

CURRICULUM VITAE ET STUDIORUM

FABRIZIO ESPOSITO, Ph.D.

PERSONAL DATA AND SCIENTIFIC IDENTIFIERS:

Name, Title: Fabrizio Esposito, Ph.D. in Neuroscience

[REDACTED]

E-mail: fabrizio.esposito@unicampania.it

ORCID: 0000-0002-5099-9786

Scopus Author ID: 7102220908

WoS ReasercherID: M-8555-2015

DIRECT LINKS TO AUTHOR BIBLIOMETRIC PAGES:

Scopus: <https://www.scopus.com/authid/detail.uri?authorId=7102220908>

Google Scholar: <https://scholar.google.com/citations?hl=en&user=K3zT4-IAAAAJ&sortby=pubdate>

ResearchGate: https://www.researchgate.net/profile/Fabrizio_Esposito2

Loop: <https://loop.frontiersin.org/people/66607/overview>

PUBLICATION TRACK RECORD (LAST UPDATE: 2023-08-04):

Total number of articles (in-extenso) on peer-reviewed journals (indexed in Scopus): 229

Scopus: H-index: 50. Citations: 10158.

Total number of publications including conference proceedings (indexed in Google Scholar): 407

Google Scholar: H-index: 61. Citations: 14593.

CURRENT ACADEMIC POSITION:

Since 2020 (December): Full Professor of Bioengineering (S.C. 09/G2, S.S.D. ING-INF/06) at the Department of Advanced Medical and Surgical Sciences, University of Campania "Luigi Vanvitelli", Naples, Italy. Director of the "Brain Imaging" Laboratory of the First Division of Neurology at the MRI Research Centre in the University Hospital "Policlinico Luigi Vanvitelli" in Naples, Italy.

PREVIOUS ACADEMIC POSITIONS:

From 2012 (December) to 2020 (November): Associate Professor of Bioengineering (S.C. 09/G2, S.S.D. ING-INF/06) at Department of Medicine, Surgery and Dentistry "Scuola Medica Salernitana", University of Salerno, Baronissi (Salerno), Italy. Director of the "Advanced MR" Research Program at the Department of Diagnostic Imaging of the University Hospital "S. Giovanni di Dio e Ruggi d'Aragona" in Salerno, Italy.

From 2009 (January) to 2012 (December): Associate Professor of Neuroimaging Methods at Department of Cognitive Neuroscience, Maastricht University, Maastricht, The Netherlands.

From 2006 (January) to 2009 (January): Assistant Professor of Neuroimaging Methods at Department of Cognitive Neuroscience, Maastricht University, Maastricht, The Netherlands.

ACADEMIC EDUCATION (POSTGRADUATE):

2000-2004: Ph. D. in Neuroscience. University of Campania "Luigi Vanvitelli" (Naples, Italy).

Final Thesis: "Non-inferential Exploration of Functional Magnetic Resonance Imaging Time-series with Independent Component Analysis. Methodological Advancements with Applications to Neuroscience".

ACADEMIC EDUCATION (UNDERGRADUATE):

1993-2000: B.D. in Electronics Engineering (Study Plan: Bioengineering. Grade: 110/110 cum Laude). University of Naples "Federico II" (Naples, Italy).

Final Thesis: "Functional Magnetic Resonance Imaging: A Surface-based Independent Component Analysis Approach for Cortical Activity Detection".

AWARDS AND OTHER RECOGNITIONS:

2020: Harold G. Wolff Award (American Headache Society).

2019: Enrico Greppi Award (Italian Headache Society).

2007: Pittsburgh Brain Activity Interpretation Competition (Neuroscientific Honorable Mention).

2004: Pfizer Reserch Award (Section: Neuroscience).

PREVIOUS PARTICIPATIONS IN NATIONAL AND INTERNATIONAL RESEARCH PROJECTS:

2022-2025: National Recovery and Resilience Plan (NRRP), project MNESYS (PE0000006)—A multiscale integrated approach to the study of the nervous system in health and disease (DN. 1553 11.10.2022)

2021-2024: INTERNATIONAL COOPERATION GRANTS (GRANT OF UNIVERSITY OF ZURICH, SWITZERLAND).

Grant recipient for research cooperation on modalities and applications of advanced methods of acquisition and analysis in MRI-based neuroimaging.

2018-2020: H2020 EUROPEAN PROJECT BENEFICIARY (GRANT OF EUROPEAN COMMUNITY)

Title: "MICROBRADAM" (Advanced MR methods for characterization of MICROstructural BRAin DAMAGE).

