

Federico Giove

MRI Scientist

c/o Fondazione Santa Lucia
Laboratorio Neuroimmagini
Via Ardeatina, 306
00141 Rome Italy

+39 06 51501324

<http://www.marbilab.eu>

federico.giove@cref.it

Italian

Profiles

iD 0000-0002-6934-3146

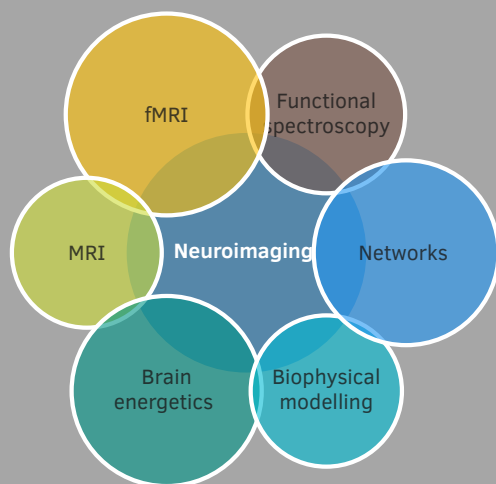
R C-3295-2008

SC 6603200123

g P5Kz7kIAAAAJ

Loop 44486

Research



Positions

From 2022	Research Director	Centro Ricerche Enrico Fermi
From 2023	Director of Neuroimaging Laboratory	Fondazione Santa Lucia
2019–2021	Senior researcher, tenured	Centro Ricerche Enrico Fermi
2015–2018	Senior researcher, tenure track	Centro Ricerche Enrico Fermi
2011–2015	Senior postdoc fellow	Centro Ricerche Enrico Fermi
2010	Postdoc fellow	Sapienza University of Rome
2004–2009	Postdoc fellow	Centro Ricerche Enrico Fermi

Research

Interests

- Dynamics of brain metabolism physiology and alterations (neurotransmitters 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 about 80 full papers and 20 conference papers on indexed journal, and 70+ other items (editorials, conference proceedings, papers on national journals).
- Some tenths of invited conference talks and chairmanships.
- h-index: 28, 2375 citations (source: Scopus).

Academic and organizational experience

2024–2028	Member of the Scientific Council of Centro Ricerche Enrico Fermi.
2019	Member of the group “Health” of the Ministry of Research Commission for the 2021–2027 National Research Plan (PNR).
From 2017	Qualified as full professor in Applied Physics.
From 2013	Qualified as associate professor in several disciplines, including Experimental Condensed Matter, Physiology, Biochemistry.
From 2018	Grant reviewer for The Netherlands Organisation for Scientific Research (NL), the Alzheimer’s Society Foundation (UK), the University of Modena and Reggio Emilia (I).
2017–2021	Member of the Board (Collegio dei Docenti) of the PhD School in Morphogenesis and Tissue Engineering, from XXXIII to XXXVII cycle, Sapienza University of Rome
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.
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.

Federico Giove

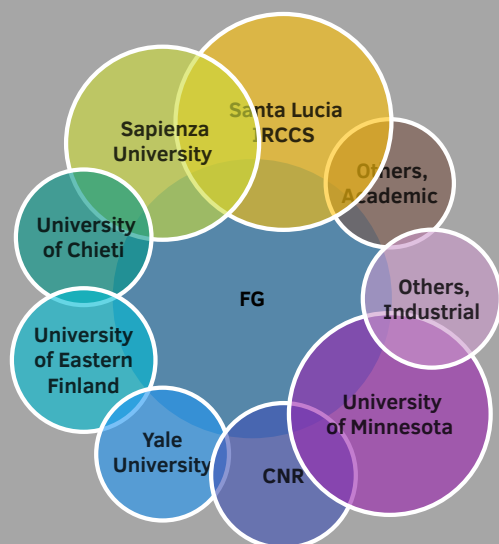
MRI Scientist

About Me

I head a group of physicists and bio-engineers working on 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. 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.

