

Personal Information

Name: Giovanni Pasini

Email: pasini.giovanni97@gmail.com

Date of Birth: July 25, 1997

Nationality: Italian

Work Experience

June 2025 – Present: Associate Collaborator, Istituto Nazionale di Fisica Nucleare – Laboratori Nazionali del Sud (INFN-LNS), Catania, Italy. Support research in radiomics and artificial intelligence applied to medical imaging within the AIM_MIA project.

January 2023 – Present: Associate Collaborator, National Research Council (CNR), Institute of Bioimages and Complex Biological Systems (IBSBC-CNR), Cefalù, Italy. Research in radiomics and artificial intelligence applied to medical imaging within the BIS project.

May 2022 – January 2023: Research Collaborator, IBSBC-CNR, Cefalù, Italy. Developed and implemented matRadiomics, a complete radiomics workflow software for image visualization, segmentation, biomarker extraction, feature selection, and AI model building.

Education and Training

PhD in Industrial and Management Engineering (2022–2025), Department of Mechanical and Aerospace Engineering (DIMA), Sapienza University of Rome, in collaboration with CNR-IBSBC. Focus on artificial intelligence and radiomics for clinical decision support in oncology and neurodegenerative diseases. Visiting PhD at Universidad de Sevilla for research on radiotherapy and AI-based dose prediction.

MSc in Biomedical Engineering (2019–2022), Sapienza University of Rome, 110/110 cum laude. Thesis on the design and implementation of a complete radiomics framework. Skills: C, Matlab, Python, biomedical signal processing, and medical imaging.

BSc in Clinical Engineering (2016–2019), Sapienza University of Rome, 108/110. Thesis on the effect of mechanical load on bone structure in obese pediatric patients.

Classical High School Diploma (2011–2016), Liceo Classico Eugenio Montale, 94/100.

Selected Publications

1) Stefano, A.; Bini, F.; Giovagnoli, E.; Dimarco, M.; Lauciello, N.; Narbonese, D.; Pasini, G.; Marinozzi, F.; Russo, G.; D'Angelo, I. Comparative Evaluation of Machine Learning-Based Radiomics and Deep Learning for Breast Lesion Classification in Mammography. *Diagnostics* 2025, 15, 953. <https://doi.org/10.3390/diagnostics15080953>

2) Bauckneht, M., Pasini, G., Di Raimondo, T. et al. [18F]PSMA-1007 PET/CT based radiomics may help enhance the interpretation of bone focal uptakes in hormone-sensitive prostate cancer patients. *Eur J Nucl Med Mol Imaging* 52, 2076–2086 (2025). <https://doi.org/10.1007/s00259-025-07085-6>

3) Pasini, G., Stefano, A., Mantarro, C. et al. A Robust [18F]-PSMA-1007 Radiomics Ensemble Model for Prostate Cancer Risk Stratification. *J Digit Imaging. Inform. Med.* 38, 1388–1402 (2025). <https://doi.org/10.1007/s10278-024-01281-w>

4) Pasini, G.; Bini, F.; Russo, G.; Comelli, A.; Marinozzi, F.; Stefano, A. matRadiomics: A Novel and Complete Radiomics Framework, from Image Visualization to Predictive Model. *J. Imaging* 2022, 8, 221. <https://doi.org/10.3390/jimaging8080221>

5) Pasini, G.; Russo, G.; Mantarro, C.; Bini, F.; Richiusa, S.; Morgante, L.; Comelli, A.; Russo, G.I.; Sabini, M.G.; Cosentino, S.; et al. A Critical Analysis of the Robustness of Radiomics to Variations in Segmentation Methods in 18F PSMA-1007 PET Images of Patients Affected by Prostate Cancer. *Diagnostics* 2023, 13, 3640. <https://doi.org/10.3390/diagnostics13243640>

Languages

Italian: Native

English: Excellent (C1 Certificate, 2016)

Spanish: Good

Technical Skills

Proficient in Microsoft Office and Linux systems.

Programming: Python, Matlab, C#.

Experience with TensorFlow, Keras, and PyTorch for AI in medical imaging.

Soft Skills

Curiosity, Problem Solving, Teamwork, Communication, Public Speaking, Empathy, Critical Thinking, Analytical Skills.

Additional Information

Driving Licenses: B and A2.

European Patent Office Certificate: 'Create–Protect–Innovate: Bringing Ideas to Market (Entry Level)'.