

Simone Bruno, MD, PhD

Research Associate, Department of Psychiatry

University of Wisconsin – Madison

6001 Research Park Blvd, Madison, WI 53719 (USA)

sbruno3@wisc.edu; simone.bruno850@gmail.com

[Simone Bruno - Google Scholar](#)

[Simone Bruno \(researchgate.net\)](#)

Working experience

Research Associate, University of Wisconsin-Madison, Madison (WI), United States

06/2024 – Current

As a post-doctoral researcher at University of Wisconsin-Madison, under the supervision of prof. Giulio Tononi, I am engaged in non-invasive experiments in humans aimed at improving sleep through Transcranial Electric Stimulation with Temporal Interference, with the ultimate goal of promoting emotional health and stress resilience.

Programmer for EEG quantitative analysis, IRCSS Stella Maris Foundation, Calambrone (Pisa), Italy

01/2024 - 05/2024

In my working position, I was focused on optimizing and validating an automated algorithm designed to detect sleep spindles in infants. This role presented a valuable opportunity for me to enhance both my coding skills and my knowledge of EEG features specific to pediatric sleep patterns. The project aimed at developing a tool capable of predicting motor outcomes in infants affected by stroke, drawing insights from the characteristics of sleep spindles.

Data analyst for clinical research, Pisa University Hospital (AOUP), Pisa, Italy

02/2024 - 05/2024

In my role within the Cardiology unit, I was actively engaged in supporting data analysis for clinical research. Working closely with a multidisciplinary team, this position offered me the opportunity to contribute to the advancement of cardiovascular medicine by leveraging my expertise in data analysis and statistical techniques. My work was mainly focused on the possibility to predict the occurrence of neurological events based on imaging signs of carotid plaque vulnerability.

Visiting PhD student, NeuroImaging for Coma and Consciousness Lab, Massachusetts General Hospital, Boston (MA), United States

10/2022 – 09/2023

As a visiting PhD student at prof. Edlow lab I gained proficiency and independence in performing TMS-EEG studies (experimental design, data collection, data analysis and interpretation), as well as basic knowledge on the use of Magnetic Resonance for brain imaging, by conducting several experiments on healthy participants and neurological and psychiatric patients.

Member of the organizing secretary of the Pisa Sleep Award, 15th edition (2022)

Visiting PhD student, Neurophysiology Lab, University of Milan, Milan, Italy

01/2022 – 02/2022

During the two months I spent at the Neurophysiology lab directed by prof. Massimini, I deepened my knowledge in conducting Transcranial Magnetic Stimulation and Electroencephalography (TMS/EEG) experiments and EEG data analysis.

PhD student in Neuroscience, University of Pisa, Pisa, Italy

10/2020 – 12/2023

As a PhD student, under the supervision of prof. Ugo Faraguna, I gained proficiency in all the aspects of neuroscientific research, including literature review, experimental design, data collection and analysis, systematic reviews and meta-analyses, paper writing, public speaking. I also developed educational skills by occasionally lecturing and through the supervision of more than 20 thesis defenses of medicine and sport science undergraduate students.

My primary research focus is centered on understanding the influence of sleep and circadian rhythm on daily life in healthy individuals (e.g., work, sport, lifestyle decision-making) and their implications for health in clinical populations. To pursue this aim, I employed a diverse range of techniques, including questionnaires, cognitive tasks, actigraphy, EEG, high-density EEG, and TMS/EEG.

Internship, Sonmolab, University of Pisa, Pisa, Italy

02/2019 – 09/2020

As an undergraduate candidate with a thesis on risk-taking behavior and sustained attention in healthcare professionals first, and as an intern student then, I learned how to implement and administer cognitive tasks and questionnaires, as well as how to use actigraphy for sleep monitoring.