Identifier: H2020-MSCA-RISE-2015.

2019-2021: Siced (System Innovation for Cancer 6 Early Diagnosis) (GRANT OF CAMPANIA REGION, REGIONAL OPERATIVE PROGRAM FESR 2014-2020).

2014-2020: INTERNATIONAL COOPERATION GRANTS (GRANT OF UNIVERSITY OF ZURICH, SWITZERLAND).

Grant recipient for research cooperation on modalities and applications of advanced methods of acquisition and analysis in MRI-based neuroimaging.

2013-2019: UNIVERSITY GRANTS FOR BASIC RESEARCH (GRANT OF UNIVERSITY OF SALERNO, ITALY)

- 2017-2019 University grant (FARB2017): Image Normalization Approaches for Quantitative MRI.
- 2016-2018 University grant (FARB2016): Interaction of Oxidative Species with Brain Perfusion.
- 2015-2017 University grant (FARB2015): Metabolic Analysis of Resting-state fMRI Networks.
- 2014-2016 University grant (FARB2014): Effects of Mastication on Trigeminal Nuclei in Humans.

2011-2016: COLLABORATION IN ERC PROJECT (The Netherlands)

Title: "Cracking the columnar-level code in the visual hierarchy: Ultra high-field MRI, neuro-cognitive modeling and high-resolution brain computer interfaces" (European Research Council, ERC grant #269853, P.I.: R. Goebel).

2012-2015: COLLABORATION IN NWO PROJECT (The Netherlands)

Title: "Don't mind the gap: Brain mechanisms for the tracking of sounds in noisy scenes" (Netherlands Organization for Scientific Research, Project nr. 451-11-014, P.I.: L. Riecke).

2006-2008: COLLABORATION IN SWISS NATIONAL FOUNDATION PROJECT (Switzerland)

Title: "Music in the Brain - Neuronal Plasticity and Intersubject Synchronization - A Functional and Structural MRI Study with Musicians and Non-Musicians" (Swiss National Foundation, P.I.: K. Cattapan-Ludewig).

2004-2006: COLLABORATION IN SWISS NATIONAL FOUNDATION PROJECT (SWITZERLAND)

Title: "Functional and Pharmacological Magnetic Resonance Imaging (fMRI, pHMRI) to study the interaction between depression, serotonin and sleep" (Swiss National Foundation, N.10312, P.I.: E. Seifritz).

2003-2005: COLLABORATION IN IRCSS PROJECT (ITALY)

Title: "Functional Connectivity and Functional Genomics: Integrazione dei pattern di Connettività funzionale con i risultati della Ricerca Genetica" (I.R.C.C.S. "Casa Sollievo della Sofferenza", San Giovanni Rotondo, Italy).

2005: COLLABORATION IN RESEARCH PROJECT (REGIONE CAMPANIA, ITALY)

Title: "Approccio neuroradiologico integrato alla diagnosi preclinica del morbo di Alzheimer" (Regione Campania).

2003-2005: COLLABORATION IN PRIN PROJECT (ITALY)

Title (PRIN 2002) "Nuove Metodiche per lo studio della funzione e del metabolismo cerebrale" (MINISTRY OF UNIVERSITY AND RESEARCH)

RESEARCH INTEREST AND ACTIVITY DESCRIPTION:

The main focus of previous successful research projects has pertained to the advanced study of physiological and pathological mechanisms underlying the in-vivo observation of neuronal networks in the living human brain using neuroimaging methods. Among these, a special interest has been devoted to functional and structural magnetic resonance imaging (fMRI, MRI), performed at high and ultra-high magnetic fields, electro- and magneto-encephalography (EEG,MEG), and the multi-modal integration of these techniques, eventually including clinical and behavioural data from neuropsychology and experimental data from neurophysiology, neurostimulation and nuclear medicine. Over the last 20 years, this activity has required the design of custom devices and the development of suitable computational and analytic methods to optimize the acquisition and processing of neurologically relevant signals and to adaptively set-up novel research protocols for performing neuroimaging experiments on several categories of neurological and psychiatric patients.

Multi-modal and multi-domain data integration and quantitative techniques have been also covered in the previous research as can be found in the publications resulting from the participations to the above listed projects.

MOST RECENT PUBLICATONS (2022-2023 FROM PUBMED):

Frequency and imaging correlates of neuropsychiatric symptoms in Progressive Supranuclear Palsy.
Cuoco S, Ponticorvo S, Abate F, Tepedino MF, Erro R, Manara R, Di Salle G, Di Salle F, Pellecchia MT, Esposito F, Barone P, Picillo M.

