

Studi

- 1994: Diploma di Maturità Scientifica, conseguito presso il Liceo Scientifico Statale “Isacco Newton” di Roma, con la votazione di 60/60.
- 2002: Laurea in Ingegneria Elettronica Biomedica conseguita presso l’Università degli Studi di Roma “La Sapienza” con una tesi dal titolo: “Modelli di connettività funzionale tra popolazioni neuronali della corteccia cerebrale e del midollo spinale; uno studio di coerenza inter-elettroica tra dati elettroencefalografici e/o elettromiografici”, con la votazione di 110/110.
- 2002-2005: Dottorato di ricerca in Neurofisiologia presso il dipartimento di Fisiologia Umana sezione EEG ad alta risoluzione dell’Università degli Studi di Roma “La Sapienza” con una tesi dal titolo: “Functional coupling of cortical EEG rhythms during short- and long-term episodic memory”.
- 2003: Superamento dell’esame di stato per l’abilitazione alla professione di Ingegnere.
- 2014: “Abilitazione II fascia” da ASN in 05/D1 - Fisiologia - (settore scientifico disciplinare: BIO/09 Fisiologia).

Membro di società scientifiche

- Dal 2003, Membro dell’ *Organization for Human Brain Mapping* (OHBM).
- Dal 2003, Membro della Società Italiana di Neurofisiologia Clinica (SINC).

Membro di Scientific Boards e direzione gruppi di studio

- Scientific Advisory Board del congresso HBM2005 (Toronto, 12-16 June 2005) in qualità di revisore degli abstract.
- Scientific Advisory Board del congresso HBM2006 (Firenze, 11-15 June 2006) in qualità di revisore degli abstract.
- 2010: Guest Editor per lo special issue “Clinical Neurophysiology in Alzheimer's Disease” nella rivista: *International Journal of Alzheimer’s Disease*
- Dal 2014: Associate Editor della rivista: *Journal of Alzheimer’s Disease*
- Membro dello International Scientific Advisory Board del 15th congresso della società europea di neurofisiologia clinica (European Congress on Clinical Neurophysiology- ECCN) (Brno, 30 Sept-3 Oct 2015)
- Membro dello Scientific Advisory Board del 15th congresso della società europea di neurofisiologia clinica (European Congress on Clinical Neurophysiology- ECCN) (Brno, 30 Sept-3 Oct 2015) in qualità di revisore degli abstract
- Dal 2016: Handling Editor della rivista: *Journal of Alzheimer’s Disease*
- Membro dello Scientific Advisory Board e dell’organizzazione del congresso “Updates on human brain connectome: from physiology to diseases” (Rome, 28-29 November 2016)
- Membro dello Scientific Advisory Board e dell’organizzazione del congresso “Innovative analysis of electromagnetic brain signals for early diagnosis of Alzheimer and related dementias” (Rome, 19-20 June 2017)
- Dal 2018 Co-Direttore del gruppo di studio internazionale (SIG-Special Interest Group) “Functional Brain Connectivity as Revealed by EEG/MEG” per la Federazione Internazionale di Neurofisiologia Clinica (IFCN - International Federation of Clinical Neurophysiology)

Didattica

- Dal 2004 al 2008, assistente didattico di Fisiologia (BIO/09) per il corso di laurea in Scienze della Educazione e Formazione presso l'Università di Roma "La Sapienza".
- Dal 2006 al 2017, professore a contratto di Fisiologia (BIO/09, 3 CFU) per il corso di laurea in Tecniche Biomediche presso l'Università di Roma "La Sapienza" (nel corso "Basi morfologiche e funzionali del corpo umano"). Coordinatore di questo corso dal 2008 al 2014.
- Dal 2008 al 2017, professore a contratto di Fisiologia del Sistema nervoso centrale (BIO/09, 1 CFU) per il corso di laurea in Tecniche Ortopediche presso l'Università di Roma "La Sapienza" (nel corso "Fondamenti di meccanica applicati all'organismo umano"). Coordinatore dal 2009 al 2017.
- Dal 2012 al 2018, professore a contratto di Fisiologia (BIO/09, 4 CFU) corso di laurea in Tecniche Ortopediche presso l'Università di Roma "Sapienza" (nel corso "Scienze biomediche II").
- Dal 2017 al 2018, professore a contratto di Fisiologia (BIO/09, 3 CFU) per il corso di laurea in Tecniche Biomediche presso l'Università di Roma "Sapienza" (nel corso "Basi morfologiche e funzionali del corpo umano").

