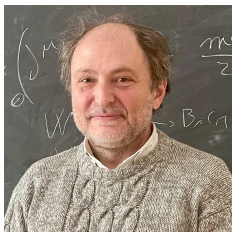
Curriculum vitae

PERSONAL INFORMATION

Federico Giove



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WoS http://www.webofscience.com/wos/author/record/C-3295-2008

Scopus ID https://www.scopus.com/authid/detail.uri?authorId=6603200123

Loop profile http://loop.frontiersin.org/people/44486

Google scholar https://scholar.google.com/citations?user=P5Kz7kIAAAAJ

Gender M | Nationality Italian

CURRENT POSITION AND APPOINTMENTS

1/2022–present

Research Director, tenured

Centro Ricerche Enrico Fermi (formally Museo storico della fisica e Centro studi e ricerche Enrico Fermi), Rome. As Research Director (Dirigente di Ricerca) I head a group of medical physicists (1 researcher, 2 postdocs, undergraduate and PhD students) devoted to the study of human brain structure and function, and to the development of the relevant MR methods. I am the PI of the project “Neuroscience and Quantitative Neuroimaging” (NQN). My research activity is strongly oriented towards interdisciplinary approaches to neuroscience and neuroimaging.

I’m involved in many national and international collaborations; I attracted as coordinator more than 2 million euros from competitive grants since 2015. I have thus gained a strong experience in coordination of complex projects.

I come from the MRI School led by prof. Bruno Maraviglia, and I continue the tradition of human scale MRI development.

10/2023–present

Head of the Neuroimaging Laboratory.

Fondazione Santa Lucia, Rome. In this role, I coordinate the research and development activities on a Siemens Prisma 3T scanner, which is exclusively dedicated to research. The Neuroimaging Laboratory is a gathering place for scientists interested in multidisciplinary, advanced MRI research, where researchers from Fondazione Santa Lucia and various other collaborating institutions, including Sapienza Università di Roma and Università degli Studi di Roma Tor Vergata, work together.

PAST POSITIONS

1/2022–10/2023

Head of the Laboratory of Neurophysics and Neuroimaging (NaN)

Fondazione Santa Lucia, Rome.

7/2020–10/2023

Coordinator of 3T MRI research

Fondazione Santa Lucia, Rome.

9/2015–12/2021 **Senior researcher**

Primo ricercatore (Senior researcher) at Centro Ricerche Enrico Fermi.

76 months.

9/2012–8/2015 **Senior postdoc fellowship**

Assegno di ricerca senior at Centro Ricerche Enrico Fermi on “Investigation on Brain Energetics”.

36 months.

1/2011–6/2012 **Senior grant**

Senior postdoc fellowship at Centro Ricerche Enrico Fermi, on a project devoted to: “Investigation of human brain function by NMR”.

18 months.

1/2010–12/2010 **Postdoc fellowship**

Assegno di ricerca at Department of Physics, Sapienza Università di Roma, on a project devoted to: “Modeling of brain energetics”.

12 months.

11/2004–10/2009 **Postdoc fellowship**

Junior grant at Centro Ricerche Enrico Fermi, on a project devoted to: “Investigation of Brain Function by MRI”.

60 months.

RESEARCH EXPERIENCE

Interests

- Human brain metabolic dynamics, in healthy subjects and in some pathologies. My specific studies are focused on neurotransmitters and on energy-related compounds.
- Biophysical modeling and computational approaches to the study of brain function and metabolism.
- Quantitative MR approaches to brain structure and function.
- Human brain function at rest and under sustained stimulation (resting state and steady state networks).
- MR scanners technology.

Scientific production

- Coauthor of about 80 full papers and 20 conference papers on international journal with impact factor, 70+ other items, including editorials, commentaries, papers on national journals and other conference papers.
- Some tenths of conference talks and chairmanships.
- h-index: 28, 2375 total citations, 2214 citations without self-citations (source: Scopus).
- h-index: 27, 2216 total citations, 2055 citations without self-citations (source: Clarivate – Web of Science).
- h-index: 33, 3327 total citations (source: Google Scholar).

2013 Visiting scientist, Center for Magnetic Resonance Research, Minneapolis, MN, USA.

2010–present Research on computational models of brain energetics.

2008–present Research on function and resting state networks of the human brain.

2006–present Research on human vision and perception.

