.e., Attention Deficit Hyperactivity Disorder, Autism Spectrum Disorder) and highrisk children.

Supervisor: Giovanni Mento giovanni.mento@unipd.it

Milan, October 2022-May 2023

Post-graduated professional internship, mentored by Prof. Valentina Riva, coordinator of MEDEA BabyLab-Autism Area, I.R.C.C.S. E.Medea founded by Associazione La Nostra Famiglia , Bosisio Parini (LC)

Worked within a multidisciplinary research environment to investigate early identification of risk markers of Autism Spectrum Disorder onset and typical and atypical developmental trajectories in the first three years of life following two research projects:

- Research Project: Experimental and Integrated Techniques for Early Detection of Autism Spectrum Disorder-BabyLab Psychopathology Laboratory In collaboration with the NIDA Network (Network Italiano per il riconscimento precoce dei Disturbi dello Spettro Autistico).
- Research Project: Evolution of neurocognitive biomarkers following early intervention in the sibling population of children with autism- BabyLab Psychopathology Laboratory In collaboration with FIA (Fondazione Italiana Autismo)
  - Gained expertise in administering and scoring neuropsychological tests (such as the GMDS-R, Vineland VABS-II, ADOS-2 (Toddler module and module 1), and ADI-R) as well as data input;
  - Gained confidence in the setup and management of electrophysiology (EEG/ERP) techniques;
  - Gained confidence in the setup and management of eye movement recording (Eye-tracking);
  - Achieved the goals of properly planning and organizing studies, collecting behavioural and physiological data, communicating with experimental subjects, and debriefing;



Keywords: Autism Spectrum Disorder, Early screening, Toddlers, Eye movement recording (Eye-tracking), Neurophysiological (EEG/ERP) techniques, Audio-visual Integration, Familiar risk

Currently focusing on writing systematic literature reviews (SLRs), expanding knowledge and skills in scientific literature investigation (improving skills on navigating scientific databases) and writing and editing systematic reviews, as well as learning the use of the Rayyan platform and PRISMA 2020 guidelines.

Keywords: Autism Spectrum Disorder, Eye movement recording (Eye-tracking), Pupillometry, Pupillary response physiology, Cognitive processing, Social cognition

Supervisor: Valentina Riva valentina.riva@lanostrafamiglia.it

Milan, January 2023 - October 2023

Project in collaboration with BDAC LAB (Brain Dynamics and Cognition Lab), directed by Prof. Luca Ronconi, Faculty of Psychology, Vita-Salute San Raffaele University and Division of Neuroscience, I.R.C.C.S. San Raffaele Hospital, Milan.

Research project: Restoring neural oscillator communication between dorsal and ventral visual pathways in developmental dyslexia.

Worked in a research laboratory continuing the work done during the months of writing the master's thesis to study a new innovative technique for the treatment of developmental dyslexia (DD). The goal is to gain new knowledge in the area of cognitive processes that support reading of the respective brain mechanisms. Specifically, the goal is to investigate the possibility of improving reading skills and related cognitive processes with neuropsychological training that combines cognitive methods with noninvasive alternating current (tACS) electrical brain neurostimulation.

- o Improving skills in planning, writing and executing experimental projects.
- o Interpreting and summarizing results for talks and poster presentations.
- o Improved skills in setting up and managing electrophysiological (EEG) techniques.
- Improved skills in setting up and managing Eye Tracker techniques.
- Gained expertise in administering and scoring neuropsychological tests (such as RAN, Digit memory (WAIS-MC), Word and nonword lists (MT 16-19), Reading comprehensive test (St. Lucia), Phonological MBT and auditory attention, Raven's progressive matrices test) as well as data input.

Keywords: Developmental Dyslexia, Visual pathways, Temporal processing, Neural oscillations, Eye movement recording (Eye-tracking), Brain imaging (EEG), Neurostimulation, Non-invasive transcranial brain stimulation (tACS, tMS)

Supervisor: Luca Ronconi ronconi.luca@unisr.it

Milan, September 2021-October 2023

## EFPSA- European Federarion of Psychology Students' Associations

International organization EFPSA- European Federarion of Psychology Students' Associations composed of psychology student associations from all over Europe.

- Worked as Vice Member Representative of Italy;
- National coordinator of "Mind the Mind" campaign- 9<sup>th</sup>wave: Campaign promoted by EFPSA that aims to combat stigma related to mental disorders. The project aims to educate students (ages 13 to 18), and the general public, about health and mental disorders while reducing stigma and negative beliefs;
- Volunteer for the "Mind the Mind"- 8<sup>th</sup> wave

Milan, May 2021- September 2022

Research activities in order to accomplish the MSc dissertation at the BDAC-Lab (Brain Dynamics and Cognition), directed by Prof. Luca Ronconi, Faculty of Psychology, Vita-Salute San Raffaele University and Division of Neuroscience, I.R.C.C.S. San Raffaele Hospital, Milan.