Education

2023: PhD in Clinical and Translational Sciences – Neuroscience, University of Pisa

2020: Master Degree in Medicine and Surgery, University of Pisa (110/110 with honors and dignity of publication)

Language skills

Italian: Mother tongue

English: Proficient user (C2)

Spanish: Proficient user (B2/C1)

German: Independent user (B1)

French: Basic user (A2)

Digital skills

Programming languages: R (proficient), Matlab (proficient), Python (basic)

Microsoft Office Suite: Proficient

Inkscape (Vector graphics): Basic

Publications

2025

- Optimizing timing and dose of exogenous melatonin administration in neuropsychiatric pediatric populations: a meta-analysis on sleep outcomes. Sleep Medicine Reviews. <https://pubmed.ncbi.nlm.nih.gov/40914024/>
Bruno S, Cenerini G, Lo Giudice L, Cruz-Sanabria F, Benedetti D, Crippa A, Fiori S, Ferri R, Masi G, Faraguna U
- Enhancement of Sleep Slow Wave Activity using Transcranial Electrical Stimulation with Temporal Interference. medRxiv. <https://www.medrxiv.org/content/10.1101/2025.08.11.25333452v1>
Schaeffer EL, Haber I, Fan Z, **Bruno S**, Mat B, Alauddin T, Vigueras G, Neumann L, Smith R, Missey F, Williamson A, Achermann P, Beerli S, Capstick M, Neufeld E, Kuster N, Goldman R, Davidson R, Albantakis L, Jones S, Cirelli C, Boly M, Tononi G
- Active disease, fibromyalgia and glucocorticoids exposure to glucocorticoids differentially associate with sleep and circadian parameters in Behçet's Syndrome. Rheumatology (Oxford). <https://pubmed.ncbi.nlm.nih.gov/40088934/>
Colitta A, **Bruno S**, Bazzani A, Cruz-Sanabria F, Frumento P, d'Ascanio P, di Cianni F, Marinello D, Turchetti G, Mosca M, Faraguna U, Talarico R
- Sleep and circadian parameters in Behcet's syndrome: a comparative analysis using actigraphy and questionnaires. Rheumatology (Oxford). <https://pubmed.ncbi.nlm.nih.gov/40489669/ires-PubMed>
Colitta A, **Bruno S**, Cruz-Sanabria F, Starace F, Bazzani A, di Cianni F, Frumento P, Maestri Tassoni M, Bonanni E, Mosca M, Talarico R, Faraguna U

2024

- Chronotype and lifestyle in the transition to adulthood: exploring the role of sleep health and circadian misalignment. Sleep Health. <https://pubmed.ncbi.nlm.nih.gov/39343634>
Bruno S, Daddoveri F, Di Galante M, Bazzani A, Cruz-Sanabria F, Colitta A, d'Ascanio P, Frumento P, Faraguna U
- Optimizing the time and dose of melatonin as a sleep-promoting drug: a systematic review of randomized controlled trials and dose-response meta-analysis. Journal of Pineal Research. <https://pubmed.ncbi.nlm.nih.gov/38888087>

Cruz-Sanabria F*, **Bruno S***, Crippa A, Frumento P, Scarselli M, Skene DJ, Faraguna U

- Hypnotizability-related risky experience and behavior. Neuroscience Letters. <https://pubmed.ncbi.nlm.nih.gov/38185203/>

Cruz-Sanabria F, Faraguna U, Panu C, Tommasi L, **Bruno S**, Bazzani A, Sebastiani L, Santarcangelo EL

2023

- School attendance, chronotype and day-of-the-week-effect in adolescent male basketball players. Journal of Biological Rhythms. <https://pubmed.ncbi.nlm.nih.gov/36680409/>

Bruno S, Benedetti D, Bazzani A, Ferri F, Granieri I, Cruz-Sanabria F, Fiori S, d'Ascanio P, Frumento P, Faraguna U

- Handling shifts during an overnight sailing regatta: comparisons among sleep management strategies. Scandinavian Journal of Medicine and Science in Sport. <https://pubmed.ncbi.nlm.nih.gov/36403189/>