2005–present Research on brain energetics, functions and structure with fMRI, fMRS and microstructural approaches. Research on spinal cord fMRI. Development of methods for acquisition and processing of MRI and MRS data. Development of integration approaches (both instrumental and postprocessing) between MR and compatible techniques.

2001–2004 Research on brain energetics and function by fMRI and fMRS, as PhD student.

2000–2001 Research on brain energetics by fMRS, as undergraduate student.

ACADEMIC QUALIFICATIONS

2017–present Qualified as full professor of Applied Physics (02/D1, Fisica applicata, didattica e storia della fisica, from 5/12/2017 to 5/12/2028), National Scientific Qualification (Abilitazione Scientifica Nazionale), Italy.

2013–present Qualified as associate professor of Applied Physics (02/B3, Fisica applicata, now Fisica applicata, didattica e storia della fisica, 02/D1, from 27/12/13 to 27/12/24), Experimental Physics of the Matter (02/B1, Fisica sperimentale della materia, from 13/10/14 to 13/10/25), Physiology (05/D1, Fisiologia, from 31/1/14 to 31/1/25), General Biochemistry (05/E1, Biochimica Generale, from 5/12/2017 to 5/12/2028), Science of healthcare professions and applied medical technologies (06/N1, dal 29/4/2019 al 29/4/2030). National Scientific Qualification (Abilitazione Scientifica Nazionale), Italy.

ACADEMIC APPOINTMENTS AND CORRELATED EXPERIENCES

2024–2028 Member of the Scientific Council, as a representative of researchers and technologists, Centro Ricerche Enrico Fermi.

2023–present Member of the work group for the three-year Scientific Plan, Centro Ricerche Enrico Fermi.

2019 Member of the group “Health” of the Commission established by the Ministry of Research for the 2021-2027 National Research Plan (PNR).

2017–2021 Member of the Board (Collegio dei Docenti) of the PhD School in Morphogenesis and Tissue Engineering, from XXXIII to XXXVII cycle, Sapienza Università di Roma.

2013–2024 Repeatedly member of Commission or President of Commission for public selections for tenured and fixed term researcher, postdoc and administrative positions (Centro Ricerche Enrico Fermi).

RESPONSIBILITIES IN ORGANIZING CONFERENCES

2020 Member of the Scientific Committee of the Virtual online GIDRM Workshop on Artificial Intelligence in NMR, MRI and Neuroscience.

2009–2021 Condirector of the International School on Magnetic Resonance and Brain Function, Erice, Italy.

2007–2008 President of the Local Organizing Committee of International Society for Magnetic Resonance in Medicine Workshop on Advances in High Field MR, Rome, 15–18 October.

2003–2009 Member of the Organizing Committee of the International School on Magnetic Resonance and Brain Function, Erice, Italy.

EDITORIAL WORK

Specialty Chief Editor

2024–present Medical Physics and Imaging section, Frontiers in Physics and Frontiers in Physiology.

Associate/Academic Editor

2021–present PLOS One.

2019–present Brain Imaging Methods section, Frontiers in Neuroscience.

2018–2024 Cellular Neurophysiology section, Frontiers in Cellular Neuroscience.

2015–2024 Medical Physics and Imaging section, Frontiers in Physics and Frontiers in Physiology.

Editorial Board member

2015–2024 Frontiers in Computational Neuroscience.

Reviewer

2006–present For many international journals (Scientific Reports, Cerebral Cortex, Neuroimage, Journal of Cerebral Blood Flow and Metabolism, NMR in Biomedicine, Magnetic Resonance in Medicine, PLOS One, Journal of Neuroscience Methods, Magnetic Resonance Imaging, Journal of Physiology, Journal of Mathematical Biology, Brain Structure and Function, Frontiers in Neuroscience).

Guest editor

2016–2018 Coeditor of the Proceedings of the International School on Magnetic Resonance and Brain Function, Erice, Italy, Frontiers in Physics, Frontiers in Neurology, Frontiers in Neuroscience (2 special issues).

2003–2011 Coeditor of the Proceedings of the International School on Magnetic Resonance and Brain Function, Erice, Italy, Magnetic Resonance Imaging (8 special issues).