Principali collaborazioni, premi e attività formative e di tutoraggio

- Dal 2002 al 2003, Collaborazione per analisi preliminare e spettrale dati EEG, sviluppo di software inerente il trattamento di dati EEG, gestione database soggetti in studio presso Università degli studi di Roma La Sapienza
- Dal 2002 al 2014 tutor per tesi di studenti (ingegneria, medicina, fisica, TNFP), dottorandi (neurofisiologia) e specializzandi (neurologia, medicina dello sport) presso il Dipartimento di Fisiologia e Farmacologia dell'Università di Roma "La Sapienza".
- Dal 2006 al 2007, Collaborazione nel progetto BIOPATTERN- "Grand Vision Initiative Multi Modal Data for Alzheimer's Disease", presso Università degli studi di Pisa
- 2008, Premio "Travel Grant" per il congresso della società europea di neurofisiologia tenutosi ad Istanbul, European Congress on Clinical Neurophysiology (ECCN)
- Dal 2008 al 2009, Collaborazione nel progetto "Harmonization of existing protocols for the manual tracing of the hippocampus development and validation of a unified standard protocol: an eadadni joint effort", presso l'IRCCS "Centro S. Giovanni di Dio – Fatebenefratelli" Brescia
- 2009, Collaborazione per analisi spettrale di dati EEG in ambito neurofisiologico, presso Università degli studi di Roma La Sapienza
- 2009, Premio "miglior poster" Congresso Nazionale della Società Italiana di Neurofisiologia Clinica tenutosi a Salerno, SINC Società Italiana di Neurofisiologia Clinica
- Dal 2010 al 2013, Coinvolto in diversi progetti di ricerca, tra cui: - Diagnosis of Alzheimer disease: development of ADNI- markers; - Ricerca EEG in pazienti affetti da virus dell'immunodeficienza; - Analisi DTF dei dati EEG in soggetti normali, MCI e Alzheimer, presso l'Università degli studi di Foggia
- Dal 2011 al 2013, Collaborazione per analisi spettrale di dati EEG in ambito neurofisiologico, presso Università degli studi di Roma La Sapienza
- Dal 2011 tutor per tesi di studenti (ingegneria, medicina, TNFP), dottorandi (neuroscienze) e specializzandi (neurologia) presso il Dipartimento di Neurologia del policlinico universitario Agostino Gemelli di Roma.
- 2011, Collaborazione per trattamento computerizzato dei dati neurofisiologici e statistici, presso IRCCS Oasi Maria SS Troina
- Dal 2013 al 2014, Collaborazione per analisi dati EEG in ambito neurofisiologico in pazienti con declino cognitivo, presso Fondazione Patrizio Paoletti
- 2013, Collaborazione per trattamento computerizzato dei dati neurofisiologici e statistici, presso IRCCS Oasi Maria SS Troina
- Dal 2013 consulente esterno per Università Cattolica del Sacro Cuore di Roma.
- 2014, Collaborazione per lo sviluppo di un software per la somministrazione di stimolazioni visive, presso Università degli studi di Urbino Carlo Bo
- 2014, Collaborazione per analisi spettrale di dati EEG in ambito neurofisiologico, presso Università degli studi di Bari Aldo Moro
- Dal 2018 consulente esterno per il Dipartimento di Neurologia del policlinico universitario Agostino Gemelli di Roma.

Esperienze lavorative

- Dal 2003 al 2013, ricercatore: attività di ricerca in ambito neurofisiologico con particolare attenzione ai meccanismi neuronali della connessione funzionali, presso AFaR: Associazione Fatebenefratelli per la Ricerca
- Dal 2013 ricercatore senior e direttore del Laboratorio per lo studio della connettività cerebrale (Brain connectivity laboratory –BCLab- for cognitive neurosciences, con attività di ricerca in ambito neurofisiologico con particolare attenzione a trasmissione e connessione funzionale neurale in patologie neurodegenerative e neuro-motorie) presso l'IRCCS San Raffaele Pisana, Roma.
- Dal 2017 presidente dell'Ufficio per il Trasferimento Tecnologico (UTT; Technology Transfer Office -TTO) del IRCCS San Raffaele Pisana, Roma.
- Socio fondatore e membro del Consiglio di Amministrazione dello Spin-off (startup innovativa) Neuroconnect srl.

Invited Lectures, Symposia, Chair sessions, Group of Study

- 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 Oct 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 - SIFP, 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 SIFP (Italian society of psychophysiology), Siena, Certosa di Pontignano, 28-31 October 2009
- Lecture: “Correlati EEG dell’esecuzione di ensemble in musicisti professionisti” **Invited speaker:** XVII congress of SIFP (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** 15th European Congress on Clinical Neurophysiology (ECCN), Brno, 30 Sept-3 Oct 2015
- E-Poster Session: “Neurological and psychiatric diseases” **Chairman** 15th 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” 15th 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” 15th 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” 15th 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** 16th European Congress on Clinical Neurophysiology (ECCN), Budapest, 30 August-2 September 2017
- Poster Session: “Functional Connectivity” **Chairman** 16th 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” 16th 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 Int. 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
- Più di 220 abstract personalmente presentati durante congressi nazionali o internazionali (più di 35 selezionati e presentati come comunicazioni orali)