Bruno S, Ceccanti S, Bazzani A, d'Ascanio P, Frumento P, Faraguna U

- Bipolar disorder and delayed sleep-wake phase disorder: Findings on sustained attention, sleep, and circadian rhythm parameters. Journal of Affective Disorders Reports. <https://www.sciencedirect.com/science/article/pii/S2666915323001981>

Cruz-Sanabria F, Massoni M, Violi V, **Bruno S**, Faraguna F, Dell'Oso L, Carmassi C

- Chronotype is differentially associated with lifetime mood and panic-agoraphobic spectrum symptoms in patients with bipolar disorder and healthy controls. CNS Spectrums. <https://pubmed.ncbi.nlm.nih.gov/36942635/>

Cruz-Sanabria F, Violi M, Bazzani B, **Bruno S**, Massoni L, Bertelloni CA, dell'Oste V, Frumento P, Faraguna U, Dell'Oso L, Carmassi C

- Actigraphic and self-reported characterization of sleep in systemic lupus erythematosus patients. Rheumatology (Oxford). <https://pubmed.ncbi.nlm.nih.gov/37432350/>

Faraguna U, Porciani C, Colitta A, **Bruno S**, Frumento P, Stagnaro C, Tani C, Vagelli R, Mosca M

- Effects of exogenous melatonin on sleep and circadian rhythm parameters in bipolar disorder with comorbid delayed sleep-wake phase disorder: An actigraphic study. Journal of Psychiatric Research. <https://pubmed.ncbi.nlm.nih.gov/37487294/>

Cruz-Sanabria F, Faraguna U, Violi M, **Bruno S**, Gravina D, Bonelli C, Bazzani A, Massoni L, Musetti L, Simoncini M, Frumento P, Dell'Oso L, Carmassi C

- Associations between post-traumatic stress symptoms and sleep/circadian parameters: Exploring the effect of chronotype as a moderator variable. Chronobiology International. <https://pubmed.ncbi.nlm.nih.gov/37042535/>

Cruz-Sanabria F, **Bruno S**, Bazzani A, Bonelli C, Violi M, Frumento P, Faraguna U

2022

- Poor sleep quality and unhealthy lifestyle during the lockdown: an Italian study. Sleep Medicine. <https://pubmed.ncbi.nlm.nih.gov/35093684/>

Bruno S, Bazzani A, Marantonio S, Cruz-Sanabria F, Benedetti D, Frumento P, Turchetti G, Faraguna U

- Obstructive Sleep Apnoea Syndrome Screening Through Wrist-Worn Smartbands: A Machine-Learning Approach. Nature and Science of Sleep. <https://pubmed.ncbi.nlm.nih.gov/35611177/>

Benedetti D, Olcese U, **Bruno S**, Barsotti M, Maestri Tassoni M, Bonanni E, Siciliano G, Faraguna U

- Melatonin as a Chronobiotic with Sleep-promoting Properties. Current Neuropharmacology. <https://pubmed.ncbi.nlm.nih.gov/35176989/>

Cruz-Sanabria F, Carmassi C, **Bruno S**, Bazzani A, Carli M, Scarselli M, Faraguna U

- Late chronotypes, late mealtimes. Chrononutrition and sleep habits during the COVID-19 lockdown in Italy. Appetite. <https://pubmed.ncbi.nlm.nih.gov/35092744/>

Bazzani A, Marantonio S, Andreozzi G, Lorenzoni V, **Bruno S**, Cruz-Sanabria F, d'Ascanio P, Turchetti G, Faraguna U

2021

- Heart rate detection by Fitbit ChargeHRTM: A validation study versus portable polysomnography. Journal of Sleep Research. <https://pubmed.ncbi.nlm.nih.gov/33837981/>

