

**Study**

- 1994: Scientific School Leaving Certificate, obtained at Liceo Scientifico Statale “Isacco Newton” of Rome, with the final mark of 60/60.
- 2002: Master Degree in Biomedical Electronic Engineering obtained at University of Rome “La Sapienza”, graduation thesis entitled: “Modelli di connettività funzionale tra popolazioni neuronali della corteccia cerebrale e del midollo spinale; uno studio di coerenza inter-elettrodica tra dati elettroencefalografici e/o elettromiografici”, with the final mark of 110/110.
- 2002-2005: PhD in Neurophysiology in the Department of Human Physiology and Pharmacology High Resolution EEG section, University of Rome “La Sapienza” (thesis entitled: “Functional coupling of cortical EEG rhythms during short- and long-term episodic memory”)
- 2003: Passed the examination for Engineer Association.
- 2014: “Abilitazione II fascia” by ASN for 05/D1 - Fisiologia - (settore scientifico disciplinare: BIO/09 Fisiologia)
- 2020: “Abilitazione I fascia” by ASN for 05/D1 - Fisiologia - (settore scientifico disciplinare: BIO/09 Fisiologia)

**Membership in scientific Societies**

- From 2003, Member of Organization for Human Brain Mapping (OHBM).
- From 2003, Member of Italian Society of Clinical Neurophysiology (SINC).

**Member of Scientific Boards**

- Scientific Advisory Board for the HBM2005 congress (Toronto, 12-16 June 2005) as abstract reviewer.
- Scientific Advisory Board for the HBM2006 congress (Firenze, 11-15 June 2006) as abstract reviewer.
- 2010: Guest Editor for the special issue “Clinical Neurophysiology in Alzheimer's Disease” in the International Journal of Alzheimer's Disease
- From 2014 to date: Associate Editor for the Journal of Alzheimer's Disease
- Member of the International Scientific Advisory Board of the 15<sup>th</sup> European Congress on Clinical Neurophysiology (ECCN) (Brno, 30 Sept-3 Oct 2015)
- Scientific Advisory Board for the 15<sup>th</sup> European Congress on Clinical Neurophysiology (ECCN) (Brno, 30 Sept-3 Oct 2015) as abstract reviewer
- From 2016 to date: Handling Editor for the Journal of Alzheimer's Disease
- Scientific Advisory Board and Organizer of the “Updates on human brain connectome: from physiology to diseases” (Rome, 28-29 November 2016)
- Scientific Advisory Board and Organizer of the “Innovative analysis of electromagnetic brain signals

for early diagnosis of Alzheimer and related dementias” (Rome, 19-20 June 2017)

- Co-Director of the SIG (Special Interest Group) “Functional Brain Connectivity as Revealed by EEG/MEG” for the IFCN (International Federation of Clinical Neurophysiology)
- From 2020 to date: member of the Editorial Board for the journal: Translational Neuroscience
- Scientific Advisory Board for the MAIS 2020 congress (Montreal Artificial Intelligence Symposium) as abstract reviewer

#### Didactic responsibilities

- From 2004 to 2008, teaching assistant of Physiology (BIO/09) for the Degree in Science of Education at University of Rome “La Sapienza”.
- From 2006 to 2017, adjunct professor of Physiology (BIO/09, 3 CFU) for the Degree in Biomedical Technician at University of Rome "La Sapienza" in Viterbo (Italy) (in the course “Basi morfologiche e funzionali del corpo umano”). Coordinator for this course from 2008 to 2014.
- From 2008 to 2017, adjunct professor of Physiology of the central nervous system (BIO/09, 1 CFU) for the Degree in Orthopedic Technician at University of Rome "La Sapienza" (in the course “Fondamenti di meccanica applicati all’organismo umano”). Coordinator from 2009.
- From 2012 to 2018, adjunct professor of Physiology (BIO/09, 4 CFU) for the Degree in Orthopedic Technician at University of Rome "La Sapienza" (in the course “Scienze biomediche II”)
- From 2017 to 2018, adjunct professor of Physiology (BIO/09, 3 CFU) for the Degree in Biomedical Technician at University of Rome "La Sapienza" (in the course “Basi morfologiche e funzionali del corpo umano”).
- From 2019, adjunct professor of Physiology (BIO/09, 3 CFU) for the Degree in Obstetrics at University of Rome "La Sapienza"