Activity as grants reviewer

2018 Grant reviewer for The Netherlands Organisation for Scientific Research.

2018 Grant reviewer for the University of Modena and Reggio Emilia.

2018 Grant reviewer for the Alzheimer's Society Foundation, UK.

2017–present Member of the REPRISE register (Official register of Expert Peer Reviewers for Italian Scientific Evaluation) in the basic research section, Italian Ministry of Research, ERC sectors LS4_5, LS5_10, LS7_1, PE8_13, SSD FIS/07, BIO/09, ING-IND/34.

TEACHING

Teaching as Titular Professor or Lecturer

2023–2024 Lecturer (Docente in convenzione), Applied Physics course (SSD FIS/07), degree course in Fisioterapia (L/SNT2), Università degli Studi di Roma Tor Vergata.

2 CFU, 1 academic year

2023–2024 Lecturer (Docente in convenzione), Applied Physics course (SSD FIS/07), degree course in Infermieristica (L/SNT1), Università degli Studi di Roma Tor Vergata.

2 CFU, 1 academic year

2022–2024 Lecturer, AI in medical image analysis PhD course (SSD FIS/07), National PhD in Artificial Intelligence.

2 academic years

2022–2024 Lecturer, Neurophysiology course (SSD BIO/09), Postgraduate School in Neuropsychology, Sapienza Università di Roma.

2 academic years

2018–2020 Adjunct Professor (Professore a contratto), Instrumentation Physics: Applied Physics course (SSD FIS/07), degree course “E” in Tecniche di radiologia medica, per immagini e radioterapia (L/SNT3), Sapienza Università di Roma.

2 CFU, 2 academic years

2018–2020 Adjunct Professor (Professore a contratto), Radiation Therapy: Applied Physics course (SSD FIS/07), degree course “E” in Tecniche di radiologia medica, per immagini e radioterapia (L/SNT3), Sapienza Università di Roma.

1 CFU, 2 academic years

2018 Lecturer, First Level Master on MR techniques in clinic and research, Università Campus Bio-Medico, Rome.

2017 Lecturer, Second Level Master on Radioprotection – Safety of ionizing and non-ionizing radiations, Università degli Studi di Roma Tor Vergata.

2016–2017 Adjunct Professor (Professore a contratto), Basic Physics and Chemistry: Electric and Electronic Measures course (SSD ING-INF/07), degree course “E” in Tecniche di radiologia medica, per immagini e radioterapia (L/SNT3), Sapienza Università di Roma.

1 CFU, 1 academic year

2015–2017 Adjunct Professor (Professore a contratto) Basic Physics and Chemistry: Applied Physics course (SSD FIS/07), degree course “E” in Tecniche di radiologia medica, per immagini e radioterapia (L/SNT3), Sapienza Università di Roma.

2 CFU, 2 academic years

2015 Lecturer, Second Level Master on Radioprotection – Safety of ionizing and non-ionizing radiations, Università Campus Bio-Medico, Rome.

2014–2015 Lecturer (Docente in convenzione), Physics Applied to Instrumentation and Radiotherapy: Radioprotection Physics course (SSD FIS/07), degree course “E” in Tecniche di radiologia medica, per immagini e radioterapia (L/SNT3), Sapienza Università di Roma

3 CFU, 1 academic year

Teaching as Assistant Professor

2016–2017 Teaching at the Instrumentation Physics: Applied Physics course (SSD FIS/07), degree course “E” in Tecniche di radiologia medica, per immagini e radioterapia (L/SNT3), Sapienza Università di Roma, with Prof. Rosanna Pellegrini.

2 CFU, 1 academic year

2015–2016 Teaching at the Physics Applied to Instrumentation and Radiotherapy: Radioprotection Physics course (SSD FIS/07), degree course “E” in Tecniche di radiologia medica, per immagini e radioterapia (L/SNT3), Sapienza Università di Roma, with Prof. Rosanna Pellegrini.

3 CFU, 1 academic year

2014–2015 Teaching at the Basic Physics and Chemistry: Applied Physics course (SSD FIS/07), degree course “E” in Tecniche di radiologia medica, per immagini e radioterapia (L/SNT3), Sapienza Università di Roma, with Prof. Rosanna Pellegrini.

2 CFU, 1 academic year

2014–2017 Teaching at the Basic Physics and Chemistry: Applied Physics course (SSD FIS/07), degree course “U” in Infermieristica (L/SNT1), Sapienza Università di Roma, with Prof. Rosanna Pellegrini.