- o Gained experience with setting up and managing electrophysiological (EEG) techniques.
- o Gained experience with setting up and managing tACS/EEG device (i.e., StarStim32)
- Learned basic programming (MATLAB, R-studio) and data analysis skills (EEGLAB, Brainstorm, SPSS)

Keywords: Developmental Dyslexia, Visual pathways, Temporal processing, Neural oscillations, Visual crowding, EEG connectivity indexes, Brain imaging (EEG), Neurostimulation, Non-invasive transcranial brain stimulation (tACS, tMS)

Milan, March 2020- to date

Supervisor: Luca Ronconi ronconi.luca@unisr.it

APE inFo - Associazione Psicologi Europei in Formazione

The first psychology student association in Lombardy, one of the few in Italy, and a member of the European Federation of Psychology Students' Associations (EFPSA). Engaged in various activities, it oversees a journal focused on psychological and current affairs topics.

Among other activities, I have been responsible for writing and editing articles for the APEinfo Journal and social media platoforms.

Contributed to the establishment, management and formation of the association's international section

- September 2023-to date: Consultant within the International area;
- March 2021-September 2023: Head of International Area;
- o March 2020- March 2021: Copywriter/Writer for APE inFo Journal.

Bologna, July 2020- October 2020

Projects in collaboration with psychologist and psychotherapist Elisa Bernardi, in which I dedicated myself to the creation and implementation of several projects aimed at schools:

- o Project: "Inclusion at the time of Covid-19: the online psychologist for the classroom group";
- Project "Magnanima Juventus Beata Senectute"-an experimental hypothesis for the development of social consciousness and competence.

Exploratory research activities in order to accomplish the post-graduated Bachelor dissertation with Prof. Alessandro Antonietti, Department of Psychology, Cattolica del Sacro Cuore University, Milan, Italy.

- Expanded theoretical knowledge of noninvasive transcranial stimulation (NIBS) techniques particularly those of transcranial electrical stimulation tES and transcranial magnetic stimulation TMS. Literature investigation of ethical issues related to neurostimulation and neuroenhancement in the adult population and more specifically in the pediatric population, with particular interest in the latter on ethical issues related to the application of these techniques, and analysis of the specific issues of neuromodulation in minors:
- Full command of Microsoft Office Suite and of the navigation in Scientific Databases (i.e., Pubmed, Embase, Web of Science, Scopus, PROquest).

Keywords: noninvasive brain stimulation, transcranial electrical stimulation (tES), transcranial direct current stimulation (tDCS), transcranial magnetic stimulation (TMS), ethical issues, neurodevelopmental disorders

Milan, January 2019- September 2020

Supervisor: Alessandro Antonietti <u>alessandro.antonietti@unicatt.it</u>
Volunteer in U.V.I- Unione Volontari per l'Infanzia e l'Adolescenza

Worked as a volunteer in collaboration on various psychological projects including:

- Home care: Provided assistance to the family of a child with autistic spectrum disorder (the work with the family was carried out entirely in Spanish);
- Scholastic support: Assisted a family of a child with DSA (Dyslexia and Dyscalculia) with their studies and school preparation;
- o Comunità Stelline of Milan: I took care of following some girls aged 14 to 17 especially as school support;
- Project Albero dei Mille Colori: Participated in this project, as a school volunteer, that involves the organization of a pre-school space for the cultural and social integration of foreign families.

Scientific Responsible: Silvio Morganti silvio.morganti@unionevolontariperinfanzia.org

## Poster e pubblications

2024

Toffoli L., **Stefanelli G.,** Manca G., Del Popolo Cristaldi F., Duma G. M., Guidi M., Incagli F., Sbernini L., Tarantino V., Mento G. *Adaptive Cognitive Control in 4 to 7-Year-Old Children and Potential Effects of School-Based Yoga-Mindfulness Interventions: An Exploratory Study in Italy.* – Under review

2024

**Stefanelli G.,** Crifaci G., Capelli E., Beretta C., Riboldi E. M., Billeci L., Cantiani C., Molteni M., Riva V. *Pupillary responses for social versus non-social stimuli in autism: a systematic review* – Under review

March 2024

**Stefanelli G.,** Toffoli L., Duma G. M., Del Popolo Cristaldi, F.,Tarantino, V., Danieli A., team CALM, Mento. *Gestione dell'interferenza cognitiva nell'ADHD: Ruolo della Predicibilità Ambientale (Managment of cognitive interference in ADHD: Role of Environmental Predictability) - Video-poster accepted for the Giornate di aggiornamento sull'uso degli strumenti in Psicologia Clinica dello Sviluppo Bologna, 1st - 2nd March 2024* 

