

PERSONAL INFORMATION **Marco Muzi**STUDIES APPLIED FOR **Doctor of Philosophy (Applied Physics, Neuroscience)**

WORK EXPERIENCE

- 03/2017–07/2017 **Teaching assistance in Electrical Engineering**
Campus Bio-medico University of Rome, Rome (Italy)
Circuit theory tutoring.
- 17/10/2016–Present **Secondary education teaching**
ITIS Galilei, Rome (Italy)
Substitute teacher for the courses:
■ Informatics
■ Control Systems
- 01/10/2015–29/02/2016 **Research and development**
Department: Information, Electronic and Telecommunications Engineering (DIET)
Via eudossiana 18, 00184 Rome (Italy)
Winner of a scholarship for the research topic "Design of measuring probes for the estimation of the dielectric permittivity of cell cultures". Project cofinanced by DIET and the Italian Space Agency (ASI).
Main tasks:
Design of measuring probes for biological samples complex dielectric permittivity measurement in liquid and solid dilute suspension.
Type of contract: "*Borsa di studio*"
Business or sector Academic research and development
- 01/10/2014–01/10/2015 **Research and development**
Department: Information, Electronic and Telecommunications Engineering (DIET)
Via Eudossiana 18, 00184 Rome (Italy)
Winner of a fellowship for the research topic: "Methods and models for biomass estimation through dielectric spectroscopy". Project cofinanced by DIET and the Italian Space Agency (ASI).
Main tasks:
Bibliographic study of the scientific literature; Development and validation of models and methods for the biomass and cell morphology estimation from complex dielectric spectrum measurements and its validation through commercial and self-made softwares.
Type of contract: "*Assegno di ricerca*"
Business or sector Academic research and development
- 01/04/2010–30/07/2010 **Computer programmer**

VIACOM s.r.l.
Via Vincenzo Lamaro, 21, 00173 Rome (Italy)
Main tasks: C-embedded programmer for automotive applications.

Business or sector Automotive, Embedded Systems

EDUCATION AND TRAINING

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- 14/04/2014–17/04/2014 **Leaky waves and periodic structures for antenna applications**
University of the Studies of Rome "La Sapienza", Roma (Italy)
Study and design techniques for periodic and leaky waves structures.
- 24/03/2014–28/03/2014 **Diagnostic and Microwave Imaging**
University of the Studies of Trento, Madonna di Campiglio (Italy)
Electromagnetic imaging and field inversion.
- 29/07/2013–02/08/2013 **Scientific Computing in MATLAB : Module 2: Parallel Computing with MATLAB and introduction to the main Toolbox**
University of the studies of Palermo, Palermo (Italy)
Training on Matlab Parallel toolbox and notions on image processing and statistical toolbox.
- 18/04/2011–21/04/2011 **The tool-kit of Cognitive Neuroscience 2011: advanced data analysis and source modeling of EEG and MEG data**
Donders Institute for Brain, Cognition and Behaviour, Nijmegen (Netherlands)
Entry level course on EEG/MEG signals and data with FieldTrip matlab toolbox and pipelines.
- 01/01/2011–31/12/2013 **Ph.D program on: "Functional Neuroimaging: from molecular biology to the cognitive science"**
University of the Studies of Chieti-Pescara "G. d'Annunzio", Chieti (Italy)
Research topic:
 - MEG inverse problem solver algorithms, with a particular attention to the minimum-norm and bayesian approach to the problem;
 - Development and optimization of L2,1 mixed norm regularized minimum-norm algorithms.Side activities:
 - Teaching assistant in informatic and physics courses for medicine students (210 hours in 3 years)
- 01/10/2009–19/04/2010 **2nd level post-degree Master in "Scientific Computing"** Final mark: 110/110
cum Laude
Università degli Studi di Roma "La Sapienza", Roma (Italy)
Numerical methods and models for integro-differential equations resolution and signals/images processing.
Parallel and efficient algorithms design in C and Matlab.
The topic of the final dissertation was on "2D Discrete Wavelet Transform implementation on CUDA architectures in Matlab environment".
- 01/01/2006–09/03/2009 **Master's degree in Biomedical Engineering** Final mark: 108/110
University of the Studies of Rome "La Sapienza", Rome (Italy)
Main courses:

- Optimization of control systems;
- Identification and filtering in dynamic systems;
- Biomedical instrumentation;
- Biomedical signals elaboration.

