

Federico Giove

MRI Physicist

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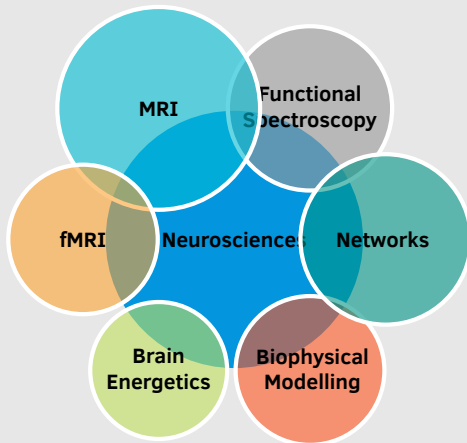
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Skills

Overview



Programming

0 LOC → 5000 LOC

IDEA (Siemens pulse programming)

Joomla

Matlab • L^AT_EX

Languages

0 → *Mothertongue*

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 2022 **Head of the Laboratory of Neurophysics and Neuroimaging (NaN)** Fondazione Santa Lucia

From 2020 **Coordinator of High Field MRI research** Fondazione Santa Lucia

2015 – **Senior researcher, tenured** Centro Ricerche Enrico Fermi
2021

2011 – **Senior postdoc fellow** Centro Ricerche Enrico Fermi
2015

2004 – **Postdoc fellow** Centro Ricerche Enrico Fermi, Sapienza University of Rome
2010

2001 – **PhD student** Sapienza University of Rome
2004

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.

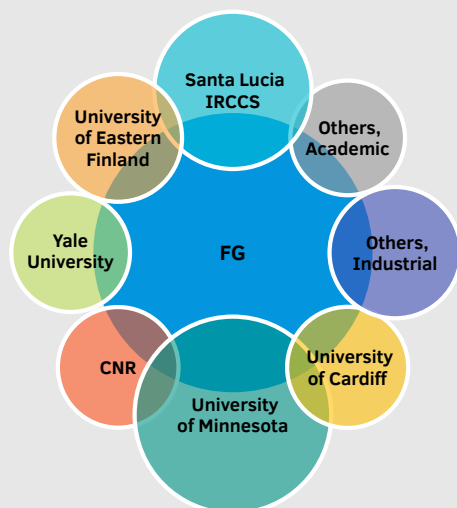
Production

- Coauthor of 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, 1924 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.
- **Member of the Board** (Collegio dei Docenti) of the PhD School in Morphogenesis and Tissue Engineering, from XXXIII cycle, Sapienza University of Rome.
- **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: April 27, 2023

Teaching

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

Grants (last 5 years)

2023 – 2025	Co-PI “Development of advanced MRI methods and of tailored signal processing for the quantitative characterization of neurodegenerative diseases through novel biomarkers identification”. 1000000 €	Ministry of Health PNRR-MAD-2022
2021 – 2023	Coordinator and PI “FISASMEM — Physiology of aging: development of quantitative MRI methods”. 149614 €	Regione Lazio POR-FESR 2014–2020
2020 – 2022	Coordinator and PI “NBP — Development of a collaborative platform for advanced neuroimaging methods”. 379832 €	Regione Lazio POR-FESR 2014–2020
2020 – 2023	Investigator “VEROSH — Virtual ExploRation Of Science History”. 73840 €	Regione Lazio DTC Fase 1
2019 – 2021	Investigator “ISIS@MACH — Composite Materials ISIS Hub”. 642335 €	Regione Lazio POR-FESR 2014–2020
2015 – 2019	Coordinator and PI “MICROBRADAM — Advanced MR methods for characterization of microstructural brain damage”. 540000 €	H2020 MSCA-RISE 691110
2015 – 2018	PI “PAMINA — Platform for Integrated and Multimodal Analysis in Applied Neuroscience”. 862000 €	Regione Lazio POR-FESR 2014–2020

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