Benedetti D, Olcese U, Frumento P, Bazzani A, **Bruno S**, d'Ascanio P, Maestri M, Bonanni E, Faraguna U

- Sleep quality mediates the effect of chronotype on resilience in the time of COVID-19. Chronobiology International. <https://pubmed.ncbi.nlm.nih.gov/33966553/>

Bazzani A, **Bruno S**, Frumento P, Cruz-Sanabria F, Turchetti G, Faraguna U

Conferences and seminars

2025

- Bilateral thalamic stimulation via TES-TI Enhances Sleep Spindle Activity during a Daytime Sleep Episode. World Sleep Congress - 2025.
Bruno S., Mat B, Schaeffer EL, Haber I, Zhiwei F, Alauddin T, Smith RF, Prahl SP, Wilcox MR, Loring MD, Achermann P, Beerli S, Capstick M, Neufeld E, Kuster N, Albantakis L, Jones SG, Cirelli C, Boly M, Tononi G
- Optimizing time and dose of melatonin administration: a randomized, double-blind controlled trial in healthy adults. World Sleep Congress - 2025.
Bruno S., Cruz-Sanabria F, di Galante M, lo Giudice L, Ceccanti S, Daddoveri F, di Pedè C, Frumento P, Faraguna U
- Chronotype and infradian rhythm: the influence of solar and lunar cycle on sleep duration and phase. World Sleep Congress - 2025.
Bruno S., Cruz-Sanabria F, di Galante M, Frumento P, Faraguna U
- Enhancement of Sleep Slow Waves Using Transcranial Electrical Stimulation with Temporal Interference (TES-TI). SLEEP - 2025.
Schaeffer EL, Haber I, Fan Z, Mat B, **Bruno S.**, Missey F, Williamson A, Achermann P, Neufeld E, Kuster N, Davidson R, Jones S, Cirelli C, Boly M, Tononi G
- Comparative Analysis of Mid-Sleep Point Calculation Methods Using Actigraphy: Relationship with Sleep Quality and Chronotype. World Sleep Congress - 2025.
Ceccanti S, Cruz-Sanabria F, **Bruno S.**, di Galante M, Faraguna U
- Managing Sleep, Fatigue, and Crew Strategies in Offshore Sailing: The Role of Chronotype, Effort, and Team Coordination. World Sleep Congress - 2025.
Ceccanti S, **Bruno S.**, Frumento P, Faraguna U
- Changing in sleep slow waves activity after an adaptive and tele-rehabilitative working memory training in children with spastic diplegia: A high density EEG study. International Meeting for Childhood Disabilities - 2025.
Peroni L, **Bruno S.**, Di Lieto M, Sgandurra G, Brovedani P, Marchi V, Sarasso S, Pecini C, Guzzetta A, Cioni G, Faraguna U

- Sleep spindles features and motor outcomes in infants with perinatal brain injury: a retrospective study. Neonatal Sleep Talks - 2025.

Festante F, Signoriello E, **Bruno S**, Progetti J, Darra F, Guzzetta A, Marchi V

- Monitoring sleep in the age of wearable technologies. 21st National Congress of the Italian Society for Neuroscience.

Fraguna U, Bazzani A, Benedetti D, Banfi T, Cruz-Sanabria F, **Bruno S**, Ceccanti S, Olcese U

- Self-Reported and Actigraphic Sleep and Circadian Rhythm Disruptions in Patients with Sjögren's Disease: Associations with Disease Activity and Patient-Reported Outcomes. ACR Convergence 2025.

di Pede C, Colitta A, di Galante M, **Bruno S**, Donati S, Dei B, Fulvio G, la Rocca G, Talarico R, Mosca M, Baldini C, Faraguna U

- Clinical Practice and Actigraphic Findings of Daridorexant in Chronic Insomnia. 27th Congress of the European Sleep Research Society.