#### Working positions

- From 2002 to 2014 tutor for thesis and Ph.D. thesis for students in the Department of Physiology and Pharmacology at University of Rome “La Sapienza”.
- From 2003 to 2013 researcher in the AFaR (Fatebenefratelli Association for biomedical research)
- From 2013 senior researcher and director of the Brain connectivity laboratory (BCLab) for cognitive neurosciences in the IRCCS San Raffaele Pisana, Roma.
- From 2017 president of the Technology Transfer Office (TTO) of the IRCCS San Raffaele Pisana.
- Founding partner and member of the Board of Directors of the Spin-off (innovative startup) Neuroconnect srl.
- From 2019 member of the Ethical Committee of IRCCS San Raffaele Pisana as Biomedical Engineer

#### Invited Lectures, Symposia, Chair sessions

- Lecture: “Synchronization of gamma oscillations increases functional connectivity of human hippocampus and inferior-middle temporal cortex during repetitive visuomotor events.” **Invited speaker:** St. Anne’s University Hospital, Masaryk University Brno, (Czech Republic). 6 October 2003.
- Lecture: “Functional coupling of cortical EEG rhythms during short- and long-term episodic memory.” **Invited speaker:** St. Anne’s University Hospital, Masaryk University Brno, (Czech Republic). 17 February 2006.
- Lecture: “Functional coupling of brain rhythms in pathological aging.” **Invited speaker:** ATCTP Summer School for Nonlinear Dynamics of Brain Disorders, Chungmoonsool Building, KAIST, Daejeong, (South Korea), 18-19 August 2006
- Opening Lecture: “Correlati elettroencefalografici di processi cognitivi nell’uomo mediante avanzate tecniche non invasive.” **Invited speaker:** VIII congresso nazionale Società Italiana Riabilitazione

Neurologica (SIRN), Simposio congiunto SIRN - SIPF, Montecatini Terme, 17 April 2008

- Lecture: “Audio-visual integration in motor systems in expert musicians as revealed by cortical alpha rhythms.” **Invited speaker:** Sixth framework program new and emerging science and technology (nest), Siena, 23 May 2008
- Lecture: “Audio-visual integration in motor systems in expert musicians as revealed by cortical alpha rhythms” BrainTuning workshop: Music, emotions, and brain plasticity. International and interdisciplinary workshop on music perception, learning, and emotions Helsinki, Finland, February 6, 2009
- Symposium: “Mechanisms of neural synchronization of human cerebral cortex as revealed by qEEG” **Invited speaker** “Mechanisms of neural synchronization in the brain along Alzheimer’s disease: looking for new qEEG markers for early diagnosis, prognosis, drug discovery, and therapy monitoring” Brescia, September 2009
- Lecture: “EEG e ERP” **Invited speaker:** XVII congress of SIPF (Italian society of psychophysiology), Siena, Certosa di Pontignano, 28-31 October 2009
- Lecture: “Correlati EEG dell’ecuzione di ensemble in musicisti professionisti” **Invited speaker:** XVII congress of SIPF (Italian society of psychophysiology), Siena, Certosa di Pontignano, 28-31 October 2009
- Lecture: “L’Analisi tempo-frequenza dell’EEG nello studio delle funzioni cognitive” **Invited speaker:** Padova, 17 February 2010
- Lecture: “Ritmi del cervello nei malati di Alzheimer: possono aiutarci a formulare una diagnosi precoce?” **Invited speaker:** congress “Evoluzione e filosofia della mente. Tra creatività e intelligenza artificiale”, Musei Mazzucchelli, Cilverghe di Mazzano (Bs), 24-25 aprile 2010
- Opening Lecture: “Visão geral do EEGq presente e Futuro” **Invited speaker** III Jornada Brasileira de EEG quantitativo (Mapeamento Cerebral) de Neurofisiologia Clínica and III Curso de Bases da Neurofisiologia Clínica do Capitulo Paulista, San Paolo (Brasil), Indaiatuba, 14-16 May 2010
- Lecture: “Ressonância Magnética funcional com EEGq” **Invited speaker** III Jornada Brasileira de EEG quantitativo (Mapeamento Cerebral) de Neurofisiologia Clínica and III Curso de Bases da Neurofisiologia Clínica do Capitulo Paulista, San Paolo (Brasil), Indaiatuba, 14-16 May 2010
- Symposium: “Psychophysiology of sports” **Invited speaker** “Is there a neural efficiency in the athlete’s brain?” 16th world congress of psychophysiology (IOP) Pisa, 13-17 September 2012
- Symposium: “Advanced EEG analysis and multi-methodological approaches in psychophysiological and clinical research” **Invited speaker** “Abnormal brain oscillation as revealed by EEG rhythms in Alzheimer disease: Validation of EEG markers in the European DECIDE project” 16th world congress of psychophysiology (IOP) Pisa, 13-17 September 2012
- Symposium: “Combined EEG-fMRI imaging in psychophysiology” **Invited speaker** “Neural underpinnings of human cognitive-motor processes as revealed by the combination of high resolution EEG, fMRI and TMS” 16th world congress of psychophysiology (IOP) Pisa, 13-17 September 2012
- Symposium: “Functional and effective brain connectivity in physiological and pathological aging: investigating the most recent methodological approaches such as graph theory and EEG-TMS analyses” **Organizer and Chairman** 30th International Congress of Clinical Neurophysiology (ICCN), Berlin, 20-23 March 2014
- Symposium: “Functional and effective brain connectivity in physiological and pathological aging: investigating the most recent methodological approaches such as graph theory and EEG-TMS analyses” **Invited speaker** “Exploring coupling and connectivity in cognition, motor performance and during physiological aging” 30th International Congress of Clinical Neurophysiology (ICCN), Berlin, 20-23 March 2014
- Lecture: “Possiamo in anticipo capire da una registrazione elettroencefalografica come saranno le nostre performance ad un determinato compito?” **Invited speaker:** congress “Neuro-Enhancement. I professionisti tra l’aumento della competitività e la maggiore richiesta di produttività”, Museo MAXXI, Roma, 5 June 2014
- Lecture: “Dallo scalpo alle sorgenti: le più avanzate tecniche di analisi dell’EEG” **Invited speaker** “La Neurofisiologia clinica nel 3° millennio ed il ruolo del Tecnico di NFP” XVII Corso di Aggiornamento in Tecniche di NFP, Roma, 10-11 April 2015
- Symposium: “Probing brain ageing with neurophysiological techniques” **Organizer and Chairman** 15<sup>th</sup> European Congress on Clinical Neurophysiology (ECCN), Brno, 30 September-3 October 2015
- E-Poster Session: “Neurological and psychiatric diseases” **Chairman** 15<sup>th</sup> European Congress on Clinical Neurophysiology (ECCN), Brno, 30 September -3 October 2015
- Symposium: “Probing brain ageing with neurophysiological techniques” **Invited speaker** “Pre-stimulus interhemispheric coupling of brain rhythms predicts cognitive-motor performance” 15<sup>th</sup> European Congress on Clinical Neurophysiology (ECCN), Brno, 30 September -3 October 2015