J Neural Transm (Vienna). 2023 Aug 3. doi: 10.1007/s00702-023-02676-9.

Cognitive, behavioral, and brain functional connectivity correlates of fatigue in amyotrophic lateral sclerosis.
Trojsi F, Di Nardo F, D'Alvano G, Passaniti C, Sharbafshaaer M, Canale F, Russo A, Silvestro M, Lavorgna L, Cirillo M, Esposito F, Tedeschi G, Siciliano M.

Brain Behav. 2023 Jul;13(7):e2931. doi: 10.1002/brb3.2931.

Arterial spin labeling MRI applied to migraine: current insights and future perspectives.

Russo A, Silvestro M, Tessitore A, Orologio I, De Rosa AP, De Micco R, Tedeschi G, Esposito F, Cirillo M.

J Headache Pain. 2023 Jun 16;24(1):71. doi: 10.1186/s10194-023-01597-y.

Memory Phenotypes In Early, De Novo Parkinson's Disease Patients with Mild Cognitive Impairment.

Siciliano M, De Micco R, Russo AG, Esposito F, Sant'Elia V, Ricciardi L, Morgante F, Russo A, Goldman JG, Chiorri C, Tedeschi G, Trojano L, Tessitore A.

Mov Disord. 2023 Jun 15. doi: 10.1002/mds.29502.

Subacute changes in brain functional network connectivity after nocturnal sodium oxybate intake are associated with anterior cingulate GABA.

Bavato F, Esposito F, Dornbierer DA, Zölch N, Quednow BB, Staempfli P, Landolt HP, Seifritz E, Bosch OG.

Cereb Cortex. 2023 Jun 8;33(12):8046-8055. doi: 10.1093/cercor/bhad097.

Iron and Ferroptosis More than a Suspect: Beyond the Most Common Mechanisms of Neurodegeneration for New Therapeutic Approaches to Cognitive Decline and Dementia.

Cerasuolo M, Di Meo I, Auriemma MC, Trojsi F, Maiorino MI, Cirillo M, Esposito F, Polito R, Colangelo AM, Paolisso G, Papa M, Rizzo MR.

Int J Mol Sci. 2023 Jun 1;24(11):9637. doi: 10.3390/ijms24119637.

Olfactory Loss and Brain Connectivity after COVID-19: Structural Follow-Up at One Year.

Esposito F, Cirillo M, De Micco R, Caiazzo G, Siciliano M, Russo AG, Monari C, Coppola N, Tedeschi G, Tessitore A.

Neural Plast. 2023 Apr 29;2023:6496539. doi: 10.1155/2023/6496539. eCollection 2023.

Childhood maltreatment is associated with cortical thinning in people with eating disorders.

Cascino G, Canna A, Russo AG, Monaco F, Esposito F, Di Salle F, Monteleone P, Monteleone AM.

Eur Arch Psychiatry Clin Neurosci. 2023 Mar;273(2):459-466. doi: 10.1007/s00406-022-01456-y.

Resting state fMRI analysis of pseudobulbar affect in Amyotrophic Lateral Sclerosis (ALS): motor dysfunction of emotional expression.

Trojsi F, Di Nardo F, D'Alvano G, Caiazzo G, Passaniti C, Mangione A, Sharbafshaaer M, Russo A, Silvestro M, Siciliano M, Cirillo M, Tedeschi G, Esposito F.

Brain Imaging Behav. 2023 Feb;17(1):77-89. doi: 10.1007/s11682-022-00744-4.

Resting-state functional MRI in multicenter studies on multiple sclerosis: a report on raw data quality and functional connectivity features from the Italian Neuroimaging Network Initiative.

De Rosa AP, Esposito F, Valsasina P, d'Ambrosio A, Bisecco A, Rocca MA, Tommasin S, Marzi C, De Stefano N, Battaglini M, Pantano P, Cirillo M, Tedeschi G, Filippi M, Gallo A; INNI Network.

J Neurol. 2023 Feb;270(2):1047-1066. doi: 10.1007/s00415-022-11479-z.

Resting-state network connectivity changes in drug-naïve Parkinson's disease patients with probable REM sleep behavior disorder.

De Micco R, Piramide N, Di Nardo F, Siciliano M, Cirillo M, Russo A, Silvestro M, Tedeschi G, Esposito F, Tessitore A.

J Neural Transm (Vienna). 2023 Jan;130(1):43-51. doi: 10.1007/s00702-022-02565-7.

