
Curriculum Vitae Dr. Marta Parazzini

PERSONAL DATA

Name: Marta Parazzini
Date of birth: 13/05/1975
Nationality: Italian
Email: marta.parazzini@ieiit.cnr.it

EDUCATION

05/2004 Ph.D. degree in Bioengineering at the Polytechnic of Milan, Milan, Italy.
05/2004 European Doctorate at the Polytechnic of Milan, Milan, Italy.
06/2000 M Sc. degree in Biomedical Engineering at the Polytechnic of Milan, Milan, Italy.

EMPLOYMENT AND RESEARCH EXPERIENCE

09/2013-Today Research Scientist at the Institute of Electronics, Computers and Telecommunication Engineering, (Milan Unit) of the National Research Council (IEIT-CNR).
02/10-08/2013 Research Scientist at the Institute of Biomedical Engineering, (Milan Unit) of the National Research Council (ISIB-CNR).
12/05 - 01/10 Tenured Research at the Institute of Biomedical Engineering (Milan Unit) of the National Research Council (ISIB-CNR).
06/05 - 12/05 Research Fellowship (2 years) at the Institute of Biomedical Engineering (Milan Unit) ISIB-CNR for the European project EMFnEAR "Exposure at UMTS electromagnetic fields: study on potential adverse effects on hearing" (2004-2007, 2004127);
06/03 - 05/05 Research Fellowship at the Institute of Biomedical Engineering (Milan Unit) ISIB-CNR for the European project GUARD "Potential Adverse Effects of GSM Cellular Phones on Hearing"- FP5, Quality of life and management of living resources (2002-2004, Contract N. QLK4-CT-2001-00150);
03/03 - 05/03 Grant from the National Research Council (6 months) at the University of Southampton, Hearing and Balance Centre (UK), for the study of the effects of GSM cellular phones electromagnetic fields on hearing (Call n. 203.22, 26 February 2002);
09/02 - 12/02 Grant from the European Doctorate in Sound and Vibration Studies Marie Curie Multipartner Training Site (3 months) at the University of Southampton, Hearing and Balance Centre (UK), for the study of otoacoustic emissions and small changes in auditory function;
09/00- 05/01 Grant from the CNR (1 year) at the Center of Biomedical Engineering (now Institute of Biomedical Engineering Milan Unit, ISIB CNR) for studies in the field of the "Development of new method for modelling and treatment of 3D surfaces in the biomedical field".

SKILLS AND RESEARCH INTERESTS

- Non-invasive brain and spinal stimulation (e.g. Transcranial Direct Current Stimulation, transcutaneous spinal Direct Current Stimulation, Transcranial Magnetic Stimulation, Cortical Stimulation)
- Stochastic and deterministic EMF dosimetry techniques
- Medical device safety (i.e. electrical hazards, heating damage, and safe stimulation protocols)
- Design and optimization by computational electromagnetic techniques of biomedical technologies that use EMF for diagnostic and therapeutic applications
- Computational modeling of the interactions between EMF and biological system
- EMF effects on biological system
- Experimental protocols definition and data collection
- Biomedical signal processing

TEACHING AND TUTORING ACTIVITIES

- 2001-Today Lecturer for the course of "Bioelettromagnetismo e strumentazione biomedica" (Bachelor Degree in Biomedical Engineering), "Bioelettricità e Bioelettromagnetismo I" (Bachelor Degree in Biomedical Engineering) and "Bioingegneria dei sistemi neurosensoriali" (Master Degree in Biomedical Engineering), at the Biomedical Engineering Faculty, Polytechnic of Milan.
- 2004-Today Students supervisor for master and bachelor degree at the Polytechnic of Milan
- 2008-Today Member of Boards of Examiners for the allocation of research fellowship at CNR
- 2011-Today PhD Students supervisor at the Polytechnic of Milan
- 2011-Today Supervisor of research fellows for the topic "Electromagnetic fields and health: safety and medical applications" at IEIIT-CNR
- 2015 Supervisor of research fellow for STSM in the framework of COST action

