

# Francesco Di Gregorio, Dr. Ph.

## ISTRUZIONE E FORMAZIONE

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- [ 06/11/2024 - Attuale ]

**National Scientific Qualification as associate Professor (disciplinary field of 11/E1 - General psychology, psychobiology and psychometrics)**  
*Ministero dell'Università e della Ricerca*
- [ 28/01/2021 - Attuale ]

**Albo Degli Psicologi Emilia-Romagna num. 9981**
- [ 01/11/2014 - 03/05/2019 ]

**Doctor of Philosophy (PhD)**  
*Catholic University Eichstätt-Ingolstadt*  
**Città:** Eichstätt | **Voto finale:** Cum Laude | **Tesi:** PhD dissertation title: Error-Related Brain Activity Reflects Independent Systems in Human Error Monitoring  
  
Supervisor: Prof. Dr. Marco Steinhauser, PhD.  
Co-examiners: Prof. Dr. Giuseppe Di Pellegrino, PhD, MD.
- [ 23/01/2020 - 28/05/2020 ]

**Certificate of Achievement**  
*Metodologia della ricerca in riabilitazione: corso introduttivo*  
**Indirizzo** IRCCS, Istituto delle scienze neurologiche di Bologna.
- [ 04/02/2019 - 07/02/2019 ]

**Certificate of Achievement**  
*Workshop Italiano di Rasch Analysis*
- [ 04/04/2016 - 08/04/2016 ]

**Certificate of Achievement**  
*EEGLAB workshop*
- [ 01/10/2010 - 14/02/2013 ]

**Master's Degree in Neuroscience and Neuropsychological rehabilitation**  
*Università di Bologna*  
Degree dissertation title: The error-related brain activity predicts conscious classification of different types of errors.  
Supervisor: Dr. Martin Ernst Maier  
Co-examiners: Prof. Dr. Giuseppe Di Pellegrino, PhD, MD.
- [ 01/10/2006 - 29/07/2010 ]

**Bachelor's Degree in Psychological techniques of development and education**  
*Università di Palermo*  
Final Dissertation title: The neuropsychanalytic method: between psychoanalysis and neuroscience.  
Supervisor: Prof. Patrizia Turriziani

## COMPETENZE LINGUISTICHE

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**Lingua madre:** italiano  
**Altre lingue:**

**inglese**

**ASCOLTO: C1 LETTURA: C2 SCRITTURA: C2**

**PRODUZIONE ORALE: C1 INTERAZIONE ORALE: C1**

**francese**

**ASCOLTO: B2 LETTURA: B2 SCRITTURA: B1**

**PRODUZIONE ORALE: B2 INTERAZIONE ORALE: B2**

**tedesco**

**ASCOLTO: A2 LETTURA: A2 SCRITTURA: A1**

**PRODUZIONE ORALE: A2 INTERAZIONE ORALE: A2**

## COMPETENZE

SPSS/PSPP | MATLAB-EEGLAB | RUMM 2030 | MPlus | Microsoft Office | Structural Equation Modeling | E-Prime | Presentation Software | Galileo EEG | MagStim Stimulation System | Machine Learning | Electroencephalography (EEG) | Non invasive brain stimulation

## PUBBLICAZIONI

**H-index (Scopus: 14, Scholar: 17); Citations (Scopus: 698, Scholar: 976)**

### 2026

**Di Gregorio F**, Betti S, Dalbagno D, Mannari V, di Pellegrino G, Starita F. (2026) Predictive encoding of pain location in the motor system indexed by somatomotor alpha and corticospinal excitability. *Neuroimage*. Apr 7;332:121909. doi: 10.1016/j.neuroimage.2026.121909

Mattioni L, **Di Gregorio F**, Badioli M, Danti C, Degni LAE, Finotti G, Starita F, di Pellegrino G, Garofalo S. Resting-State Theta/Beta Ratio Reveals Distinct Neural Signatures in High Sign-Tracking Individuals (2026). *Biol Psychiatry Cogn Neurosci Neuroimaging*. 2025 Dec 13:S2451-9022(25)00389-1

### 2025

**F. Di Gregorio**, S. Battaglia. (2025). Insights into brain oscillations and connectivity in neuropsychiatric disorders. *Adv Clin Exp Med*. doi:10.17219/acem/213945

Dumsky, J., M. E. Maier, **F. Di Gregorio**, and M. Steinhauser. 2025. "Error Awareness Can Occur in the Absence of an Error-Related Negativity." *Psychophysiology*62, no. 10: e70128. <https://doi.org/10.1111/psyp.70128> .