Explaining neural activity in human listeners with deep learning via natural language processing of narrative text.
Russo AG, Ciarlo A, Ponticorvo S, Di Salle F, Tedeschi G, Esposito F.
Sci Rep. 2022 Oct 25;12(1):17838. doi: 10.1038/s41598-022-21782-4.

Combined regional T1w/T2w ratio and voxel-based morphometry in multiple system atrophy: A follow-up study.
Ponticorvo S, Manara R, Russillo MC, Andreozzi V, Forino L, Erro R, Picillo M, Amboni M, Cuoco S, Di Salle G, Di Salle F, Barone P, Esposito F, Pellecchia MT.
Front Neurol. 2022 Oct 19;13:1017311. doi: 10.3389/fneur.2022.1017311. eCollection 2022.

Negative correlation between word-level surprisal and intersubject neural synchronization during narrative listening.
Russo AG, De Martino M, Elia A, Di Salle F, Esposito F.
Cortex. 2022 Oct;155:132-149. doi: 10.1016/j.cortex.2022.07.005.

Neurovascular coupling in patients with type 2 diabetes mellitus.
Canna A, Esposito F, Tedeschi G, Trojsi F, Passaniti C, di Meo I, Polito R, Maiorino MI, Paolisso G, Cirillo M, Rizzo MR.
Front Aging Neurosci. 2022 Sep 1;14:976340. doi: 10.3389/fnagi.2022.976340. eCollection 2022.

Dynamic spectral signatures of mirror movements in the sensorimotor functional connectivity network of patients with Kallmann syndrome.
Di Nardo F, Manara R, Canna A, Trojsi F, Velletrani G, Sinisi AA, Cirillo M, Tedeschi G, Esposito F.
Front Neurosci. 2022 Aug 25;16:971809. doi: 10.3389/fnins.2022.971809. eCollection 2022.

Magnetic Resonance T1w/T2w Ratio in the Putamen and Cerebellum as a Marker of Cognitive Impairment in MSA: a Longitudinal Study.
Cuoco S, Ponticorvo S, Bisogno R, Manara R, Esposito F, Di Salle G, Di Salle F, Amboni M, Erro R, Picillo M, Barone P, Pellecchia MT.
Cerebellum. 2022 Aug 19. doi: 10.1007/s12311-022-01455-8. Online ahead of print.

Uncovering clinical and radiological asymmetry in progressive supranuclear palsy-Richardson's syndrome.
Picillo M, Tepedino MF, Abate F, Ponticorvo S, Erro R, Cuoco S, Oksuz N, Di Salle G, Di Salle F, Esposito F, Pellecchia MT, Manara R, Barone P.
Neurol Sci. 2022 Jun;43(6):3677-3682. doi: 10.1007/s10072-022-05919-x. Epub 2022 Feb 1.

Semantic fMRI neurofeedback: a multi-subject study at 3 tesla.
Ciarlo A, Russo AG, Ponticorvo S, di Salle F, Lühns M, Goebel R, Esposito F.
J Neural Eng. 2022 May 30;19(3). doi: 10.1088/1741-2552/ac6f81.

Repetitive Transcranial Magnetic Stimulation (rTMS) of Dorsolateral Prefrontal Cortex May Influence Semantic Fluency and Functional Connectivity in Fronto-Parietal Network in Mild Cognitive Impairment (MCI).
Esposito S, Trojsi F, Cirillo G, de Stefano M, Di Nardo F, Siciliano M, Caiazzo G, Ippolito D, Ricciardi D, Buonanno D, Atripaldi D, Pepe R, D'Alvano G, Mangione A, Bonavita S, Santangelo G, Iavarone A, Cirillo M, Esposito F, Sorbi S, Tedeschi G.
Biomedicines. 2022 Apr 25;10(5):994. doi: 10.3390/biomedicines10050994.

Olfactory loss and brain connectivity after COVID-19.
Esposito F, Cirillo M, De Micco R, Caiazzo G, Siciliano M, Russo AG, Monari C, Coppola N, Tedeschi G, Tessitore A.
Hum Brain Mapp. 2022 Apr 1;43(5):1548-1560. doi: 10.1002/hbm.25741.

Cross-modal connectivity effects in age-related hearing loss.
Ponticorvo S, Manara R, Cassandro E, Canna A, Scarpa A, Troisi D, Cassandro C, Cuoco S, Cappiello A, Pellecchia MT, Salle FD, Esposito F.
Neurobiol Aging. 2022 Mar;111:1-13. doi: 10.1016/j.neurobiolaging.2021.09.024.