Hoxhaj D, Maestri Tassoni M, Colitta A, Carnicelli M, Pascazio A, Buracchi Torresi F, Fabbrini M, Turco F, **Bruno S**, Faraguna U, Siciliano G, Bonanni E

2024

- Sleep features and glucose homeostasis in subjects at risk of type 2 diabetes. Societa' italiana di diabetologia - 2024.

Orsolini F, Faraguna U, **Bruno S**, Daniele G, Giovannini G, Sancho-Bornez V, Del Prato S, Dardano A, On behalf of the PRE-MED2 Investigators

- Extreme chronotypes are less responsive to seasonal variations in daylength than intermediate types. 27th Congress of the European Sleep Research Society - 2024.

Bruno S, Cruz-Sanabria F, Di Galante M, Frumento P, Faraguna U

- Sleep patterns shape consumer decisions during crises. 27th Congress of the European Sleep Research Society - 2024.

Bazzani A, Frumento P, **Bruno S**, Turchetti G, Faraguna U

- A systematic review on sleep management and performance in offshore sailing regattas. 27th Congress of the European Sleep Research Society - 2024.

Ceccanti S, **Bruno S**, Bazzani A, Bianchi F, Faraguna U

- High-risk sport athletes: insights on sleep, chronotype, and health-related risk behaviors. 27th Congress of the European Sleep Research Society - 2024.

Ceccanti S, Cruz-Sanabria F, **Bruno S**, Frumento P, Di Galante M, Bazzani A, Faraguna U

- Imaging signs of carotid plaque vulnerability predict subclinical neurological events in asymptomatic patients: the Carotid Artery Multi-modality imaging Prognostic study. European Society of Cardiology (ESC) – 2024.

Gargani L, Masini G, Napoli V, Orlandi G, D'Angelo G, Lucchi G, D'amelio C, Galeotti GG, Ghicopulos I, **Bruno S**, Aghakhanyan G, Volterrani D, Palombo C, Cosottini M, De Caterina R

- Assessing Obstructive Sleep Apnoea Syndrome risk in Behcet Syndrome patients: an actigraphic approach. X European Academy of Neurology.

Colitta A, **Bruno S**, Cruz-Sanabria F, Bazzani A, Starace F, Bonanni E, Siciliano G, Mosca M, Talarico R, Faraguna U

2023

- Optimizing timing and dose of exogenous melatonin administration in neuropsychiatric pediatric populations: a metanalysis on sleep outcomes. World Sleep Congress 2023.

Bruno S, Cenerini G, Cruz-Sanabria F, Benedetti D, Fiori S, Faraguna U

- Sleep disturbances in bipolar disorder with comorbid post-traumatic stress disorder. 31st European Congress of Psychiatry.

Cruz Sanabria F, Bonelli C, Gravina D, Violi M, Massoni L, **Bruno S**, Faraguna U, Dell'Oso L, Carmassi C

- Discrepancy between objective and subjective measurements of sleep quality: the role of panic-agoraphobic spectrum. 31st European Congress of Psychiatry.

Cruz Sanabria F, Violi M, Massoni L, Bonelli C, Gravina D, **Bruno S**, Faraguna U, Dell'Oso L, Carmassi C

- Which Chronotype is more frequent in patients with objective GERD and how does it affect the response to PPI therapy? 29th National Congress of Digestive Diseases/Digestive and Liver Disease.

Stefani Donati D, Venturini A, Visaggi P, Baiano Svizzero F, Ovidi F, Mariani L, Adamo G, **Bruno S**, Faraguna U, Savarino E, De Bortoli N