- Symposium: “Electromagnetic Source Imaging: methods and their clinical validation” **Invited speaker** “A Contribution to Motor Cortex Excitability Fluctuations by the Analysis of the underlying EEG” 15<sup>th</sup> European Congress on Clinical Neurophysiology (ECCN), Brno, 30 September -3 October 2015
  - Plenary Lecture: “Music in the Brain” **Invited speaker** “Neural correlates of empathy in musicians as revealed by cortical alpha rhythms” 15<sup>th</sup> European Congress on Clinical Neurophysiology (ECCN), Brno, 30 September -3 October 2015
  - Lecture: “La percezione della realtà tra arte e neuroscienza” **Invited speaker**: congress “Festival della divulgazione”, Potenza, 4 November 2016
  - Section: “Methods of measurement” **Chairman** “Updates on human brain connectome: from physiology to diseases” congress, Rome, 28-29 November 2016
  - Lecture: “EEG/MEG” **Invited speaker** “Updates on human brain connectome: from physiology to diseases” congress, Rome, 28-29 November 2016
  - Section: “Aberrant connectivity” **Chairman** “Updates on human brain connectome: from physiology to diseases” congress, Rome, 28-29 November 2016
  - Lecture: “Graph theory” **Invited speaker** “Innovative analysis of electromagnetic brain signals for early diagnosis of Alzheimer and related dementias”, Rome, 19-20 June 2017
  - Symposium: “Updates on human brain connectome from physiology to disease” **Organizer and Chairman** 16<sup>th</sup> European Congress on Clinical Neurophysiology (ECCN), Budapest, 30 August-2 September 2017
  - Poster Session: “Functional Connectivity” **Chairman** 16<sup>th</sup> European Congress on Clinical Neurophysiology (ECCN), Budapest, 30 August-2 September 2017
  - Symposium: “Updates on human brain connectome from physiology to disease” **Invited speaker** “Behaviour performance in a cognitive-motor task during learning processes: evidence from EEG network analysis” 16<sup>th</sup> European Congress on Clinical Neurophysiology (ECCN), Budapest, 30 August-2 September 2017
  - Symposium: “Human Brain Connectome from Physiology to Disease” **Organizer and Chairman** 31st International Congress of Clinical Neurophysiology (ICCN), Washington, 1-6 May 2018
  - Symposium: “Human Brain Connectome from Physiology to Disease” **Invited speaker** “Functional Connectivity in Physiological and Pathological Aging from EEG Network Analysis During Rest and Task” 31st International Congress of Clinical Neurophysiology (ICCN), Washington, 1-6 May 2018
  - Group of Study: “EEG ad alta specializzazione” **Invited speaker** “La connettività cerebrale nella neurodegenerazione” 63 congress of the Italian society of Clinical Neurophysiology (SINC), Bari, 27-30 June 2018
  - Symposium: “EEG measures of distributed cortical activity and individual case analysis” **Invited speaker** “Behaviour and motor performance in a cognitive-motor task during learning processes: evidence from EEG network analysis” 19th World Congress of Psychophysiology (IOP), Lucca | Italy, 4-8 September 2018
  - Symposium: “Human brain networks in physiological and pathological aging: graph theory application” **Organizer and Chairman** 17th European Congress of Clinical Neurophysiology (ECCN), Warsaw, Poland, 5-8 June 2019
  - Symposium: “Human brain networks in physiological and pathological aging: graph theory application” **Invited speaker** “Brain networks connectivity in physiological and pathological aging during rest and task” 17th European Congress of Clinical Neurophysiology (ECCN), Warsaw, Poland, 5-8 June 2019
  - **Invited Lecture** “Invecchiamento fisiologico e neurodegenerazione attraverso lo studio della connettività cerebrale”, II Corso Residenziale di Elettroencefalografia organizzato da SINC e LICE, Rome, Italy, 23-27 September 2019
  - Symposium: “Connectomes: What does it mean?” **Invited speaker** “Brain connectivity and learning processes in a cognitive-motor task in neurodegeneration: evidence from EEG network analysis” European Congress of Neuro Rehabilitation 2019 (ECNR), Budapest, Hungary 9–12 October 2019
  - **Invited speaker**: “Neuroplasticity and EEG connectivity as potential biomarkers in neuro-rehabilitation” in the final Round Table in the congress “Rehabilitation, a future challenge of Robotics”, Rome 9 December 2019
- More than 240 abstracts personally presented in National or International congresses (more than 35 selected and presented as oral communications)