COLLABORATION IN RESEARCH PROJECTS FINANCED BY THE EU

- "CUPIDO - Cardio Ultraefficient nanoParticles for Inhalation of Drug prOducts" H2020 Grant Agreement N. 720834 (2017-2021)
- COST Action BM1309 "European network for innovative uses of EMFs in biomedical applications (EMF-MED)" (2014-2018).
- "GERONIMO - Generalised EMF Research using Novel Methods - an integrated approach: from research to risk assessment and support to risk management", - European Commission, 7th Framework Programme, Environment ((2014-2018, Grant agreement 603794).
- "ARIMMORA - Advanced Research on Interaction Mechanisms of electroMagnetics exposure with Organisms for Risk Assessment" - FP7, Environment (2011-2014, Contract N. 282891).
- "EFHRAN - European Health Risk Assessment Network on Electromagnetic Fields Exposure", European Commission Directorate Executive Agency for Health and Consumers (EAHC) (2009-2012, Contract N. 20081106).
- "RISK ASSETs - Risk Assessment and Management. European Training Programme" European Commission - Executive Agency for Health and Consumers (EAHC), EC Health Programme (2008-2011)
- "AHEAD III - Assessment of Hearing in the Elderly: Aging and Degeneration - Integration through Immediate Intervention"- FP7, Health (2008-2011, Contract N. 2008359
- "EMF-NET: Effects of the exposure to electromagnetic fields: from science to public health and safer workplace", European Commission 6th Framework Programme (2004-2008, Contract N. SSPE-CT-2004-502173).
- "EMFnEAR - Exposure at UMTS electromagnetic fields: study on potential adverse effects on hearing" -DG Sanco (2004-2007, Contract N. 2004127)
- "GUARD - Potential Adverse Effects of GSM Cellular Phones on Hearing"- FP5, Quality of life and management of living resources (2002-2004, Contract N. QLK4-CT-2001-00150)

COLLABORATION IN RESEARCH PROJECTS (NOT FINANCED BY THE EU)

- "AMPERE"- Advanced MapPing for the residential ExposuRE to RF- EMF sources - financed by Anses (2016-2020)
- "ELFSTAT - In depth evaluation of children's exposure to ELF (40 - 800 Hz) magnetic fields and implications for health risk of new technologies"- financed by Anses (2015/01/202, 2015-2019)
- "Open ear amplification in tinnitus therapy", Research Contract with "La Fondazione Ascolta e Vivi" and in collaboration with GN ReSound A/S (Copenhagen; 2006-2008) (*Main Coordinator*).
- "Technology Platform for electroporation", Research Contract with IGEA S.p.a., Carpi (2009).

EDITORIAL ACTIVITY

- Topic Editor (together with A. Priori, Mario U. Manto and Marco Molinari) of the Research Topic: "Progress in transcutaneous DC stimulation for modulating functions in the cerebellum and spinal cord" in *Frontiers in Human Neuroscience*.
- Co-editor of one book (IV Convegno Nazionale Interazioni tra Campi Elettromagnetici e Biosistemi, editor: Salvatore Caorsi, Paolo Ravazzani, Marta Parazzini, CNR Edizioni, ISBN 978 88 8080 208 2, pp. 112)

-
- Editorial Board Member of the International Journal of Neurology Research.
 - Editorial Advisory Board Member of “Neuroscience and Biomedical Engineering”
 - Associate Editor of “Frontiers in Public Health” - Speciality "Radiation and Health"
 - Editorial Advisory Board Member of “The Open Biomedical Engineering Journal”

REVIEWER ACTIVITY

Papers: Journal of Neural Engineering, Neuroimage, IEEE Transaction on Biomedical Engineering, Bioelectromagnetics, Radiation Research, Experimental Brain Research, BioMed Central, Frontier in Neuroscience, Frontiers in System Neuroscience, Neuroscience Letter, Mathematics and Computers in Simulation, International Journal of Audiology, American Journal of Audiology, Ear and Hearing, Industrial Health, Australasian Physical & Engineering Sciences in Medicine; Measurement Science and Technology,...;

Grants: reviewer for the call H2020-FETOPEN-1-2016-2017-RIA_11-05-2016 of the European Commission; ZonMw Programme Electromagnetic Fields and Health of the Government and the Dutch Ministry of the Environment (2007); Medical Research Council, Neurosciences & Mental Health Board (UK, 2011), German Mobile Telecommunication Research Programme (2007); Italian Ministry of Education, University and Research, Future in Research Programme (2013); Evaluator Panel "Information and Communication Technologies (ICT) for the first Call Sustainable Growth Fund of the Ministry of Economic Development (2014-2015); University Research Board dell' American University of Beirut (2015), Call PRIN 2015 of the Italian Ministry of Education, University and Research; French National research Agency (ANR) generic call (2017).

WORKING GROUP AND ASSOCIATIONS

- CNR Representative in CEI Technical Committee CT106 "Human exposure to electromagnetic fields (from May 2014)
- Elected Member of the Council of the European BioElectromagnetics Association (EBEA)
- Member of the Board of the Italian National Group of Bioengineering (GNB)
- Member of the Italian Group of Neuromodulation
- IEEE Institute of Electrical and Electronics Engineers Member
- IEEE EMBS Engineering in Medicine and Biology Society Member
- Member of the Inter-University Centre for the Study of Interactions between Electromagnetic Fields and Biosystems (ICEMB).