1 CFU, 3 academic years

2008–2014 Teaching at the Medical Physics course (SSD FIS/07), degree course in Physics (LM-17), Department of Physics, Sapienza Università di Roma, with Prof. Bruno Maraviglia and Prof. Giovanni E. Gigante.

6 CFU, 6 academic years

2007 Teaching at the Complements of Biosystem Physics course (SSD FIS/07), degree course in Physics (LM-17), Department of Physics, Sapienza Università di Roma, with Prof. Bruno Maraviglia

3 CFU, 1 academic year

Other didactic activity

2006–present Supervisor of 4 bachelor’s degrees in Physics, 8 Master degrees in Physics, 1 Master degree in Bioengineering, 2 Degrees at the Postgraduate school in Medical Physics, 1 PhD thesis in Biophysics and 4 PhD theses in Morphogenesis and tissue engineering, all at Sapienza Università di Roma. I also supervised 1 PhD thesis in Physics at the Università Roma 3, and 5 bachelor’s degrees in Physics at Université Paris-Sud 11. I acted as advisor and member of examining committee for a PhD thesis in Mathematics and Statistics at the University of Basque Country, and , for a PhD thesis in Chemical Sciences at Università degli Studi di Roma Tor Vergata.

2018–2020 Seminars and laboratories on NMR the the course of Medical Physics (SSD FIS/07), degree course in Physics (LM-17), Department of Physics, Sapienza Università di Roma (Prof. Naurang Saini)

THIRD MISSION AND TECHNOLOGICAL ROLES

2024–present Member of the Joint Technical Committee on the GARR Consortium (national network infrastructure for scientific research).

2022–present Member of the Scientific and Technical Committee of the Museum on Enrico Fermi in the building of the former Royal Institute of Physics in Via Panisperna, now headquarters of Centro Ricerche Enrico Fermi.

2020–present Member of the Organizing Committee of StartCup Lazio, regional business plan competition between startups.

2019–2020 Collaborator at the setting up of the Museum on Enrico Fermi, Centro Ricerche Enrico Fermi.

2019–present Speaker at seminars and guide for high school students in visit at the Museum on Enrico Fermi, Centro Ricerche Enrico Fermi.

2012–present Access Port Manager (APM) for the connection to the GARR network, Fondazione Santa Lucia. I'm in charge of the management of the internet conenctivity of the Via Ardeatina campus.

2010–present System administrator of the laboratory network.

MEMBERSHIPS

2024–present Italian Chapter of the International Society for Magnetic Resonance in Medicine, Milan, I.

2009–2014 INFN, Istituto Nazionale di Fisica Nucleare, Rome 1 Unit.

2008–present International Society for Magnetic Resonance in Medicine, Berkeley, CA, USA.

2002–present Centro Ricerche Enrico Fermi, Rome.

2000–2011 Department of Physics, Sapienza Università di Roma.

2000–2003 INFM, Istituto Nazionale di Fisica della Materia.

GRANTS, FUNDING AND RESEARCH PROJECTS

2024–2025 European Commission – NextGenerationEU and Ministry of University and Research PNRR M4 C2, "MNESYS SINVASC – The signal in the noise: advanced MRI methods for the characterization of the vascular component of BOLD spontaneous fluctuations". Principal Investigator.

249619 €.

2024–2026 European Commission – NextGenerationEU and Ministry of Health PNRR MCNT2-2023-12378303, "Multiparametric MR imaging for the characterization of microstructural damage in the human spinal cord". Investigator.

1000000 €.

2023–2025 MUR PRIN 2022 P202294JHK "RECENTRE - REal-time motion CorrEctioN in magneTic REsonance". Unit Principal Investigator.

22000 €.

2023–2025 European Commission – NextGenerationEU and Ministry of Health PNRR PNC-E3-2022-23683266, "INNOVA — ItaliaN NetwOrk of excellence for adVanced diAgnosistics". Unit Co-Principal Investigator.

660000 €.

2022–2024 European Commission – NextGenerationEU and Ministry of Health PNRR MAD-2022-12376889, “Development of advanced MRI methods and of tailored signal processing for the quantitative characterization of neurodegenerative diseases through novel biomarkers identification”. Co-Principal Investigator.

1000000 €.

2022–2023 Human Brain Project, Partnering Project BBM-CREF, Multiscale modelling of brain diseases. Principal Investigator.

36000 €.

2021 Fondazione Santa Lucia IRCCS, Quantitative analysis of MRI data.

28863 €.