**Ad hoc reviewer  
for international  
journals**

- From 2004: Clinical Neurophysiology (IF 3.01)
- From 2006: Brain Topography (IF 3.29)
- From 2007: International Journal of Computers and Applications
- From 2009: International Journal of Radiation Biology (IF 2.17); Brain Research Bulletin (IF 2.49)
- From 2010: Neurobiology of Aging (IF 5.61); BMC Neurology (IF 2.12); International Journal of Alzheimer's Disease; Clinical EEG and Neuroscience (IF 2.22)
- From 2011: AGE: Journal of the American Aging Association (IF 6.28); Behavioural Brain Research (IF 3.39); Neurological Sciences (IF 1.22)
- From 2012: Journal of Psychiatry and Neuroscience (IF 4.89)
- From 2013: Brain Research (IF 2.88)
- From 2014: BioMed Research International (IF 2.88); Neuropsychologia (IF 4.37); Experimental Brain Research (IF 2.39); Journal of Alzheimers Disease (IF 4.151)
- From 2015: Frontiers in Cellular Neuroscience (IF 4.289)
- From 2016: European Journal of Neurology (IF 4.055); Alzheimers & Dementia (IF 12.407); Scientific Reports (IF 5.578); Neuroimage (IF 6.357); Movement Disorders (IF 6.01)
- From 2017: Neuroscience & Biobehavioral Reviews (IF 8.580); Human Brain Mapping (IF 5.969); Brain Structure and Function (IF 3.534); Dementia and Geriatric Cognitive Disorders (IF 4.202); Neuroscience (IF 3.277); Complexity (IF 4.621)
- From 2018: Annals of Neurology (IF 10.244)

**Reviewer for  
international grant**

- Alzheimer's Research UK: External Review for Interdisciplinary Research Grant
- University of Rochester Del Monte Institute for Neuroscience: Grant Review