**F. Di Gregorio**, G. Lullini, S. Orlandi, V. Petrone, E. Ferrucci, E. Casanova, V. Romei, F. La Porta. (2024). Clinical and Neurophysiological predictors of the functional outcome in right-hemisphere stroke. *NeuroImage*, 157, 105542. <https://doi.org/10.1016/j.neuroimage.2025.121059>

J. Trajkovic, G. Ricci, G. Pirazzini, L. Tarasi, **F. Di Gregorio**, E. Magosso, M. Ursino, V. Romei. (2025) Aberrant Functional Connectivity and Brain Network Organization in High-Schizotypy Individuals: An Electroencephalography Study, *Schizophrenia Bulletin*, sbaf004, <https://doi.org/10.1093/schbul/sbaf004>

### 2024

**F. Di Gregorio**, & S. Battaglia (2024). The intricate brain-body interaction in psychiatric and neurological diseases. *Advances in clinical and experimental medicine: official organ Wroclaw Medical University*, 33(4), 321–326. <https://doi.org/10.17219/acem/185689>

**F. Di Gregorio**, M. Steinhauser, M. Maier, J.F. Thayer, & S. Battaglia. (2024). Error-related

cardiac deceleration: Functional interplay between error-related brain activity and autonomic nervous system in performance monitoring. *Neuroscience and Biobehavioral reviews*, 157, 105542. <https://doi.org/10.1016/j.neubiorev.2024.105542>

J. Trajkovic, **F. Di Gregorio**, G. Thut & V. Romei. (2024) Transcranial magnetic stimulation effects support an oscillatory model of ERP genesis. *Current Biology* 34, 1-11 <https://doi.org/10.1016/j.cub.2024.01.069>

## 2023

S. Moscato; S. Orlandi; G. Battaglia; **F. Di Gregorio**; G. Lullini; S. Pozzi; L. Sabattini; L. Chiari; F. La Porta (2023) Feasibility of a diagnostic differentiation tool for nociceptive and neuropathic pain in a neurorehabilitation population using physiological data from wearable sensors," *2023 IEEE EMBS Special Topic Conference on Data Science and Engineering in Healthcare, Medicine and Biology*, Malta, 2023, pp. 45-46, doi: 10.1109/IEEECONF58974.2023.10404975.

S Moscato, S Orlandi, **F Di Gregorio**, G Lullini, S Pozzi, L Sabattini, L Chiari, F La Porta, (2023) Feasibility interventional study investigating PAIN in neurorehabilitation through wearabLE SensorS (PAINLESS): a study protocol. *BMJ Open* [doi.org/10.1136/bmjopen-2023-073534](https://doi.org/10.1136/bmjopen-2023-073534);

**F Di Gregorio**, S Battaglia, (2023) Advances in EEG-based functional connectivity approaches to study the central nervous system in health and disease. *Advances in Clinical and Experimental Medicine* DOI: 10.17219/acem/166476;

**F Di Gregorio\***, J Trajkovic\*, A Avenanti, G Thut, V Romei, (2023) Two oscillatory correlates of attention control in the alpha-band with distinct consequences on perceptual gain and metacognition. *Journal of Neuroscience* 43 (19) 3548-3556;

**F Di Gregorio**, V Petrone, E Casanova, G Lullini, V Romei, R Piperno, F La Porta (2023) Hierarchical psychophysiological pathways subtend perceptual asymmetries in Neglect *Neuroimage* 270, 119942

## 2022

**F Di Gregorio**, J Trajkovic, C Roperti, E Marcantoni, P Di Luzio, A Avenanti, G Thut, V Romei, (2022) Tuning alpha rhythms to shape conscious visual perception *Current Biology* 32 (5), 988-998. e6

G Ippolito, R Bertaccini, L Tarasi, **F Di Gregorio**, J Trajkovic, S Battaglia, V Romei. (2022) The Role of Alpha Oscillations among the Main Neuropsychiatric Disorders in the Adult and Developing Human Brain *Biomedicines* 12, 3189

**F Di Gregorio**, ME Maier, M Steinhäuser (2022) Early correlates of error-related brain activity predict subjective timing of error awareness *Psychophysiology*, e14020

J Trajkovic, **F Di Gregorio**, E Marcantoni, G Thut, V Romei (2022) A TMS/EEG protocol for the causal assessment of the functions of the oscillatory brain rhythms in perceptual and cognitive processes *STAR protocols* 3 (2), 101435

**F Di Gregorio**, F La Porta, V Petrone, S Battaglia, S Orlandi, G Ippolito, V Romei, R Piperno, G Lullini (2022) Accuracy of EEG Biomarkers in the Detection of Clinical Outcome in Disorders of Consciousness after Severe Acquired Brain Injury: Preliminary Results of a Pilot Study Using a Machine Learning approach *Biomedicines* 10 (8), 1897 2022