2021–2023 Regione Lazio POR-FESR 2014–2020 A0375-2020-36648, “FISASMEM — Physiology of aging: development of quantitative MRI methods”. Coordinator and Principal Investigator.

149614 €.

2020–2022 Regione Lazio POR-FESR 2014–2020 A0320-2019-28189, “NBP — Development of a collaborative platform for advanced neuroimaging methods”. Coordinator and Principal Investigator.

379832 €.

2020–2022 Regione Lazio DTC Fase 1 20591, “VEROSH — Virtual ExploRation Of Science History”. Investigator.

73840 €.

2019–2021 Regione Lazio POR-FESR 2014–2020 A0301-2019-26658 Strenghtening of research infrastructures, “ISIS@MACH — Composite Materials ISIS Hub”. Investigator.

642335 €.

2017 E.M.S. S.R.L., Bologna. Measures of EM compatibility of stimulation devices with MRI.

4500 €.

2015–2019 H2020 MSCA-RISE 691110 “MICROBRADAM — Advanced MR methods for characterization of microstructural brain damage”. Consortium coordinator and Principal Investigator.

540000 €.

2015–2018 Regione Lazio POR-FESR 2014-2020 RU-2014-1092, “PAMINA — Piattaforma per l’Analisi Multimodale Integrata in Neuroscienze Applicate – Platform for Integrated and Multimodal Analysis in Applied Neuroscience”. Coordinator and Principal Investigator.

862000 €.

2015–2016 Galmed Pharmaceuticals, Tel Aviv. ARREST Phase IIb Trial. Optimization of MR spectroscopy methods for MR centers in Italy. Consultant.

2012–2014 MIUR Progetti Premiali, “NETFUN — Functional brain networks studied by NMR”. Principal Investigator.

100500 €.

2012–2014 INFN TOPEM collaboration: “TOf PEt and and SPECT MRI for PROstate cancer diagnosis and follow up”. Investigator.

2010–present Fondazione Santa Lucia, Rome. Coordinator of the project “Study of metabolic events during visual perception by MR techniques”.

2008–2010 PRIN, “Characterization of human spinal cord function by MRI”. Investigator.

41700 €.

2007–2009 Regione Lazio, “FUSION — Framework and Unified System for Investigation on Neurosciences”. Scientific coordinator.

800000 €.

2003–2005 PRIN, “Advanced methods for the study of human brain function by MRI”. Investigator.

81500 €.

2004–present Centro Ricerche Enrico Fermi, “NQN — Neurioscience and Quantitative Neuroimaging”, previously “Non-invasive technologies for the Neurosciences: Magnetic Resonance (TNIN)”, then “MRI techniques for the study of human brain function (T-MENS)”. Investigator 2004–2010, Principal Investigator 2010–present.

RECOGNITIONS AND AWARDS

2022 Regione Lazio FSE^{+} 2021–2027 22009DP000001351. Prize for researchers and post-doctoral fellows.

2022 The paper DiNuzzo, Mangia, Moraschi, Mascali, Hagberg , Giove. “Perception is associated with the brain’s metabolic response to sensory stimulation”, eLife **11**:e71016 (2022), doi: 10.7554/eLife.71016 is selected by the Editor to receive an “Insight article” introduction by Polytimi Frangou and William T. Clarke (doi: 10.7554/eLife.78327). The same paper is introduced in the editorial “The Neuroscientist Comments” on the journal The Neuroscientist (doi: 10.1177/10738584221106743).

2010 The paper DiNuzzo, Mangia, Maraviglia, Giove. “Glycogenolysis in astrocytes supports blood-borne glucose channeling not glycogen-derived lactate shuttling to neurons”, Journal of Cerbral Blood Flow and Metabolism **30**:1895–1904 (2010), doi: 10.1038/jcbfm.2010.151 is selected as “Feature article”, with an introduction by Gerald A. Dienel.

2014 ### Outstanding Reviewer

International journal Journal of Neuroscience Methods.

2001–2004 PhD scolarship, Sapienza Università di Roma.

MAIN COLLABORATIONS

2021–present University of Pavia (Egidio U. D’Angelo) and Istituto Superiore di Sanità (Rossella Canese). Mulstiscale imaging e modelling of brain diseases.

2020–present Department of Physics, Sapienza Università di Roma (Stefano Giagu, Cecilia Voena). AI methods in MRI.