**Grants**

- Principal Investigator of two young researcher grants of the Italian Ministry of Health:
  - ✓ GR-2008-1143091: Prediction of cognitive decline in mild cognitive impairment (MCI) subjects carrying genetic risk factors based on quantitative EEG and transcranial magnetic stimulation markers
  - ✓ GR-2013-02358430: NEUROMASTER: NEUROnavigated MAgnetic STimulation in patients with mild-moderate Alzheimer disease combined with Effective cognitive Rehabilitation
- Coordinator of Operative Unit in two young researcher grants of the Italian Ministry of Health:
  - ✓ GR-2008-1143090: Does rehabilitation with a 10-Hz sensory stimulation improve brain rhythms and cognitive-motor performance in neurological patients?
  - ✓ GR-2011-02349998: Neurophysiological markers of neuroplasticity in normal and pathological aging

127 publications on 46 different international journals, with a Total Impact Factor higher than **536**, men IF **4.54** (on the 118 impacted papers)  
h-index = **40** (Scopus)  
total citation > **4040** (Scopus)

39 publications as first or last author

**-2003 (1):**

1. Tecchio F, Babiloni C, Zappasodi F, **Vecchio F**, Pizzella V, Romani GL, Rossini PM. Gamma synchronization in human primary somatosensory cortex as revealed by somatosensory evoked neuromagnetic fields. Brain Res. 2003 Oct 3; 986(1-2): 63-70.

**-2004 (5):**

2. Babiloni C, **Vecchio F**, Babiloni F, Brunelli GA, Carducci F, Cincotti F, Pizzella V, Romani GL, Tecchio F, Rossini PM. Coupling between "Hand" primary sensorimotor cortex and lower limb muscles after ulnar nerve surgical transfer in paraplegia. Behav Neurosci. 2004 Feb;118(1):214-22.
3. Babiloni C, Bares M, **Vecchio F**, Brazdil M, Jurak P, Moretti DV, Ubaldi A, Rossini PM and Rektor I. Synchronization of gamma oscillations increases functional connectivity of human hippocampus and inferior-middle temporal cortex during repetitive visuomotor events. Eur J Neurosci. 2004 Jun;19(11):3088-98.
4. Babiloni C, Babiloni F, Carducci F, Cincotti F, **Vecchio F**, Cola B, Rossi S, Miniussi C, Rossini PM. Functional frontoparietal connectivity during short-term memory as revealed by high-resolution EEG coherence analysis. Behav Neurosci. 2004 Aug;118(4):687-97.
5. Babiloni C, Miniussi C, Moretti DV, **Vecchio F**, Salinari S, Frisoni G, Rossini PM. Cortical networks generating movement-related EEG rhythms in Alzheimer's disease: an EEG coherence study. Behav Neurosci. 2004 Aug;118(4):698-706.
6. De Gennaro L, **Vecchio F**, Ferrara M, Curcio G, Rossini PM, Babiloni C. Changes in fronto-posterior functional coupling at sleep onset in humans. J Sleep Res. 2004 Sep;13(3):209-17.

**-2005 (4):**

7. De Gennaro L, **Vecchio F**, Ferrara M, Curcio G, Rossini PM, Babiloni C. Antero-posterior functional coupling at sleep onset: changes as a function of increased sleep pressure. Brain Res Bull. 2005 Mar 15;65(2):133-40.
8. Babiloni C, Ferretti A, Del Gratta C, Carducci F, **Vecchio F**, Romani GL, Rossini PM. Human cortical responses during one-bit delayed-response tasks. An fMRI study. Brain Res Bull. 2005 May 15;65(5):383-90
9. De Gennaro L, Ferrara M, **Vecchio F**, Curcio G, Bertini M. An electroencephalographic fingerprint of human sleep. Neuroimage. 2005 May 15; 26(1):114-22.
10. Brancucci A, Babiloni C, **Vecchio F**, Galderisi S, Mucci A, Tecchio F, Romani GL, Rossini PM. Decrease of functional coupling between left and right auditory cortices during dichotic listening: an EEG study. Neuroscience. 2005;136(1):323-32. Epub 2005 Oct 3