**Ad hoc reviewer
per riviste
internazionali**

Clinical Neurophysiology (IF 3.61); Brain Topography (IF 3.29); International Journal of Computers and Applications; International Journal of Radiation Biology (IF 2.17); Brain Research Bulletin (IF 2.49); Neurobiology of Aging (IF 5.61); BMC Neurology (IF 2.12); International Journal of Alzheimer's Disease; Clinical EEG and Neuroscience (IF 2.22); AGE: Journal of the American Aging Association (IF 6.28); Behavioural Brain Research (IF 3.39); Neurological Sciences (IF 1.22); Journal of Psychiatry and Neuroscience (IF 4.89); Brain Research (IF 2.88); BioMed Research International (IF 2.88); Neuropsychologia (IF 4.37); Experimental Brain Research (IF 2.39); Journal of Alzheimers Disease (IF 4.151); Frontiers in Cellular Neuroscience (IF 4.289); 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); 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); Neural Plasticity (3.582); Frontiers in Neurology (3.508); Annals of Neurology (IF 10.244)

Grants

- Vincitore di due Bandi di Ricerca Finalizzata (Giovane Ricercatore) del Ministero della Salute in qualità di Principal Investigator e coordinatore dell'intero progetto:
 - ✓ 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
- Vincitore di due Bandi di Ricerca Finalizzata (Giovane Ricercatore) del Ministero della Salute in qualità di Coordinatore di Unità Operativa:
 - ✓ 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

116 pubblicazioni in estenso su 40 differenti riviste internazionali peer review, con un Impact Factor totale maggiore di **491**, IF medio **4.59** (sulle 107 impattate)

h-index = **36** (Scopus)

numero totale di citazioni > **3300** (Scopus)

33 pubblicazioni come primo o ultimo autore

-2003 (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):

- 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.
- 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.
- 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.
- 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.
- 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):

- 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.
- 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
- 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.
- 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):

- 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.
- 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.
- 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.

- 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.
- 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.
- 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
- 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.
- 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):

- **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.
- 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
- 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.
- 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.
- 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):

- 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
- 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.
- **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.
- 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):

- 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
- 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
- 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.
- 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
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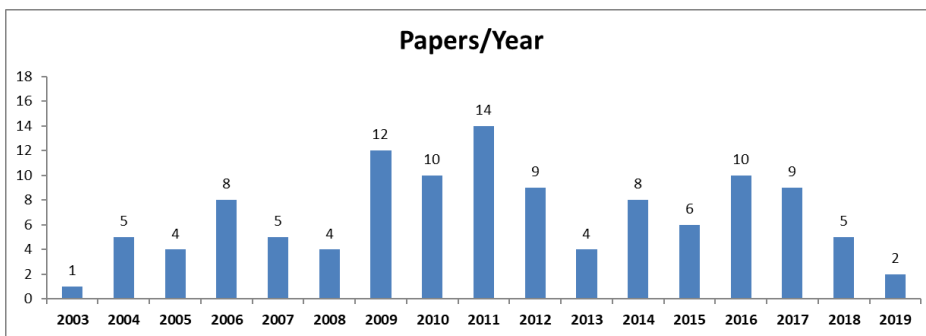
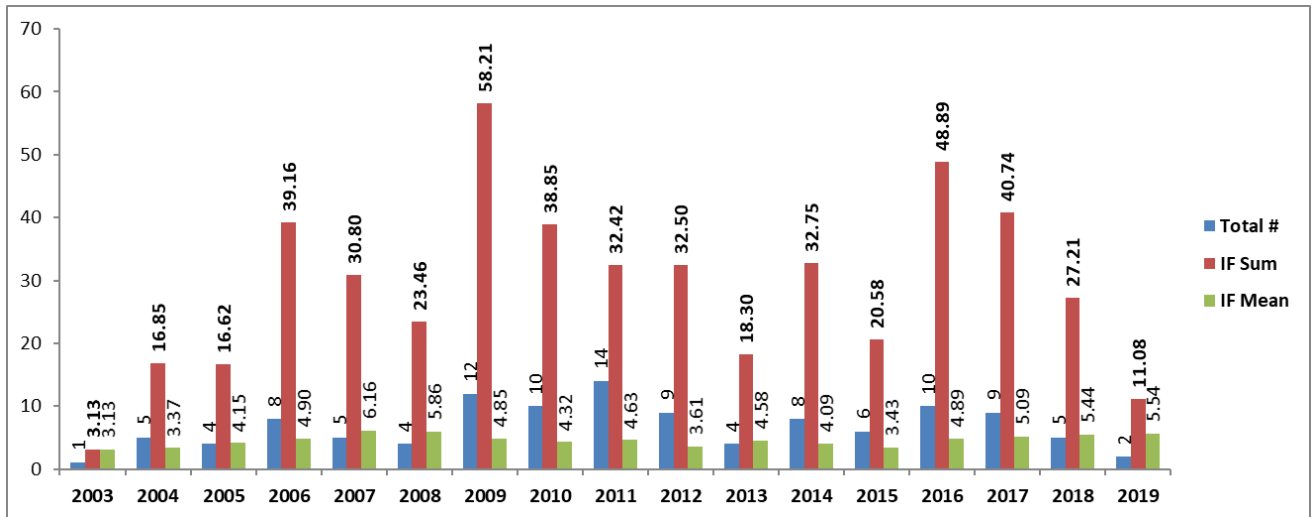
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Fabrizio Vecchio