2019–present Magnetic Resonance Research Center, Yale University, New Haven (Douglas L. Rothman). Metabolic modelling.

2019–2021 University of Eastern Finland, Kuopio (Jussi Tohka). AI methods for MRI segemntation.

2018–2019 University of Montreal. (Julien Cohen-Adad). Spinal cord imaging.

2018–2022 Project Consulting S.R.L., Rome. Algorithms and platforms for automated processing of biomedical images.

2016–present Istituto dei Sistemi Complessi, Consiglio Nazionale delle Ricerche (CNR–ISC), Rome (Silvia Capuani). Quantitative clinical MR methods.

2015–present Department of Information Engineering, Electronics and Telecommunications, Sapienza Università di Roma (Fabrizio Frezza). Biophysical models.

2015–present Siemens Healthcare Italy, Milano. Methods for MR spectroscopy in vivo.

2015–2019 University of Eastern Finland, Kuopio (Olli Gröhn). MRI methods for characterization of microstructural damage in neurodegeneration.

2013–present Cardiff Brain Research University Center (CUBRIC), University of Cardiff, then Department of Neuroscience, Imaging and Clinical Sciences, Università di Chieti–Pescara, Chieti (Richard G. Wise). Calibrated BOLD imaging, methods for the study of brain functional networks.

2013–present Istituto per i processi chimico-fisici, now Istituto di nanotecnologia, Consiglio Nazionale delle Ricerche (CNR–IPCF), Rome (Andrea De Martino, Alessia Cedola, Michela Fratini). Metabolic networks, spinal cord imaging.

2013–2014 Dipartimento di Scienze Radiologiche, Sapienza Università di Roma (Valeria Panebianco). Advanced MR methods for prostate cancer characterization.

2009–2013 Istituto Superiore di Sanità (Franco Garibaldi). Hybrid PET/MRI probe for the characterization of prostatic cancer.

2008–2012 EBNeuro S.p.A., Firenze. Development of an hardware EEG filter for simultaneous EEG/fMRI recordings.

2008–present Università di Modena e Reggio Emilia, Modena (Carlo A. Porro, Paul E. Summers). Spinal cord fMRI.

2006–present Center For Magnetic Resonance Research (CMRR), University of Minnesota, Minneapolis (Silvia Mangia, Ivan Tkáč, Kâmil Uğurbil). Brain metabolic dynamics, neurometabolic coupling, metabolic pathologies, metabolic modeling.

2003–present Fondazione Santa Lucia, Rome (Gisela E. Hagberg, Emiliano Macaluso, Gianfranco Spalletta, Laura Serra, Marco Bozzali, Donatella Mattia). Brain metabolism and neurodegenerative diseases.

2003–2016 Dipartimento di Scienze Neurologiche, Sapienza Università di Roma (Claudio Colonnese, Carlo Di Bonaventura). Neurological diseases.

EDUCATION

2005 **PhD in Biophysics** ISCED 8, EQF 8

Sapienza Università di Roma. Thesis title: “Energetics and activation of the central nervous system by in vivo nuclear magnetic resonance”. Supervisor: Prof. Bruno Maraviglia.

2001 **Master Degree in Physics** ISCED 7, EQF 7

(cum laude). Sapienza Università di Roma. Thesis title: “Dynamics of neuronal metabolism under activation: “in vivo” lactate measurement with NMR”. Supervisor: Prof. Bruno Maraviglia.

OTHER INFORMATION

Experience with MRI scanners

Programming languages
- Certified IDEA programmer (Pulse programming language for Siemens scanners).
- Basic knowledge of Bruker and Philips pulse programming languages.

Scanners
- Advanced knowledge of Siemens scanners (software and hardware).
- Very good knowledge of General Electric and Philips scanners (software), basic knowledge of Bruker scanners.

NMR Software
- Advanced knowledge of main MR processing tools. Spectroscopy: LCModel, jMRUI, MatNMR, XWinNMR; Imaging: SPM, AFNI, FSL, freesurfer).
- Author of several custom processing routines in Matlab.

Informatic knowledge

Programming languages: C, Fortran, HTML (basic knowledge); Matlab, LaTeX 2_ε (advanced knowledge).

OS and servers: SQL Server (basic knowledge); MS Windows (NT kernel, workstation and server), Linux, Apache (advanced knowledge). Advanced knowledge in the fields of networking and ssytems management (Unix-like, Windows server).