## 2021

J Trajkovic, **F Di Gregorio**, F Ferri, C Marzi, S Diciotti, V Romei, (2021) Resting state alpha oscillatory activity is a valid and reliable marker of schizotypy *Scientific Reports* 11 (1), 1-13

**F Di Gregorio**, F La Porta, E Casanova, E Magni, R Bonora, MG Ercolino, V Petrone, MR Leo, RPiperno (2021) Efficacy of repetitive transcranial magnetic stimulation combined with visual scanning treatment on cognitive and behavioral symptoms of left hemispatial neglect in right-hemisphere stroke: study protocol for a randomized controlled trial. *Trials* 22 (1), 1-11

**F Di Gregorio**, F La Porta, E Casanova, E Magni, R Bonora, MG Ercolino, V Petrone, MR Leo, RPiperno, (2021) Efficacy of Repetitive Transcranial Magnetic Stimulation Combined With Visual Scanning Treatment on Cognitive-Behavioral Symptoms of Unilateral Spatial Neglect in Patients With Traumatic Brain Injury: study protocol for a randomized controlled trial *Frontiers in Neurology* 12 (702649)

## 2020

**F Di Gregorio**, ME Maier, M Steinhauser (2020) Are errors detected before they occur? Early error sensations revealed by metacognitive judgments on the timing of error awareness *Consciousness and Cognition* 77, 102857

## 2019

**F Di Gregorio**, B Ernst, M Steinhauser (2019) Differential effects of instructed and objective feedback reliability on feedback-related brain activity *Psychophysiology* 56 (9), e13399

## 2018

**F Di Gregorio**, ME Maier, M Steinhauser (2018) Errors can elicit an error positivity in the absence of an error negativity: Evidence for independent systems of human error monitoring *Neuroimage* 172, 427-436

## 2016

**F Di Gregorio**, M Steinhauser, ME Maier (2016) Error-related brain activity and error awareness in an error classification paradigm *Neuroimage* 139, 202-210

## 2015

ME Maier, **F Di Gregorio**, T Muricchio, G Di Pellegrino (2015) Impaired rapid error monitoring but intact error signaling following rostral anterior cingulate cortex lesions in humans *Frontiers in human neuroscience* 9, 339

## CONFERENZE/SEMINARI

[ 06/05/2024 - 08/05/2024 ]

**Research Talk** EMHFC (European Meeting of Human Fear Conditioning), Heeze, the Netherlands

Grounding fear conditioning in the motor system: the conditioned corticospinal response

[ 03/11/2023 - 09/11/2023 ]

**Research Talk** IEEE EMBS 2023 Malta.

Feasibility of a diagnostic differentiation tool for nociceptive and neuropathic pain in a neurorehabilitation population using physiological data from wearable sensors,

[ 15/10/2023 - 20/10/2023 ]

**Research Talk** Convegno SIMFERER (Società Italiana di Medicina Fisica e Riabilitativa), Bologna, Italy

Classificazione binaria del dolore su pazienti con sclerosi multipla mediante sensori indossabili e algoritmi di machine learning.

[ 10/06/2022 - 12/06/2022 ]

**Research Talk** Convegno SIRN (Società Italiana Riabilitazione Neurologica), Napoli, Italy

La Stimolazione Magnetica Transcranica ripetitiva abbinata al visual scanning riduce i sintomi cognitivi e lo squilibrio interemisferico nella Negligenza spaziale unilaterale sinistra dopo Stroke: uno studio clinico randomizzato controllato

[ 20/05/2015 ] **Research Talk** Seminario di Ricerca, AUSL di Bologna in Medina Riabilitativa e Neuroriabilitazione, Bologna, Italy

Attenzione e Stimolazione Magnetica Transcranica

### Conference Posters

**F Di Gregorio**.; Steinhauser M.; Maier M.E. (2015) Error-related brain activity predicts conscious classification of different error types. *TeaP 2015, Hildesheim*.

**F Di Gregorio**, Maier M.E.; Steinhauser M. (2016) Does the Feeling of Error Detection emerge already before the Response?. *TeaP 2016, Heidelberg*.

**F Di Gregorio**, Maier M.E.; Steinhauser M. (2018). Independent systems in human performance monitoring: evidence from error-related brain activity. *SINP 2018, Palermo*.

**F Di Gregorio**, Trajkovic J, Roperti C., Romei V. (2019) Electrophysiological and Cognitive Asymmetries Underlying Schizotypy. *OHBM 2019, Rome*.