**-2006 (8):**

11. Babiloni C, **Vecchio F**, Cappa S, Pasqualetti P, Rossi S, Miniussi C, Rossini PM. Functional frontoparietal connectivity during encoding and retrieval processes follows HERA model A high-resolution study. Brain Res Bull. 2006 Jan 15;68(4):203-212. Epub 2005 Oct 27.
12. Babiloni C, **Vecchio F**, Miriello M, Romani GL, and Rossini PM. Visual-spatial consciousness and parieto-occipital areas: a high-resolution EEG study. Cerebral Cortex. 2006 Jan;16(1):37-46. Epub 2005 Mar 30.
13. Babiloni C, Ferri R, Binetti G, Cassarino A, Forno GD, Ercolani M, Ferreri F, Frisoni GB, Lanuzza B, Miniussi C, Nobili F, Rodriguez G, Rundo F, Stam CJ, Musha T, **Vecchio F**, Rossini PM. Fronto-parietal coupling of brain rhythms in mild cognitive impairment: A multicentric EEG study. Brain Res Bull. 2006 Mar 15;69(1):63-73. Epub 2005 Nov 21.

14. Rossi S, Pasqualetti P, Zito G, **Vecchio F**, Cappa SF, Miniussi C, Babiloni C, Rossini PM. Prefrontal and parietal cortex in human episodic memory: an interference study by repetitive transcranial magnetic stimulation. Eur J Neurosci. 2006 Feb;23(3):793-800.
15. Babiloni C, **Vecchio F**, Bultrini A, Romani GL, and Rossini PM. Pre- and post-stimulus alpha rhythms are related to conscious visual perception: a high-resolution EEG study. Cerebral Cortex. 2006 Dec;16(12):1690-700. Epub 2005 Dec 28.
16. Babiloni C, Brancucci A, **Vecchio F**, Arendt-Nielsen L, Chen A, and Rossini PM. Anticipation of somatosensory and motor events increases centro-parietal functional coupling: an EEG coherence study. Clinical Neurophysiology. 2006 May;117(5):1000-8. Epub 2006 Mar 3
17. Henderson GT, Ifeachor EC, Hudson NR, Goh C, Outram N, Wimalaratna HSK, Del Percio C and **Vecchio F**. Development and assessment of methods for detecting dementia using the human electroencephalogram. IEEE Trans Biomed Eng. 2006 Aug;53(8):1557-68.
18. Rossini PM, Del Percio C, Pasqualetti P, Cassetta E, Binetti G, Dal Forno G, Ferreri F, Frisoni G, Chiovenda P, Miniussi C, Parisi L, Tombini M, **Vecchio F**, Babiloni C. Conversion from mild cognitive impairment to Alzheimer's disease is predicted by sources and coherence of brain electroencephalography rhythms. Neuroscience. 2006 Dec;143(3):793-803. Epub 2006 Oct 13.

**-2007 (5):**

19. **Vecchio F**, Babiloni C, Ferreri F, Curcio G, Fini R, Del Percio C, Rossini PM. Mobile phone emission modulates interhemispheric functional coupling of EEG alpha rhythms. Eur J Neurosci. 2007 Mar;25(6):1908-1913.
20. Del Percio C, Brancucci A, Bergami F, Marzano N; Fiore A, Di Ciolo E; Aschieri P; Lino A, **Vecchio F**, Iacoboni M; Gallamini M, Babiloni C, Eusebi F. Cortical alpha rhythms are correlated with body sway during quiet open-eyes standing in athletes: a high-resolution EEG study. Neuroimage. 2007 Jul 1;36(3):822-9. Epub 2007 Mar 28
21. Babiloni C, **Vecchio F**, Rossi S, De Capua A, Bartalini S, Ulivelli M, Rossini PM. Human ventral parietal cortex plays a functional role on visuospatial attention and primary consciousness. A repetitive transcranial magnetic stimulation study. Cereb Cortex. 2007 Jun;17(6):1486-92. Epub 2006 Aug 21.
22. Bertini M, Ferrara M, De Gennaro L, Curcio G, Moroni F, **Vecchio F**, De Gasperis M, Rossini PM, Babiloni C. Directional information flows between brain hemispheres during presleep wake and early sleep stages. Cereb Cortex. 2007 Aug;17(8):1970-8. Epub 2006 Oct 27.
23. Del Percio C, Brancucci A, **Vecchio F**, Marzano N, Pirritano M, Meccariello E, Padoa S, Mascia A, Giallonardo AT, Aschieri P, Lino A, Palma E, Fiore A, Di Ciolo E, Babiloni C, Eusebi F. Visual event-related potentials in elite and amateur athletes. Brain Res Bull. 2007 Sep 14;74(1-3):104-12. Epub 2007 Jun 12.