Applications: Main productivity applications; Data analysis and statistics (SPSS, Origin).

LANGUAGES

Mother tongue: Italian

Other languages

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	C2	B1	B2	C1
Spanish	B2	A2	A2	A2	A2

Levels: A1 and A2: Basic user – B1 and B2: Independent user – C1 and C2: Proficient user
Common European Framework of Reference for Languages

DIGITAL SKILLS

Digital competences

SELF-ASSESSMENT				
Information Processing	Communication	Content creation	Safety	Problem solving
Proficient user	Independent user	Independent user	Proficient user	Proficient user

Digital competences - Self-assessment grid

ATTACHMENTS

Complete list of scientific publications.

Publications Federico Giove

Papers on international journal

[A1] Mauro DiNuzzo, Gerald A. Dienel, Kevin L. Behar, Ognen A. Petroff, Helene Beneveniste, Fahmeed Hyder, Federico Giove, Shalom Michaeli, Silvia Mangia, Suzana Herculano-Houzel, and Douglas L. Rothman. Neurovascular coupling is optimized to compensate for the increase in proton production from nonoxidative glycolysis and glycogenolysis during brain activation and maintain homeostasis of pH, pCO_2, and pO_2. *Journal of Neurochemistry 168* (2024), 632–662. DOI: 10.1111/jnc.15839.

[A2] Stefano Lasaponara, Mario Pinto, Silvana Lozito, Gabriele Scozia, Michele Pellegrino, Sara Lo Presti, Steve Gazzitano, Federico Giove, and Fabrizio Doricchi. Changes in brain functional connectivity underlying the Space-Number Association. *Journal of Cognitive Neuroscience* (2024). DOI: 10.1162/jocn_a_02240.

[A3] Lucia Mencarelli, Mario Torso, Ilaria Borghi, Martina Assogna, Valentina Pezzopane, Sonia Bonnì, Francesco Di Lorenzo, Emiliano Santarnecchi, Federico Giove, Alessandro Martorana, Marco Bozzali, Gerald R. Ridgway, Steven A. Chance, and Giacomo Koch. Macro and micro structural preservation of grey matter integrity after 24 weeks of rTMS in Alzheimer's disease patients: a pilot study. *Alzheimer's Research & Therapy 16* :152 (2024). DOI: 10.1186/s13195-024-01501-z.

[A4] Emma Colamarino, Matteo Lorusso, Floriana Pichiorri, Jlenia Toppi, Federica Tamburella, Giada Serratore, Angela Riccio, Francesco Tomaiuolo, Alessandra Bigion, Federico Giove, Giorgio Scivoletto, Febo Cincotti, and Donatella Mattia. DiSCIoser: unlocking recovery potential of arm sensorimotor functions after spinal cord injury by promoting activity-dependent brain plasticity by means of brain-computer interface technology. A randomized controlled trial to test efficacy. *BMC Neurology 23* :414 (2023). DOI: 10.1186/s12883-023-03442-w.

[A5] Maria Guidi, Giovanni Giulietti, Emma Biondetti, Richard G. Wise, and Federico Giove. Towards high-resolution quantitative assessment of vascular dysfunction. *Frontiers in Physics 11* :1248021 (2023). DOI: 10.3389/fphy.2023.1248021.

[A6] Laura Maugeri et al. Lesion extension and neuronal loss following spinal cord injury using X-ray phase-contrast tomography in mice. *Journal of Neurotrauma 40* (2023), 939–951. DOI: 10.1089/neu.2021.0451.

[A7] Alice Teghil, Alessia Bonavita, Federica Procida, Federico Giove, and Maddalena Boccia. Intrinsic hippocampal connectivity is associated with individual differences in retrospective duration processing. *Brain Structure and Function 228* (2023), 687–695. DOI: 10.1007/s00429-023-02612-3.

[A8] Mauro DiNuzzo, Silvia Mangia, and Federico Giove. Manipulations of sleep-like slow-wave activity by noninvasive brain stimulation. *Journal of Neuroscience Research 100* (2022), 1218–1225. DOI: 10.1002/jnr.25029.

[A9] Mauro DiNuzzo, Silvia Mangia, Marta Moraschi, Daniele Mascali, Gisela E. Hagberg, and Federico Giove. Perception is associated with the brain's metabolic response to sensory stimulation. *eLife 11* :e71016 (2022). DOI: 10.7554/eLife.71016.

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