Trajkovic J., **F Di Gregorio**, et al. HOW DO WE BECOME AWARE OF WHAT (WE THINK) WE SEE? *Oscillatory mechanisms of conscious perception. 2020 Rovereto*

**F Di Gregorio**, Valeria Petrone, et al., Neural correlates of perceptual asymmetries in Neglect: from generative models to neurostimulation, *RIN 2022 Bologna*

E. Magni, **F Di Gregorio**, et al., La Continuità di Selezione: dalle strategie riperfusive al percorso riabilitativo negli ultraottantenni con esiti di stroke, *RIN 2022 Bologna*

M. G Verrengia, S. Moscato, S. Orlandi, **F. Di Gregorio**, G. Lullini et al.,. A Differential Diagnosis Method to Detect Nociceptive and Neuropathic Pain: Preliminary Results of the PAINLESS Project, *RIN 2023 Roma*

S. Moscato, S. Orlandi, **F. Di Gregorio**, G. Lullini et al. Valutazione automatica del dolore mediante sensori indossabili e algoritmi di intelligenza artificiale, *SIRN 2023 Riva del Garda*

**F. Di Gregorio**, Betti S., Dalbagno D., Mannari V., Garofalo S., di Pellegrino G., Starita F. Constructing pain predictions in the motor system, *MNESYS 2024, Bologna*

S. Betti, **F. Di Gregorio**, Dalbagno D., Mannari V., Garofalo S., di Pellegrino G., Starita F. Multiple systems for fear learning: the role of corticospinal excitability, autonomic response and brain rhythms, *EMHFC (European Meeting of Human Fear Conditioning) 2024, Heeze, the Netherlands*.

Dalbagno D., S. Betti, Mannari V., **F. Di Gregorio**, Garofalo S., di Pellegrino G., Starita F. Learning threat predictions in the cortical motor system *EMHFC (European Meeting of Human Fear Conditioning) 2024, Heeze, the Netherlands*.

Dalbagno D., S. Betti, Mannari V., **F. Di Gregorio**, Garofalo S., di Pellegrino G., Starita F. Learning threat predictions in the cortical motor system *EMHFC (European Meeting of Human Fear Conditioning) 2024, Heeze, the Netherlands*.

## RETI E ASSOCIAZIONI DI APPARTENENZA

### Scientific Collaborations

National and International scientific collaborations as Principal Investigator, Co-Principal Investigator, and researcher.

National

1. UNIBO (Prof. G. Di Pellegrino, Prof. V. Romei, Prof. A. Avenanti, Prof. L. Chiari, Prof. S. Diciotti)
2. AUSL di Bologna (Dr. R. Piperno)

3. IRCCS Don Gnocchi di Firenze (Prof. F. Cecchi)
4. Ospedale di Montecatone (Dr. P. Salucci)
5. Ospedale Villabellombra (Dr. M. R. Leo)
6. Università di Chieti (Prof. F. Ferri)
7. Fondazione Istituto Neurologico Carlo Besta (Prof. M. Leonardi)
8. IRCCS Centro Neurolesi Bonino Pulejo Messina (Prof. S. Marino)
9. Istituto S. Anna Crotone (Prof. P. Tonin)

#### International

1. KU Eichstatt-Ingolstadt (Prof. M. Steinhauser, Dr. M. E. Maier)
2. University of Glasgow (Prof. G. Thut)
3. University Hospital Schleswig-Holstein Kiel (Prof. W. Maetzler)
4. Vrije University Amsterdam (Prof. J. Van Dieen)
5. Tel Aviv Sourasky Medical Center (Prof. J. Hausdorff)
6. University of New South Wales, Sydney (Dr. M. Brodie)
7. Swiss Federal Institute of Technology (ETH Zürich) (Dr. N. Singh)
8. Ohio state university (Prof. Julian Thayer)

#### Membership

2014-2018: Membro della "Deutsche Gesellschaft für Psychologie" (Società Tedesca di Psicologia)

## ONORIFICENZE E RICONOSCIMENTI

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- [ 01/01/2018 ] **Starting Grant Winner Istituto che rilascia la qualifica:** Italian Ministry of Health, Accademia dei Lincei, Roma  
Awarded to Francesco Di Gregorio  
  
Winner in the Category "Starting Grant", "Ricerca Finalizzata Ministeriale 2018"
- [ 01/01/2020 ] **Poster award Istituto che rilascia la qualifica:** Transcranial Brain Stimulation in Cognitive Neuroscience 2nd Edition, Rovereto  
  