Thesys title: "Feasibility study of a microwave heater for humanitarian demining"

01/09/2002–18/02/2006

Bachelor's degree in Clinical Engineering

Final mark: 101/110

Univesity of the Study of Rome "La Sapienza", Rome (Italy)

Main courses:

- Automatic controls;
- Signal theory;
- Electronics;
- Measurement systems.

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)

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

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

Driving licence B

ADDITIONAL INFORMATION

Honours and awards

2014: **Young scientist award**, released by *International Union of Radioscience General Assembly and Scientific Symposium* commission.

2010: **MATEMATICA ED INNOVAZIONE** award, released by *Department of Base Science Applied to Engineering (SBAI) University of Rome "La Sapienza"*

Affiliations

University of the Study of Rome "La Sapienza": *Advanced Electromagnetics* teaching assistant
MeMoCS: ordinary member

Publications

[Related document\(s\)](#): Error: Reference source not found, PUBLICATION_LIST.pdf

Trattamento dei dati personali

For Italy: **Autorizzo il trattamento dei miei dati personali ai sensi del Decreto Legislativo 30 giugno 2003, n. 196 "Codice in materia di protezione dei dati personali"**.

For other countries: **I authorize the use of my personal data according to applicable law.**

ANNEXES

- PUBLICATION_LIST.pdf

PUBLICATION_LIST.pdf **MARCO MUZI PUBLICATIONS LIST**

- 2017** A. Macchia, F. Mangini, S. A. Ruffolo, M. Muzi, L. Rivaroli, M. Ricca, ..., F. Frezza, (2017). A novel model to detect the content of inorganic nanoparticles in coatings used for stone protection. " *Progress in Organic Coatings 106 (2017): 177-185.*
- 2016** F. Mangini, M. Muzi, N. Tedeschi, "Cellular volume fraction estimation through complex dielectric permittivity measurement and Monte Carlo algorithm", Proceedings of: XXI RINEM, September 12th - 14th, 2016, Parma, Italy.
- P.P. Di Gregorio, V. Ferrara, F. Frezza, F. Mangini, M. Muzi, "Electromagnetic interaction with a misaligned broken pipe", Proceedings of: XXI RINEM, September 12th - 14th, 2016, Parma, Italy.
- M. Muzi, A. Veroli, A. Buzzin, B. Alam, G. de Cesare, D. Caputo, L. Maiolo, M. Marrani, F. Frezza, "Nano-sieve filter for microfluidic sensing on lab-on-chip", Proceedings of: NanoInnovation 2016, September 21st - 23th, Rome, Italy.
- 2015** F. Frezza, F. Mangini, M. Muzi, E. Stoja, (2015). In silico validation procedure for cell volume fraction estimation through dielectric spectroscopy. *Journal of Biological Physics*, 1-12.
- S. Chicarella, V. Ferrara, F. Frezza, F. Mangini, M. Muzi, P.Simeoni, N. Tedeschi. "Electromagnetic scattering in dissipative materials", Proceedings of: Third General Meeting of the COST Action TU1208 "Civil Engineering Applications of Ground Penetrating Radar", March 4th-6th, London, England.
- P.P. Di Gregorio, F. Frezza, F. Mangini, M. Muzi, N. Tedeschi. "Detection of Two Buried Cross Pipelines by Observation of the Scattered Electromagnetic Field", Proceedings of: EGU General Assembly, April 12th-17th, 2015, Vienna, Austria.
- 2014** M. Muzi. "REwheighted, STandardized, Recursively Iterated Cerebral Tomography Algorithm (RESTRICTA)", Proceedings of: XX RINEM, September 10th-14th, 2014, Padua, Italy.
- M. Muzi, F. Mangini, E. Stoja. "Hierarchical in silico validation procedure for biomass estimation techniques based on dielectric spectroscopy", Proceedings of: XX RINEM, September 10th-14th, 2014, Padua, Italy.
- M. Muzi, V. Pizzella. "Estimation of neuromagnetic sources using a REwheighted, STandardized, Recursively Iterated Cerebral Tomography Algorithm (RESTRICTA)", proceedings of: URSIGASS 2014, August 16th-23th, 2014, Beijing, China.
- 2013** F. Frezza, F. Mangini, M. Muzi, C. Santini, E. Stoja, N. Tedeschi. "Sphygmoc stress diagnosis in arterial blood vessels by electromagnetic radiation scattering", Proceedings of: ANBRE 2013, August 25th - 28th, 2013, Seoul, South Korea.
- 2012** M. Muzi. "Resolution of MEG inverse problem via reweighted L2,1 minimization algorithm", Proceedings of: XIX RINEM, September 10th - 14th, 2012, Rome, Italy.