2022

- Chronotype and lifestyle in young adults. XXXII National Conference of Italian Association of Sleep Medicine (AIMS).
Bruno S., Daddoveri F, Benedetti D, Cruz-Sanabria F, d'Ascanio P, Frumento P, Faraguna U
- Artificial intelligence in OSAS screening. XXXII National Conference of Italian Association of Sleep Medicine (AIMS).
Benedetti D, Olcese U, **Bruno S.**, Barsotti M, Maestri Tassoni M, Bonanni E, Siciliano G, Faraguna U
- Patterns of sleep and adaptive functioning: a longitudinal study in preschool age. XXX Conference of Italian Association of Psychology.
Iacobellis B, Faraguna U, Di Galante M, **Bruno S.**, Coppola G
- Chronotype predicts sport performance in adolescent male basketball players. World Sleep Congress 2022.
Bruno S., Benedetti D, Ferri F, Granieri I, Bazzani A, Cruz-Sanabria F, Frumento P, d'Ascanio P, Faraguna U
- Consumer wrist-worn smartbands and OSAS screening: performance of supervised machine-learning algorithms. World Sleep Congress 2022.
Benedetti D, Olcese U, **Bruno S.**, Barsotti M, Maestri M, Bonanni E, Siciliano G, Faraguna U
- Eveningness and ruminations are independently associated with poor sleep quality in healthy youths. World Sleep Congress 2022.
Cruz-Sanabria S, Andreoni N, Bazzani A, Starace F, **Bruno S.**, Frumento P, Carmassi C, Faraguna U
- Circadian tipology and cognitive flexibility. World Sleep Congress 2022.
Isoppo E, Bazzani A, Starace F, Cruz-Sanabria F, **Bruno S.**, Frumento P, Turchetti G, d'Ascanio P, Faraguna U

2021

- The colours of politics: a psycho-marketing study on the association between colours and political sides. International Marketing Trends Conference.
Bazzani A, **Bruno S.**, Gasparini G, Starace F, Trieste L, Turchetti G

- Psychometric profiling and purchase behaviour during COVID-19 first lockdown: an Italian study. Congresso Sinergie SIMA.

Bazzani A, **Bruno S**, Frumento P, Cruz-Sanabria F, Turchetti G, Faraguna U

2020

- Chronobiology and Resilience in the time of COVID-19. XXX National Conference of Italian Association of Sleep Medicine (AIMS).

Bazzani A, **Bruno S**, Faraguna U

- Risk-taking behavior and night shift tolerance in healthcare practitioners. XXX National Conference of Italian Association of Sleep Medicine (AIMS).

Bruno S, Cruz-Sanabria F, Bazzani A, Frumento P, Faraguna U

Teaching Experience

Assistant supervisor for thesis defense (Prof. Ugo Faraguna), School of Medicine - University of Pisa (2024)

Neurocognitive Performance in Healthcare Shift Workers: Effects of Sleep Deprivation and Gender Differences - M. Dicembrino [Thesis etd-09062024-102937](#)

Optimizing Time and Dose of Melatonin in Sleep Promotion: A Meta-Analysis in Pediatric Neuropsychiatric Patients and Clinical Trial in Healthy Adults - L. LoGiudice [Thesis etd-10072024-180756](#)

Teaching assistant, Sleep and Restorative Processes (Director Prof. Chiara Cirelli) - Neuroscience School of Advanced Studies (2024)

ADE - La regolazione fisiologica del ritmo sonno-veglia e i suoi disturbi (Prof. Ugo Faraguna), School of Medicine - University of Pisa (2021)

Class on cognitive effects of sleep deprivation and shift work

Honours and Awards

New Investigator Award - World Sleep Society (2025)

Travel Grant for 27th Congress of the European Sleep Research Society - European Sleep Research Society (2024)

Volunteering

Doctors with Africa CUAMM, Pisa, Italy (2018-2021)

Founded in 1950, Doctors with Africa CUAMM was the first non-governmental organization focused on healthcare to be recognized by the Italian government. It is now the country's leading organization working to protect and improve the wellbeing and health of vulnerable communities in Sub-Saharan Africa.

CUAMM also carries out capacity-building activities and conducts and disseminates scientific research with the end goal of ensuring that the fundamental human right to health can be enjoyed by everyone everywhere.