

EDUCATION AND TRAINING

January 2022 - Ongoing

Specialization in Psychotherapy (SSPC-IFREP, Mestre)

Università degli Studi di Trento
EQF 8

November 2018 – January 2022

PhD in Cognitive Science *cum laude*

Project: study of emotion regulation and information processing in healthy and clinical populations. Thesis on the psychological and neural bases of anger and the impact of mindfulness meditation on its regulation (title: "The psychological and neural mechanisms of anger and its regulation").
Supervisor: Professor Alessandro Grecucci

April 2018 – April 2019

Post-lauream Internship (section A)

Emotion regulation, mindfulness training and brain features in different clinical conditions
Supervisor: Alessandro Grecucci
Enrollment in the register of psychologists of Friuli Venezia Giulia, number 2289

IsIMind (Istituto Italiano Mindfulness), Milano

September 2017 – October 2018

Master in "Mindfulness in Ambito Clinico"

50 ECM

Master in order to become Mindfulness Teacher (United Kingdom Guidelines for Mindfulness Teachers). Application of the mindfulness training in the treatment of many disorders: borderline, addictions, depression, eating disorders, sexual disorders, obsessive compulsive disorder, cancer.
Supervisor: Fabrizio Didonna

October 2016 – March 2018

Master Degree *cum laude* in Psychology - Neuroscience

Thesis: Schizophrenia and Bipolar Disorder: Comparing two different morphometric analyses
Alessandro Grecucci

Università degli Studi di Trento

EQF: 7

Supervisor:

Università degli Studi di Trento, CIMeC; International School for Advanced Studies (SISSA), Trieste

September 2014 – October 2016

Double Graduate Program in Cognitive Science *cum laude*: *Master Degree in Cognitive Science* from UNITN and *Diploma in Cognitive Science* from SISSA.

EQF: 7

Thesis: Time perception in rats: reciprocal modulation of time and somatosensory perception.
Supervisors: Professor Mathew Diamond (SISSA), professor Giorgio Vallortigara (UNITN)

Università degli Studi di Trento

September 2011 – July 2014

Bachelor Degree *cum laude* in Sciences and Techniques of Cognitive Psychology.

EQF: 6

Internship on "Effect of reward and attention on memory".
Massimo Turatto

Supervisor: Professor

WORK EXPERIENCES

September 2023 – March 2025

Research Fellow – University of Udine

2019 - Ongoing

Teaching experience

Teaching courses at the University of Trento (Faculty of Psychology) and at the University of Udine, independently ("Mindfulness - methods for personal well-being" proposed for the academic years 2020/2021, 2021/2022; "Nozioni di psicologia clinica applicate alle scienze motorie" academic year 2023/2024) or within other teachings of prof. Alessandro Grecucci (Affective Neuroscience, Neurotechnology)

December 2021 – December 2022

Research Fellow – University of Trento

February 2019 – February 2020

Internship in Psychiatric Mental Health Center – APSS Arco

LAB EXPERIENCE

October 2017 – December 2022

**Alessandro Grecucci's lab (Clinical and Affective Neuroscience Lab),
Department of Cognitive Science, Trento, IT**

Comparison of the univariate Voxel-based Morphometry and the multivariate Source-based Morphometry techniques. Usage of advanced machine learning analyses (both supervised and unsupervised) applied to structural and functional data (task based and resting state), in order to investigate individual differences in the regulation of emotions (anger in particular) and in different clinical disorders.

October 2015 – September 2017

**Mathew Diamond's lab (Tactile Perception and Learning Lab),
International School for Advanced Studies (SISSA), Trieste, IT**

Investigation of duration perception in rodents and humans through psychophysics, electrophysiological and optogenetic techniques. This strong and rigorous scientific experience improved my researcher independence.

November 2014 – August 2015

Luigi Cattaneo's lab, Center for Mind/Brain Sciences (CIMeC), Trento University, IT

Investigation of cortico-cortical connectivity between premotor and motor cortices with transcranial magnetic stimulation; investigation of rule-dependent vs. stimulus dependent brain networks during action observation with transcranial magnetic stimulation; investigation of the inhibitory role of dorsal premotor cortex with transcranial magnetic stimulation.

November 2013 – March 2014

Massimo Turatto's lab, Department of Cognitive Science, Trento University, IT

Investigation of unconscious effect of reward and attention on memory through psychophysics techniques.

RESEARCH EXPERIENCE AND SKILLS

- Carry on a project independently, from data acquisition to paper writing
- Data analysis of behavioral, morphometric and functional MRI data (R, Matlab)
- Independent user of different brain morphometric techniques (Source-based Morphometry, Voxel-based Morphometry), applied to the study of clinical conditions
- Independent user of resting-state fMRI analysis
- Independent user of different machine learning approaches applied to MRI and fMRI data (both resting states and task based)
- Use of TMS and tDCS and data analysis (Matlab)
- Use of Matlab, R and Python (including OpenSesame) to produce and analyze psychophysical experiments
- Knowledge of electrophysiological and optogenetic techniques
- Scientific knowledge and experience of emotion regulation and mindfulness training, especially when applied to different clinical conditions

Papers

Grecucci A, Dadomo H, Salvato G, Lapomarda G, Sorella S, Messina I. Abnormal Brain Circuits Characterize Borderline Personality and Mediate the Relationship between Childhood Traumas and Symptoms: A mCCA+jICA and Random Forest Approach. *Sensors*. 2023; 23(5):2862. <https://doi.org/10.3390/s23052862>

