

Federico Giove

MRI Physicist



+39 347 0407034



www.marbilab.eu



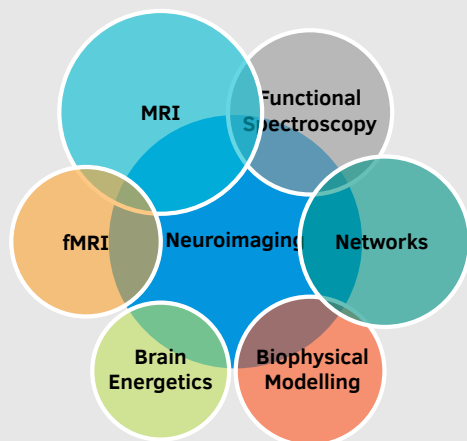
federico.giove@cref.it



0000-0002-6934-3146

Skills

Overview



Programming

0 LOC —————> 5000 LOC

IDEA (Siemens pulse programming)



Joomla



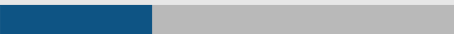
Matlab • L^AT_EX



Languages

0 —————> Mother tongue

Spanish



English



Italian



Positions

From 2022 **Research Director**

Centro Ricerche Enrico Fermi

As Research Director (Dirigente di Ricerca) I head a group of physicists devoted to the study of brain structure and function, and to the development of the relevant MR methods. My research is strongly focused on interdisciplinary approaches to neuroscience and neuroimaging.

From 2023 **Director of Neuroimaging Laboratory**

Fondazione Santa Lucia

2015 – **Senior researcher, tenured**

Centro Ricerche Enrico Fermi

2011 – **Senior postdoc fellow**

Centro Ricerche Enrico Fermi

2004 – **Postdoc fellow**

Centro Ricerche Enrico Fermi, Sapienza University of Rome

2001 – **PhD student**

Sapienza University of Rome

Research

Interests

- Dynamics of brain metabolism physiology and alterations (neuro-transmitters cycling, 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).
- Optimization of MR scanners technology for neuroscience.

Production

- Coauthor of more than 70 full papers and 14 conference papers on international journal with IF, and 40+ other items (editorials, conference proceedings, papers on national journals).
- Some tenths of invited conference talks and chairmanships.
- h-index: 26, 2019 total citations (source: ISI – Web of Science).

Academic achievements

- **Member** of the group “Health” of the Ministry of Research Commission for the 2021-2027 National Research Plan (PNR).
- **Qualified as full professor** in Applied Physics.
- **Qualified as associate professor** in several disciplines, including Experimental Condensed Matter, Physiology, Biochemistry.
- **Condirector** of the International School on Magnetic Resonance and Brain Function, Erice, Italy.
- **Associate Editor** of PLOS One, Frontiers in Neuroscience, Frontiers in Physics and Frontiers in Physiology.
- **Guest Editor** of Magnetic Resonance Imaging.
- **Reviewer** for leading international journals (Sci Rep, Cereb Cortex, NeuroImage, J Cerebr Blood F Met, NMR Biomed, PLOS One, J Physiol, J Math Biol...)
- **Grant reviewer** for The Netherlands Organisation for Scientific Research (NL), the Alzheimer’s Society Foundation (UK), the University of Modena and Reggio Emilia (I).

Collaborations



Education

PhD, Biophysics (ISCED 8)
Sapienza University of Rome
2005 | Rome, Italy

MSc, Physics *cum laude* (ISCED 7)
Curriculum: Biophysics
Sapienza University of Rome
2001 | Rome, Italy

Updated: December 21, 2023

Teaching

2015 – present	Adjunct Professor	Sapienza and Tor Vergata Universities, Rome
	“Professore a contratto” of Applied Physics and Radioprotection Physics.	
2018	Lecturer	Campus Bio-Medico University, Rome.
	First Level Master on MR techniques in clinic and research.	
2017	Lecturer	Tor Vergata University, Rome.
	Second Level Master on Radioprotection.	
2015	Lecturer	Campus Bio-Medico University, Rome.
	Second Level Master on Radioprotection.	
2008–2014	Teaching assistant	Sapienza University of Rome.
	Course of Medical Physics, with Prof. B. Maraviglia.	

Grants (last 5 years)

2023 – 2025	Unit PI	Ministry of Research PRIN 2022
	“REal-time motion CorrEction in magneTic REsonance”. 22000 €	
2023 – 2025	Unit Co-PI	NextGenerationEU and Ministry of Health PNRR PNC-2022
	“ItaliaN NetwOrk of excellence for adVanced diAgnosistics”. 1000000 €	
2023 – 2025	Co-PI	NextGenerationEU and Ministry of Health PNRR-MAD-2022
	“Development of advanced MRI methods and of tailored signal processing for the quantitative characterization of neurodegenerative diseases through novel biomarkers identification”. 1000000 €	
2021 – 2023	Coordinator and PI	Regione Lazio POR-FESR 2014–2020
	“Physiology of aging: development of quantitative MRI methods”. 149614 €	
2020 – 2022	Coordinator and PI	Regione Lazio POR-FESR 2014–2020
	“Development of a collaborative platform for advanced neuroimaging methods”. 379832 €	
2020 – 2023	Investigator	Regione Lazio DTC Fase 1
	“Virtual ExploRation Of Science History”. 73840 €	
2019 – 2021	Investigator	Regione Lazio POR-FESR 2014–2020
	“Composite Materials ISIS Hub”. 642335 €	
2015 – 2019	Coordinator and PI	H2020 MSCA-RISE 691110
	“ Advanced MR methods for characterization of microstructural brain damage”. 540000 €	

Five selected publications

- M. DiNuzzo et al. Perception is associated with the brain’s metabolic response to sensory stimulation. *eLife* 11 e71016 (2022).
- J. Cohen-Adad et al. Generic acquisition protocol for quantitative MRI of the spinal cord. *Nature protocols* 16 (2021), 4611–4632.
- D. Mascali et al. Disruption of Semantic Network in Mild Alzheimer’s Disease Revealed by Resting-State fMRI. *Neuroscience* 371 (2018), 38–48.
- P. Bednařík et al. Neurochemical and BOLD responses during neuronal activation measured in the human visual cortex at 7 Tesla. *Journal of Cerebral Blood Flow and Metabolism* 35 (2015), 601–610.
- M. DiNuzzo et al. Glycogenolysis in astrocytes supports blood-borne glucose channeling not glycogenderived lactate shuttling to neurons: evidence from mathematical modeling. *Journal of Cerebral Blood Flow and Metabolism* 30 (2010), 1895–1904.