Collaborations



Memberships



International Society for Magnetic Resonance in Medicine, Berkeley, CA, USA



Associazione Italiana Risonanza Magnetica in Medicina, Milan, I

Education

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

MSc, Physics cum laude (ISCED 7)

2001 Curriculum: Biophysics
Sapienza University of Rome

Editorial activity

From 2024

Specialty Chief Editor of Medical Physics and Imaging section, Frontiers in Physics and Frontiers in Physiology.

From 2019

Associate Editor of PLOS One and Frontiers in Neuroscience.

2003-2011

Guest Editor of Magnetic Resonance Imaging.

From 2006

Reviewer for leading international journals (Sci Rep, Cereb Cortex, NeuroImage, Hum Brain Mapp, J Cerebr Blood F Metab, NMR Biomed, PLOS One, J Physiol, J Math Biol...).

Grants (last 5 years)

2024-2025

PI European Commission and Ministry of University and Research NextGenerationEU-PNRR M4 C2 "MNESYS SINVASC – The signal in the noise: advanced MRI methods for the characterization of the vascular component of BOLD spontaneous fluctuations". 249619 €.

2024-2026

Investigator European Commission and Ministry of Health PNRR MCNT2-2023-12378303, "Multiparametric MR imaging for the characterization of microstructural damage in the human spinal cord". 1000000 €.

2023-2025

Unit PI Ministry of University and Research PRIN 2022 P202294JHK "RECENTRE — REal-time motion CorrEction in magneTic REsonance". 22000 €.

2023-2025

Unit Co-PI European Commission and Ministry of Health PNRR PNC-E3-2022-23683266, "INNOVA — Italian NetWork of excellence for adVanced diAGNostics". 660000 €.

2022-2024

Co-Coordinator and Co-PI European Commission 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". 1000000 €.

2021-2023

Coordinator and PI Regione Lazio POR-FESR 2014-2020 A0375-2020-36648, "FISASMEM — Physiology of aging: development of quantitative MRI methods". 149614 €.

2020-2022

Coordinator and PI Regione Lazio POR-FESR 2014-2020 A0320-2019-28189, "NBP — Development of a collaborative platform for advanced neuroimaging methods". 379832 €.

2020-2022

Investigator Regione Lazio DTC Fase 1 20591, "VEROSH — Virtual ExploRation Of Science History". 73840 €.

2019-2021

Investigator Regione Lazio POR-FESR 2014-2020 A0301-2019-26658 Strengthening of research infrastructures, "ISIS@MACH — Composite Materials ISIS Hub". 642335 €.

2015-2019

Coordinator and PI European Commission H2020 MSCA-RISE 691110 "MICROBRADAM — Advanced MR methods for characterization of microstructural brain damage". 540000€.

Third mission and technological roles

From 2024

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

From 2022

Member of the Scientific Committee of the Museum on Enrico Fermi in the building of the former Royal Institute of Physics in Via Panisperna.

From 2020

Member of the Organizing Committee of StartCup Lazio, regional competition between startups.

From 2019

Speaker at seminars and guide for high school students in visit at the Museum on Enrico Fermi.



Languages


 Italian

 English

 Spanish

Programming

 Matlab • 

 IDEA (Siemens Pulse Programming)

Didactic activity

Teaching

From 2022	Lecturer	National PhD in Artificial Intelligence PhD course on AI in medical image analysis.
From 2022	Lecturer	Sapienza University of Rome Postgraduate School, Course of Neurophysiology.
From 2015	Adjunct Professor	Sapienza and Tor Vergata Universities, Rome Courses 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

Mentorship

From 2006	Supervisor of undergraduate students	Sapienza University of Rome 4 bachelor's degrees in Physics, 8 Master degrees in Physics, 1 Master degree in Bioengineering
2010-2017	Supervisor of undergraduate students	Université Paris-Sud 11 5 bachelor's degrees in Physics
From 2009	Supervisor of postgraduate students	Sapienza University of Rome 2 Degrees at the Postgraduate school in Medical Physics, 1 PhD thesis in Biophysics and 4 PhD theses in Morphogenesis and tissue engineering
From 2009	Supervisor of postgraduate students	University Roma 3 1 PhD thesis in Physics

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 glycoenderived lactate shuttling to neurons: evidence from mathematical modeling. *Journal of Cerebral Blood Flow and Metabolism* 30 (2010), 1895–1904.