How do we became aware of what we think we see? Oscillatory mechanisms of conscious perception
- [ 01/01/2022 ] **Biomedicines Best Paper Award Istituto che rilascia la qualifica:** Biomedicines MDPI  
Biomedicines 2022 Best Paper Award for the Paper:  
  
G Ippolito, R Bertaccini, L Tarasi, **F Di Gregorio**, J Trajkovic, S Battaglia, V Romei. (2022) The Role of Alpha Oscillations among the Main Neuropsychiatric Disorders in the Adult and Developing Human Brain *Biomedicines* 12, 3189
- [ 01/01/2023 ] **Premio SIPF Junior Istituto che rilascia la qualifica:** XXXI congresso nazionale SIPF, Siena,  
  
Premio SIPF Junior, Awarded to J Trajkovic for the paper:  
  
**F Di Gregorio**, J Trajkovic, C Roperti, E Marcantoni, P Di Luzio, A Avenanti, G Thut, V Romei, (2022) Tuning alpha rhythms to shape conscious visual perception *Current Biology* 32 (5), 988-998. e6
- [ 01/01/2025 ] **Highly cited paper Istituto che rilascia la qualifica:** Web of Science  
Highly cited paper in 2024  
  
**F Di Gregorio**, S Battaglia (2024) The intricate brain-body interaction in psychiatric and neurological diseases. *ACEM* 33(4) 321-326

## GRANTED PROJECTS AND POSITIONS

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[ 01/02/2026 - Attuale ]

**Adjunct Professor**

Promoter: Università Di Parma

Department: Medicina, Tecniche di radiologia medica, per immagini e radioterapia

Teaching: Psicologia Generale (4 CFU)

Department: Medicina, Scienze Motorie, Sport e Salute

Teaching: Psicologia Generale (6 CFU)

[ 01/09/2025 - Attuale ]

**Adjunct Professor**

Promoter: Università di Ferrara

Department: Neuroscienze e Riabilitazione

Teaching: Psicometria (2 CFU)

[ 14/06/2024 - Attuale ]

**Adjunct Professor**

Promoter: Università degli studi di Bologna

Department: Psicologia "Renzo Canestrari"

Teaching: Neuroscienze in Pratica (TPV-AFP-AFP integrativi 10 CFU M-PSI/02)

[ 01/05/2024 - Attuale ]

**Post-Doc Researcher (Assegno di Ricerca)**

Center for studies and research in Cognitive Neuroscience (CsrNC), Cesena, Italy

Promoter: University of Bologna, UNIBO

Study:

"Shaping predictive waves in the human visual system"

Italian MUR, Grant/Award Number: P2022XAKXL\_003

Granted to Prof. Vincenzo Romei

[ 14/06/2023 - 14/06/2024 ]

**Adjunct Professor**

Promoter: Università degli studi di Bologna

Department: Psicologia "Renzo Canestrari"

Teaching: Neuroscienze in Pratica (TPV-AFP-AFP integrativi 10 CFU M-PSI/02)

[ 01/05/2023 - 01/05/2024 ]

**Post-Doc Researcher (Assegno di Ricerca)**

Center for studies and research in Cognitive Neuroscience (CsrNC), Cesena, Italy

Promoter: University of Bologna, UNIBO

Study:

"Fear in action: How Pavlovian fear learning shapes goal-directed motor responses"

Fundação Bial, Grant/Award Number: 47/20; J32F20000870001,

Granted to Prof. Giuseppe Di Pellegrino and Dr. Francesca Starita

[ 10/02/2019 - 09/02/2023 ]

**Post-Doc Researcher (Principal Investigator)**

AUSL di Bologna, UOC Rehabilitation Medicine and Neurorehabilitation, Bologna, Italy.

Promoter: Regione Emilia-Romagna

Study:

"Efficacy of repetitive Transcranial Magnetic Stimulation (r-TMS) combined with visual scanning treatment on cognitive-behavioral symptoms of unilateral spatial neglect in patients with traumatic brain injury: a randomized clinical trial"

Ricerca Finalizzata Ministeriale: SG-2018-12367527",

Granted to Dr. Francesco Di Gregorio

**€ 130.000**

[ 15/03/2018 - 14/09/2018 ]

**Research Fellowship**

AUSL di Bologna, UOC Rehabilitation Medicine and Neurorehabilitation, Bologna, Italy

Promoter: Istituto delle Scienze Neurologiche di Bologna

National Multicentric Study:

"Efficacia della stimolazione magnetica transcranica ripetitiva (r -TMS) abbinata al trattamento cognitivo sui sintomi cognitivo-comportamentale della negligenza spaziale unilaterale sinistra in soggetti affetti da ictus destro entro tre mesi dall'esordio in confronto al solo trattamento cognitivo convenzionale: studio randomizzato controllato"  
Fondi Ricerca Corrente, Centro Studi per la Ricerca sul Coma, Casa dei Risvegli Luca De Nigris, Bologna, Italy.