Messina I, Spataro P, Sorella S, Grecucci A. "Holding in Anger" as a Mediator in the Relationship between Attachment Orientations and Borderline Personality Features. *Brain Sciences*. 2023; 13(6):878. <https://doi.org/10.3390/brainsci13060878>

Grecucci, A., Orsini, C., Lapomarda, G., Sorella, S., & Messina, I. (2023). Perceiving visual negative stimuli in schizophrenia and bipolar disorder: Meta-analytic evidence of a common altered thalamic-parahippocampal-basal ganglia circuit. *Neuroimage: Reports*, 3(2), 100173. <https://doi.org/10.1016/j.ynrp.2023.100173>

Grecucci, Alessandro and Sorella, Sara and Consolini, Jennifer, Decoding Individual Differences in Expressing and Inhibiting Anger from Structural Brain Networks: A Supervised Machine Learning Approach. *BBRES-D-22-00423*, Available at SSRN: <https://ssrn.com/abstract=4118485> or <http://dx.doi.org/10.2139/ssrn.4118485>

Consolini, J., Sorella, S. & Grecucci, A. Evidence for lateralized functional connectivity patterns at rest related to the tendency of externalizing or internalizing anger. *Cogn Affect Behav Neurosci* **22**, 788–802 (2022). <https://doi.org/10.3758/s13415-022-01012-0>

Grecucci A, Lapomarda G, Messina I, Monachesi B, Sorella S, Siugzdaite R. Structural Features Related to Affective Instability Correctly Classify Patients With Borderline Personality Disorder. A Supervised Machine Learning Approach. *Front Psychiatry*. 2022 Feb 28;13:804440. doi: 10.3389/fpsy.2022.804440. PMID: 35295769; PMCID: PMC8918568.

Sorella, Sara; Vellani, Valentina; Siugzdaite, Roma; Feraco, Paola; Grecucci, Alessandro, "Structural and functional brain networks of individual differences in trait anger and anger control: an unsupervised machine learning study" in *EUROPEAN JOURNAL OF NEUROSCIENCE* (2021)

Sorella, S., Grecucci, A., Piretti, L., Job, R. (2021). Do anger perception and the experience of anger share common neural mechanisms? Coordinate-based meta-analytic evidence of similar and different mechanisms from functional neuroimaging studies. *NeuroImage*

Mattevi A., Sorella S., Vellani V., Remo J., Grecucci A. (2019). Regolare la rabbia: quale strategia? Uno studio preliminare. *Giornale Italiano di Psicologia*.

Sorella S., Lapomarda G., Messina I., Siugzdaite R., Grecucci A. (2019). "Testing the expanded continuum hypothesis of schizophrenia and bipolar disorder. Neural and psychological evidence for shared and distinct mechanisms.", *NeuroImage: Clinical*, v. 2019, n. 101854 (2019). - DOI: 10.1016/j.nicl.2019.101854

Book's chapters

Sorella, S. & Grecucci, A., "The neural bases of anger" in C. Martin, V. R. Preedy and V. B. Patel (edited by), *Handbook of Anger, Aggression, and Violence*, Springer, under review.

Chiffi, D.; Sorella, S.; Grecucci, A., "Effetto Placebo: Il Modello "Affective-Meaning-Making" in Cruciani, M., Gagliardi, F. (edited by), *Medicina Filosofia e Cognizione*, italia: Aracne editrice, 2019. - (LA MENTE E I SISTEMI COGNITIVI).

EXTRACURRICULAR EDUCATIONAL ACTIVITIES

Compassion Focused Therapy Training – 1st level

Mindful Self Compassion – Teacher Training 1st level

Mindfulness-based Cognitive Therapy – Teacher Training

Mindfulness-based Cognitive Therapy for OCD – Teacher Training 1st level

Mindful Eating – Teacher Training

MIND UP – Social Emotional Learning Program for Children – Teacher Training

Mindfulness-based Cognitive Therapy for Children – Teacher Training

Pattern Recognition for Neuroimaging Toolbox (PRoNTo) 2021 Course, 15-17 September 2021, UCL

BAYESIAN STATISTICAL ANALYSES FOR THE HUMAN, SOCIAL AND COGNITIVE SCIENCES, 31 May-5 June 2021, University of Verona

Statistical Parametric Mapping for fMRI and MRI/MBM, 17-19 May 2021, UCL

Introduction to Transcranial Ultrasound Stimulation, 20-22 April 2021, BrainBox

Fundamentals & Applications of TMS, 30 March-1 April 2021, BrainBox

Fundamentals & Applications of tES, 23-25 March 2021, BrainBox

Pattern Recognition in Neuroimaging Virtual Summer School, 14-18 September 2020, University of Vienna

BIENNIAL EDINBURGH SPM COURSE 2019 (Advanced Level 3-5 April 2019).

PERSONAL SKILLS

Mother tongue Italian

Other languages	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	B2	C1	C1
FCE (First Certificate in English, Cambridge English) (improved skills now)					
German	A1/A2	A1/A2	A1/A2	A1/A2	A1/A2
Goethe-Zertifikat A2: Fit in Deutsch 2 (2006)					

Digital competence

- Good command of office suite (word processor, excel, spread sheet, presentation software)
- Knowledge of data analysis programs (Matlab, R, Python)

Extra interests

- Mindfulness (Master in Mindfulness in Ambito Clinico, MBSR courses, Buddhist courses, meditation meetings, daily mindfulness meditation practice)
- Photography
- Travelling