**-2008 (4):**

24. Babiloni C, **Vecchio F**, Bares M, Brazdil M, Nestrasil I, Eusebi F, Maria Rossini P, Rektor I. Functional coupling between anterior prefrontal cortex (BA10) and hand muscle contraction during intentional and imitative motor acts. Neuroimage. 2008 Feb 1;39(3):1314-23. Epub 2007 Oct 4
25. Brancucci A, Penna SD, Babiloni C, **Vecchio F**, Capotosto P, Rossi D, Franciotti R, Torquati K, Pizzella V, Rossini PM, Romani GL. Neuromagnetic functional coupling during dichotic listening of speech sounds. Hum Brain Mapp. 2008 Mar;29(3):253-64.
26. **Vecchio F**, Del Percio C, Marzano N, Fiore A, Toran G, Aschieri P, Gallamini M, Cabras J, Rossini PM, Babiloni C, Eusebi F. Functional cortico-muscular coupling during upright standing in athletes and non-athletes: a coherence EEG-EMG study. Behav Neurosci. 2008 Aug;122(4):917-27.
27. Babiloni C, Frisoni GB, Pievani M, **Vecchio F**, Infarinato F, Geroldi C, Salinari S, Ferri R, Fracassi

C, Eusebi F, and Rossini PM White matter vascular lesions are related to parietal-to-frontal coupling of EEG rhythms in mild cognitive impairment. Hum Brain Mapp. 2008 Dec;29(12):1355-67.

**-2009 (12):**

28. Babiloni C, Ferri R, Binetti G, **Vecchio F**, Frisoni G, Lanuzza B, Miniussi C, Nobili F, Rodriguez G, Rundo F, Cassarino A, Infarinato F, Cassetta E, Salinari S, Eusebi F, Rossini PM. Directionality of EEG synchronization in Alzheimer's disease subjects. Neurobiol Aging 2009 Jan;30(1):93-102. Epub 2007 Jun 15
29. Brázdil M, Babiloni C, Roman R, Daniel P, Bareš M, Rektor I, Eusebi F, Rossini PM, and **Vecchio F**. Directional functional coupling of cerebral rhythms between anterior cingulate and dorsolateral prefrontal areas during rare stimuli: A directed transfer function (DTF) analysis of human depth EEG signal. Hum Brain Mapp. 2009 Jan;30(1):138-46
30. Babiloni C, Frisoni GB, Pievani M, **Vecchio F**, Lizio R, Buttiglione M, Geroldi C, Fracassi C, Eusebi F, Ferri R, Rossini PM. Hippocampal volume and cortical sources of EEG alpha rhythms in mild cognitive impairment and Alzheimer disease. Neuroimage. 2009 Jan 1;44(1):123-35. Epub 2008 Aug 16.
31. Babiloni C, **Vecchio F**, Iacoboni M, Buffo P, Eusebi F, Rossini PM. Cortical sources of visual evoked potentials during consciousness of executive processes. Hum Brain Mapp. 2009 Mar;30(3):998-1013
32. Bertini M, Ferrara M, De Gennaro L, Curcio G, Moroni F, Babiloni C, Infarinato F, Rossini PM, **Vecchio F**. Directional information flows between brain hemispheres across waking, non-REM and REM sleep states: an EEG study. Brain Res Bull. 2009 Mar 30;78(6):270-5. Epub 2008 Dec 31.
33. Babiloni C, Pievani M, **Vecchio F**, Geroldi C, Eusebi F, Fracassi C, Fletcher E, De Carli C, Boccardi M, Rossini PM and Frisoni GB. White-matter lesions along the cholinergic tracts are related to cortical sources of EEG rhythms in amnesic mild cognitive impairment. Hum Brain Mapp. 2009 May;30(5):1431-43.
34. Del Percio C, Babiloni C, Marzano N, Iacoboni M, Infarinato F, **Vecchio F**, Lizio R, Aschieri P, Fiore A, Torà G, Gallamini M, Baratto M, Eusebi F. "Neural efficiency" of athletes' brain for upright standing: a high-resolution EEG study. Brain Res Bull. 2009 May 29;79(3-4):193-200. Epub 2009 Feb 11.
35. Babiloni C, Del Percio C, De Rosas M, Valenzano A, **Vecchio F**, Marzano N, Rendina C, Di Santo C, Ciociola L, Lecce B, Mundi C, Eusebi F, Cibelli G. Attentional cortical responses to enlarged faces are related to body fat in normal weight subjects: an electroencephalographic study. Clin Neurophysiol. 2009 May;120(5):922-31. Epub 2009 Apr 19.
36. Babiloni C, Sarà M, **Vecchio F**, Pistoia F, Sebastiano F, Onorati P, Albertini G, Pasqualetti P, Cibelli G, Buffo P, Rossini PM. Cortical sources of resting-state alpha rhythms are abnormal in persistent vegetative state patients. Clin Neurophysiol. 2009 Apr;120(4):719-29. Epub 2009 Mar 18.
37. Babiloni C, **Vecchio F**, Mirabella G, Buttiglione M, Sebastiano F, Picardi A, Di Gennaro G, Quarato PP, Grammaldo LG, Buffo P, Esposito V, Manfredi M, Cantore G and Eusebi F. Hippocampal, amygdala and neocortical synchronization of theta rhythms is related to an immediate recall during rey auditory verbal learning test. Hum Brain Mapp. 2009 Jul;30(7):2077-89
38. Babiloni C, Albertini G, Onorati P, **Vecchio F**, Buffo P, Sarà M, Condoluci C, Pistoia F, Carducci F, Rossini PM Inter-hemispheric functional coupling of eyes-closed resting EEG rhythms in adolescents with Down syndrome. Clin Neurophysiol. 2009 Sep;120(9):1619-27. Epub 2009 Jul 29.
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**-2010 (10):**