[ 15/03/2017 - 14/03/2018 ]

**Visiting PhD Student**

Center for studies and research in Cognitive Neuroscience (CsrNC), Cesena, Italy

Promoter: KU Eichstatt-Ingolstadt

Multicentric International Study:

"Performance monitoring and Pupillometry in VmPFC patients"

DFG GZ: MA 4864/3-1,

Granted to Dr. Martin Ernst Maier.

[ 01/11/2014 - 03/05/2017 ]

**PhD Student**

Catholic University of Eichstatt-Ingolstadt, Eichstatt, Germany

Promoter: Catholic University of Eichstatt-Ingolstadt

Study:

"Top-down Control and Feedback processing"

DFG GZ: STE 1708/3-1,

Granted to Prof. Marco Steinhauser

[ 01/04/2014 - 01/10/2014 ]

**Research Fellowship**

AUSL di Bologna, UOC Rehabilitation Medicine and Neurorehabilitation, Bologna, Italy

Promoter: Centro studi per la Ricerca sul Coma

Studies:

"N100 as a marker of spatial attention in the clinical assessment of Neglect patients"

"Effects of r-TMS on the rehabilitation of Neglect patients"

Fondi Ricerca Corrente, Centro Studi per la Ricerca sul Coma, Casa dei Risvegli Luca De Nigris, Bologna, Italy.

## RESEARCH EXPERIENCE

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[ 01/05/2024 - Attuale ]

**Post-Doc Researcher (Collaborator)**

Center for studies and research in Cognitive Neuroscience (CsrNC), Cesena, Italy

Promoter: University of Bologna, UNIBO

Study:

"Shaping predictive waves in the human visual system"

[ 01/05/2023 - Attuale ]

**Post-Doc Researcher (Collaborator)**

Center for studies and research in Cognitive Neuroscience (CsrNC), Cesena, Italy

Promoter: University of Bologna, UNIBO

Study:

"Fear in action: How Pavlovian fear learning shapes goal-directed motor responses"

[ 15/05/2023 - Attuale ]

**Post-DoC Researcher (Collaborator)**

AUSL di Bologna, UOC Rehabilitation Medicine and Neurorehabilitation, Bologna, Italy

Promoter: Istituto Carlo Besta, Milano

National Multicentric Study:

"WOB - Window On the Brain: Diagnostic, therapeutic, and prognostic sonication of patients with Disorders of Consciousness"

PNRR 2022: Malattie Croniche non Trasmissibili (MCnT) ad alto impatto sui sistemi sanitari e socioassistenziali

con codice progetto PNRR-MAD-2022-12375863

Total Funding: €1.000.000

[ 08/02/2023 - Attuale ]

**Post-DoC Researcher (Collaborator)**

AUSL di Bologna, UOC Rehabilitation Medicine and Neurorehabilitation, Bologna, Italy

Promoter: Vrije Universiteit Amsterdam

International Multicentric Study:

"STEP UP: Steps against the burden of Parkinson's Disease".

EUR Joint Programme for Neurodegenerative Disease Research (JPND): 'Understanding the Mechanisms of Non-Pharmacological Interventions.

Total Funding: €1.589.883

[ 10/02/2019 - 09/02/2023 ]

**Post-DoC Researcher (Principal Investigator)**

AUSL di Bologna, UOC Rehabilitation Medicine and Neurorehabilitation, Bologna, Italy

Promoter: Regione Emilia-Romagna

Study:

"Efficacy of repetitive Transcranial Magnetic Stimulation (r-TMS) combined with visual scanning treatment on cognitive-behavioral symptoms of unilateral spatial neglect in patients with traumatic brain injury: a randomized clinical trial"

Ricerca Finalizzata Ministeriale: SG-2018-12367527".