Sex differences in the taste-evoked functional connectivity network.
Ponticorvo S, Prinster A, Cantone E, Di Salle F, Esposito F, Canna A.
Chem Senses. 2022 Jan 1;47:bjac015. doi: 10.1093/chemse/bjac015.

Functional connectivity changes in complex migraine aura: beyond the visual network.
Silvestro M, Tessitore A, Di Nardo F, Scotto di Clemente F, Trojsi F, Cirillo M, Esposito F, Tedeschi G, Russo A.
Eur J Neurol. 2022 Jan;29(1):295-304. doi: 10.1111/ene.15061.

PHD STUDENTS (SUPERVISION):

2023-2025: Supervisor Ph.D. Student (University of Campania "Luigi Vanvitelli", Italy)
Candidates: Federica Franza (Biomed. Eng.), Marianna Chianese (Biomed. Eng.), Ilaria Gigi (Comp. Science)
2022-2024: Supervisor Ph.D. Student (University of Campania "Luigi Vanvitelli", Italy)
Candidate: Alessandro Pasquale De Rosa (Biomedical Engineer)
2020-2023: Supervisor Ph.D. Student (University of Salerno, Italy)
Thesis project: "Semantic Neurofeedback: Novel experimental strategies of Neural Activation Control using Real-time functional MRI". Candidate: Assunta Ciarlo (Biomedical Engineer)
2017-2020: Supervisor Ph.D. Student (University of Salerno, Italy)
Thesis project: "The Effect of Continuous Usage of Hearing Aids on Morphological and Functional Brain Properties in Patients with Hearing Deficits: A Magnetic Resonance Imaging Study". Candidate: Sara Ponticorvo (Biomedical Engineer)
2017-2020: Co-Supervisor Ph.D. Student (University of Salerno, Italy)
Thesis project: "Applications of Novel Neuroimaging Techniques to the Study of Human Language". Candidate: Andrea Gerardo Russo (Biomedical Engineer)
2015-2018: Supervisor Ph.D. Student (University of Salerno, Italy)
Thesis project: "Functional MRI Study of Human Gustatory Cortex: Technological Advancements and Applications to Basic and Clinical Neurosciences". Candidate: Antonietta Canna, Ph.D. (Biomedical Engineer)
2014-2018: Co-Supervisor Ph.D. Student (Maastricht University, The Netherlands)
Thesis project: "New avenues towards mobile brain computer interfaces: the impact of real-time and fast fMRI". Candidate: Michael Lühns, Ph.D. (Computer Scientist)
2014-2017: Co-Supervisor (external) Ph.D. Student (University of Campania "L. Vanvitelli") Candidate: Michele Fratello, Ph.D. (Computer Scientist)
2013-2016: Co-Supervisor (external) Ph.D. Student (University of Campania "L. Vanvitelli") Candidate: Giuseppina Caiazzo, Ph.D. (Biomedical Engineer)
2010-2013: Co-Supervisor (external) Ph.D. Student (University of Campania "L. Vanvitelli") Candidate: Daniele Corbo, Ph.D. (Physics)
2005-2009: Co-Supervisor (external) Ph.D. Student (University of Campania "L. Vanvitelli") Candidate: Adriana Aragri, Ph.D. (Electronics Engineering)

ACADEMIC TEACHING ACTIVITY:

2023-2024 (Degree in Biomedical Engineering): Foundations of Biomedical Engineering (Part I).
2021-2023 (Degree in Health Professional - Laboratory Technician): Information Systems.
2021-2023 (Degree in Health Professional - Radiology): Informatics and Information Systems.
2020-2023 (Specialisation in Neurology) : Advanced Imaging in Neurology.
2013-2020 (Degree in Medicine): Biostatistics, Biomedical Informatics, Biomedical Instrumentation.
2019-2020 (Degree in Engineering): Bioinformatics Engineering: Neuroimaging.
2017-2020 (Master in Applied Behavioral Analysis). Data Analysis.
2017-2020 (Degree in Health Professional - Radiology): Electrical & Electronic Measurements.
2014-2020 (Degree in Health Professional- Nursing): Informatics, Information Systems.
2014-2015 (Degree in Computer Science): Biomedical Signal & Image Processing.
2013-2015 (Master in Advanced Neuroimaging Methods): Director.
2006-2012 (Research Master in Cognitive Neuroscience): Real-time FMRI, FMRI Data Analysis.

Napoli, 04 August 2023

(F.to)