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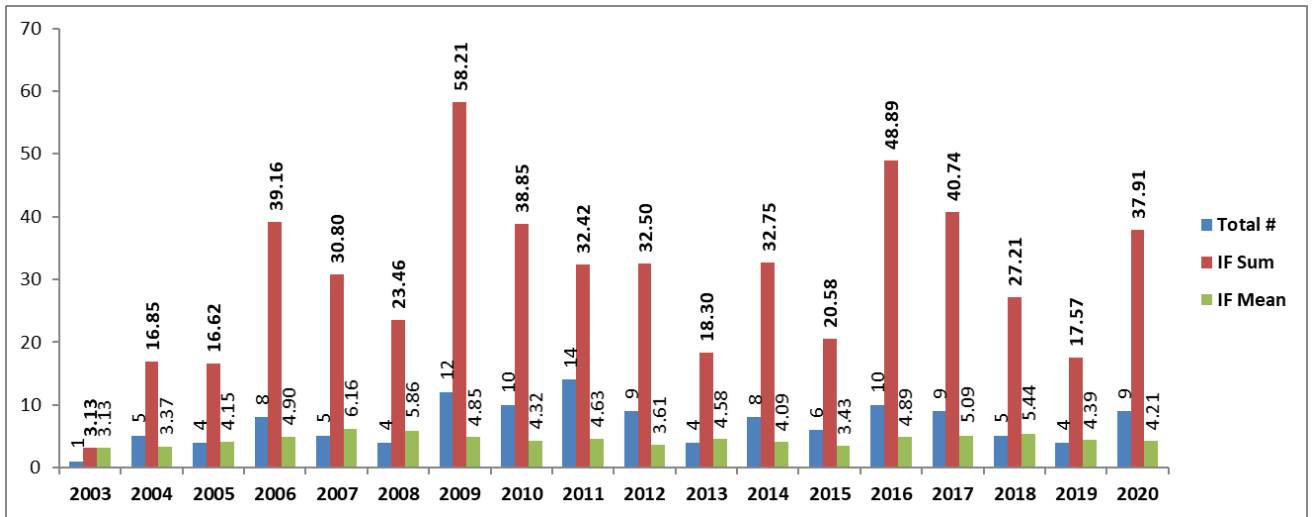
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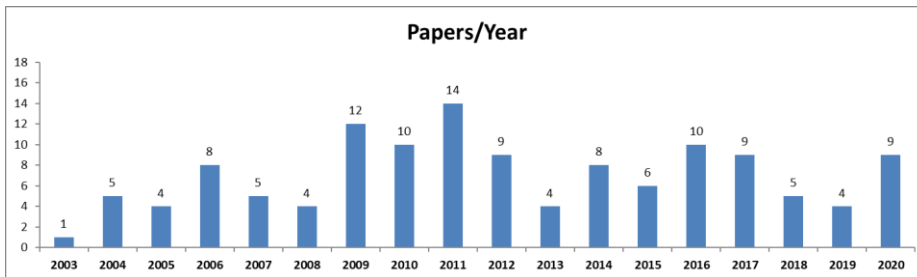
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Autorizzo il trattamento dei dati personali contenuti nel mio curriculum vitae in base all'art. 13 del D. Lgs. 196/2003 e all'art. 13 GDPR 679/16.