Granted to Dr. Francesco Di Gregorio

€ 130.000

[ 29/09/2022 - Attuale ]

**Post-DoC Researcher (Co-Principal Investigator)**

AUSL di Bologna, UOC Rehabilitation Medicine and Neurorehabilitation, Bologna, Italy

Promoter: Istituto delle Scienze Neurologiche di Bologna

National Multicentric Study:

" Improving the diagnostic accuracy of the Coma Recovery Scale-Revised: a multicentric retrospective study"

[ 14/04/2022 - Attuale ]

**Post-Doc Researcher (Co-Principal Investigator)**

AUSL di Bologna, UOC Rehabilitation Medicine and Neurorehabilitation, Bologna, Italy

Promoter: Istituto delle Scienze Neurologiche di Bologna

Study:

"PAINLESS (PAIn in Neurorehabilitation with wearabLe SensorS)"

[ 01/09/2016 - Attuale ] **Research Fellow (Collaborator)**

AUSL di Bologna, UOC Rehabilitation Medicine and Neurorehabilitation, Bologna, Italy  
Promoter: Istituto delle Scienze Neurologiche di Bologna  
National Multicentric Study:  
"Efficacia della stimolazione magnetica transcranica ripetitiva (r -TMS) abbinata al trattamento cognitivo sui sintomi cognitivo-comportamentale della negligenza spaziale unilaterale sinistra in soggetti affetti da ictus destro entro tre mesi dall'esordio in confronto al solo trattamento cognitivo convenzionale: studio randomizzato controllato"

[ 01/09/2020 - 09/02/2023 ] **Post-Doc Researcher (Collaborator)**

AUSL di Bologna, UOC Rehabilitation Medicine and Neurorehabilitation, Bologna, Italy  
Promoter: Istituto delle Scienze Neurologiche di Bologna  
Study:  
"Structural and functional connectivity as outcome markers of cranioplasty following decompressive craniectomy"

[ 01/12/2021 - 01/12/2022 ] **Post-DoC Researcher (Collaborator)**

AUSL di Bologna, UOC Rehabilitation Medicine and Neurorehabilitation, Bologna, Italy  
Promoter: Istituto delle Scienze Neurologiche di Bologna  
Study:  
"DoC EEG (Disorders of Consciousness and ElectroEncephaloGraphy)"

[ 15/03/2017 - 14/03/2018 ] **Visiting PhD Student**

Center for studies and research in Cognitive Neuroscience (CsrNC), Cesena, Italy  
Promoter: Catholic University Eichstatt-Ingolstadt  
Multicentric International Study:  
"Performance monitoring and Pupillometry in VmPFC patients"

[ 01/11/2014 - 03/05/2019 ] **PhD Student in General Psychology**

Catholic University of Eichstatt-Ingolstadt, Eichstatt, Germany  
Research interests:  
ERPs and time-frequency  
EEG-based connectivity  
Cognitive Neuroscience  
Error Awareness and consciousness  
Feedback Processing  
Visual Perception  
Multivariate Pattern Analyses (MVPA)  
Machine Learning  
Supervisor: Prof. Dr. Marco Steinhauser  
Co-Supervisor: Prof. Dr. Giuseppe di Pellegrino

[ 01/04/2014 - 01/10/2014 ] **Research fellow (Collaborator)**

AUSL di Bologna, UOC Rehabilitation Medicine and Neurorehabilitation, Bologna, Italy  
Promoter: Centro studi per la Ricerca sul Coma  
Studies:  
"N100 as a marker of spatial attention in the clinical assessment of Neglect patients"

**TEACHING EXPERIENCE  
AND THESIS  
SUPERVISION**

[ Attuale ]

**Adjunct Professor**

Ente: Università di Parma

Dipartimento: Medicina, cds: Scienze Motorie, Sport e Salute

Insegnamento: Psicologia Generale (6 CFU)

Ore totali: 42 h

22/04/2026 – 20/05/2026

Ente: Università di Parma

Dipartimento: Medicina, cds: Tecniche di radiologia medica, per immagini e radioterapia

Insegnamento: Psicologia Generale (4 CFU)

Ore totali: 25 h

20/03/2026 – 20/04/2026

Ente: Università di Ferrara

Dipartimento: Neuroscienze e Riabilitazione, cds: Logopedia

Insegnamento: Psicometria (2 CFU)

Ore totali: 8 h

14/10/2025 – 21/10/2025

Ente: Università degli studi di Bologna

Dipartimento: Psicologia "Renzo Canestrari"

Insegnamento: Neuroscienze in Pratica (AFP 4 CFU M-PSI/02)

Ore totali: 21 h

14/03/2025 – 09/05/2025

Ente: Università degli studi di Bologna

Dipartimento: Psicologia "Renzo Canestrari"

Insegnamento: Neuroscienze in Pratica (AFP-integrativi 2 CFU M-PSI/02)

Ore totali: 21 h

14/03/2025 – 09/05/2025

Ente: Università degli studi di Bologna

Dipartimento: Psicologia "Renzo Canestrari"

Insegnamento: Neuroscienze in Pratica (TPV 4 CFU M-PSI/02)