INVITED LECTURES/TALKS

- April 15, 2016: “Review on modelling and technical aspects in non-invasive brain stimulation tools”, lecture at the International School of Bioelectromagnetics «Alessandro Chiabrera» VIII Course: Electromagnetic Fields and the Nervous System: Biological Effects, Biophysical Mechanisms, Methods and Medical Applications. Director of the Course: Vincenzo di Lazzaro and Bernard Veyret.
- March 14, 2016: Modeling of the induced electric field in deep magnetic stimulation in anatomical head models, IEEE Advances in Magnetics AIM 2016, Bormio (Invited session).
- October 15, 2015: “Computational electromagnetics for human exposure assessment at low and high frequency”, Seminar “Electromagnetic fields: measurements and biological effects”, Ordine degli Ingegneri della Provincia di Milano.
- February 17, 2014: “Computational modeling studies for non-invasive brain stimulation”, Day Project presentation of rewards "Metrology in support of diagnostic and therapeutic techniques based on the use of ultrasound and electromagnetic fields", National Institute of Metrological Research (INRIM), Turin
- October 11, 2012: “Evaluation of electric field and current density generated by transcranial direct current stimulation or spinal transcutaneous direct current stimulation based on realistic body modelling” 7th International Workshop on Biological Effects of Electromagnetic Fields, Malta.
- September 19, 2012: “Role of human variability on the estimation of the electric field and of the current density during transcranial direct current stimulation”. International Symposium on Electromagnetic Compatibility (EMC EUROPE), Roma. (Special Session).

-
- October 12, 2009: "Interview of the month" together with Paolo Ravazzani (CNR) published on Radiation Research Society Podcast about the paper Parazzini et al., "Effects of UMTS Cellular Phones on Human Hearing: Results of the European Project "EMFnEAR", Rad. Res., 172(2), 244-251,2009 (<http://dx.doi.org/10.1667/RR1679.1>)
 - May 28, 2007 Invited Lectures: "Campi Elettromagnetici e Sistema Uditivo, at the Università Campus Bio-Medico, Rome, Biomedical Engineering Faculty, course "Interazione Bioelettromagnetica", (Master Degree),.
 - June 3, 2006: "Field distribution and SAR evaluation in human inner ear model exposed to external sources of electromagnetic fields", Special Session "Bioelectromagnetics and hearing" NHS2006, Cernobbio, Como (Italy).

SPECIAL SESSIONS ORGANIZER

- Co-organizer (together with Dr. A. Peterchev) of the Invited Session: "Noninvasive brain stimulation: modeling, techniques and mechanisms", 37th Annual International IEEE EMBS Conference of the IEEE Engineering in Medicine and Biology Society, Milan, Italy, August 26, 2015.

CONGRESS ORGANIZER

- Co-organizer (together with Dr. Salvatore Coarsi e Dr. Paolo Ravazzani) of the IV National Congress "Interaction between electromagnetic fields and Biosystems, Milan, Italy, July 4-6, 2016.

COLLABORATION IN CONGRESSES AND SPECIAL SESSIONS ORGANISATION

- EBEA 2011 - Special Session on Risk, Safety Standards & Policy, Roma, February 21, 2011;
- International Conference on Adult Hearing Screening AHS 2010 at Villa Erba, Como, Italy, (organized by the Institute of Biomedical Engineering ISIB CNR, in the framework of the project EU AHEAD III)
- EFAS 2010 - Structured Session: the European project AHEAD III, The 10th European Federation of Audiology Societies Congress EFAS in Warsaw, 22-25 June, 2011.
- International Workshop "Current Trends in Health & Safety Risk Assessment of Work Related Exposure to EMFs" (February 14-16 2007, Milan), organized by ICNIRP, WHO and EU EMF-NET project.
- International Conference on Newborn Hearing Screening (NHS 2002, NHS 2004, NHS 2006, NHS 2008, NHS 2010) at Villa Erba, Como, Italy, organized by the Institute of Biomedical Engineering ISIB CNR)
- Special Session on "Potential effects of cellular phones on the hearing system", at the 6th International Congress of the European Bioelectromagnetics Association (EBEA), 13 -15 November 2003 Budapest.

PUBLICATIONS

H-index: 18 (on Scopus, last access: May 9, 2017)

OTHER INFORMATION

I qualified as university associate professor - competitive sector 09 / G2 - Bioengineering, up to 10/12/2020.