February 2024

**Stefanelli G.,** Toffoli L., Duma G. M., Tarantino V., Danieli A., Mento G. *Predictive or Non-predictive: Does adaptive cognitive control (CC) differ in children with or without Attention Deficit/Hyperactivity Disorder (ADHD)?* - Poster accepted for the Cognitive Science Arena (CSA), Brixen (BZ, Italy), 8<sup>th</sup> -10<sup>th</sup> February 2024

November 2023

Zamfira D. A., Di Dona G., Turri C., **Stefanelli G.**, Battista M., Perani D., Ronconi L. *Investigating the effects of multi*session bilateral parietal tACS on cognition and neural dynamics of visual motion processing in adults with dyslexia – Submitted to XXXI Congresso Nazionale Sipf Siena, 9<sup>th</sup>-11<sup>th</sup> November 2023

September 2023

Zamfira D. A., **Stefanelli G.**, Turri C., Di Dona G., Perani D., Ronconi L. *Clinical and neurophysiological effects of multi-session bilateral parietal tACS and concurrent reading training in adults with dyslexia* - Poster accepted for Brainbox Initiative Conference 7<sup>th</sup> Annual Neuroscience Conference, London, United Kingdom 21<sup>st</sup> - 23<sup>rd</sup> September 2023

August 2023

Zamfira D. A., Turri C., Di Dona G., Battista M., Alessi G., **Stefanelli G.**, Perani D., Ronconi L. *Reading acceleration training combined with multi-session parietal tACS enhances working memory and magnocellular-dorsal stream functionality in dyslexia* - Poster accepted for the 45th European Conference on Visual Perception, Paphos, Cyprus, August, 2023

July 2023

Zamfira D. A., **Stefanelli G.**, Turri C., Di Dona G., Perani D., Ronconi L. *Investigating the clinical effects of multi*sessione bilateral parietal tACS and concurrent reading training in dyslexia -Invited talk at the Basic & Applied NeuroDynamics Laboratory, Maastricht University, Faculty of Psychology and Neuroscience, 24th July 2023

## Seminars e conference

Bologna, 1st - 2nd March, 2024

**XX** Edizione Giornate di aggiornamento sull'uso degli strumenti in Psicologia Clinica dello Sviluppo (PCS) Organized by the journal Clinical Developmental Psychology (PCS), by the publishing company Il Mulino, and by AIRIPA Italian Association for Research and Intervention in Learning Psychopathology.

Brixex (BZ), 8th -10th February, Cognitive Science Arena (CSA) 2024 2024 Annual conference in cognitive science held in Bressanone (Brixen), Italy. Siena, 9th -11th November, 2023 XXXI Congresso SIPF 2023 Annual congress of the Italian Society of Psychophysiology and Cognitive Neuroscience (SIPF). Paphos, Cypsrus, 27th-31st August 45th European Conference on Visual Perception (ECVP) 2023 2023 Annual international conference dedicated to the scientific study of visual perception. IRCCS Eugenio Medea Bosisio Magstim EGI Inclusive EEG Research WEBINAR March 22, 2023, Caitlin Hudac, PhD Parini (LC) - 22<sup>nd</sup> March 2023 IRCCS Eugenio Medea Bosisio Seminar: Tools for Identifying the Risk of Specific Learning Disorders or Developmental Language Disorders Parini (LC) - 15th March 2023 in Bilingual Children. In-depth exploration of the MuLiMi computerized system and questionnaires for parents and professionals. Speaker: Maren Eikerling Ph.D IRCCS Eugenio Medea Bosisio Seminar: Biological Complexity of the Autism Spectrum: A Reading Key for Research. Parini (LC) - 22<sup>nd</sup> February 2023 Speaker: Dott.ssa Cristina Panisi Ph.D 20th February - 3rd March 2023 Seminar: FIT'NG Interactive Virtual Workshop Series on Methods and Best Practices in Developmental EEG Organized by the Fetal, Infant, & Toddler Neuroimaging Group (FIT'NG) and curated by Drs. Lindsay Bowman and Sam Wass on behalf of the Vision and Visibility Committee. 17th February 2023 2<sup>nd</sup> mini symposium on paths to word meaning. Featuring "How do infants discover words and their meanings" by Dr. Anne Christophe (CNRS & École normale supérieure - PSL), organized in collaboration with the RIKEN CBS Laboratory for Language Development. Milan, 6th December 2022 52° Congress of Italian Society of Neurology (SIN) Participation in the roundtable discussion 'Technological Innovation in Healthcare: Reflections, Challenges, and Opportunities, 'hosted by Biogen Digital Health. Tullamore, Ireland, 25th-28th July Regional European Conference on Alcohol Policy for Youth (REAPYC)

Event organized by the International Youth Health Organization (YHO). Participation as a representative of Italy.

2022