Ore totali: 21 h

14/03/2025 – 09/05/2025

Ente: Università degli studi di Bologna

Dipartimento: Psicologia "Renzo Canestrari"

Insegnamento: Neuroscienze in Pratica (TPV 4 CFU M-PSI/02)

Ore totali: 21 h

05/04/2024 – 10/05/2024

Ente: Università degli studi di Bologna

Dipartimento: Psicologia "Renzo Canestrari"

Insegnamento: Neuroscienze in Pratica (AFP-integrativi 2 CFU M-PSI/02)

Ore totali: 21 h

05/04/2024 – 10/05/2024

Ente: Università degli studi di Bologna

Dipartimento: Psicologia "Renzo Canestrari"

Insegnamento: Neuroscienze in Pratica (AFP 4 CFU M-PSI/02)

Ore totali: 21 h

05/04/2024 – 10/05/2024

[ 17/05/2024 ] **Invited Seminar in Semeiotica e Diagnosi Differenziale in Neuropsicologia**

Ente: Università degli Studi di Bologna

Master Program in: Neuroscienze e Riabilitazione Neuropsicologica

Seminar Title: Neuroscience of Consciousness and disorders of Consciousness.

Ore totali: 4 h

[ 27/03/2024 ] **Invited Seminar in Cognition and Neuroscience**

Ente: Università degli Studi di Bologna

Master Program in: Artificial Intelligence

Seminar Title: Neuroscience of Consciousness and Artificial Intelligence.

Ore totali: 4 h

[ 22/01/2024 ] **Invited Seminar in General Psychology**

Ente: Catholic University of Eichstatt Ingolstadt

Dipartimento: Psychology

Seminar Title: Oscillatory mechanisms of conscious perception and attention

Ore totali: 4 h

[ 2016 - 2017 ] **Seminar in General Psychology**

Ente: Catholic University of Eichstatt Ingolstadt

Dipartimento: Psychology

Integrazione alla didattica in Psicologia Generale: Error-related brain activity and error awareness

Ore totali: 4 h

[ 19/11/2015 - 28/01/2016 ] **Seminar in General Psychology**

Ente: Catholic University of Eichstatt Ingolstadt

Dipartimento: Psychology

Integrazione alla didattica in Psicologia Generale: Error-related brain activity and error awareness

Ore totali: 4 h

[ 11/12/2013 ] **Seminar in General Psychology**

Ente: Catholic University of Eichstatt Ingolstadt

Dipartimento: Psychology

Integrazione alla didattica in Psicologia Generale: Error-related brain activity and error awareness

Ore totali: 4 h

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|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [ 10/02/2022 - 10/02/2023 ] | <b>Intern Supervision</b><br><br>Supervision of intern students at UOC Rehabilitation Medicine and Neurorehabilitation, Bologna, Italy                                                                                                                                                                                                                                                                                                                                                         |
| [ 2015 - Attuale ]          | <b>Thesis Supervision and Member of the Graduation Commission</b><br><br>Catholic University Eichstatt-Ingolstadt <b>Num. 3</b><br>Arguments: Error-related brain Activity and cognitive Control<br><br>University of Bologna <b>Num 5</b><br>Arguments: Conscious Perception, EEG biomarkers in healthy and disease, TMS/EEG protocols in visual perception<br><br>AUSL di Bologna <b>Num. 5</b><br>Arguments: TMS/EEG protocols in visual perception and Neglect, Disorders of Consciousness |

## REVIEWER AND EDITOR

### Reviewer for scientific peer-reviewed journals

Reviewer for: NeuroImage, Scientific Reports, Brain Sciences, Human Brain Mapping, Brain Stimulation, Journal of Psychophysiology, Frontiers, et al.

### Editor for scientific peer-reviewed journals

Section Editor (Neuroscience) for the journal "*Advances in Clinical and Experimental Medicine*"

Guest Editor for the journal "*Drug Design, Development and Therapy*"

Guest Editor for the journal "Frontiers in Computational Neuroscience"

## ADDITIONAL WORK EXPERIENCES

|                             |                                                                                                                                                                                                                                   |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [ 01/11/2012 - 01/11/2013 ] | <b>Internship</b><br><br>Studies:<br>Event-related Potentials (ERP) in healthy subjects and neurological patients;<br><br>Supervisors: Prof. Dr. Elisabetta Ladavas; Prof. Dr. Giuseppe Di Pellegrino; Prof. Dr. Alessio Avenanti |
| [ 01/02/2008 - 01/02/2009 ] | <b>Servizio Civile Volontario</b><br><br>Azienda Sanitaria Provinciale di Palermo U.O.C. PTA "Casa del sole"                                                                                                                      |