Fabio LA FORESTA, Ph.D.

Associate Professor of Electrical Engineering

(update January 2017)

Fabio La Foresta received his MS Degree (summa cum laude) in Electronic Engineering at the University of Messina in 1998 with the thesis "Study of the Electromagnetic Diffraction Phenomena through the Finite Element Method". In 1998 he has been a visiting research at the French Research Institute ISEN to develop the project "Design and Simulation of a fuzzy control system". From 2000 to 2003 he has been a PhD fellow in "Advanced Technologies for Computer Science" at the University of Messina. From 2003 to 2005 he has been a Post-Doctoral Researcher in Biomedical Engineering at the *Mediterranea* University of Reggio Calabria. In 2004 he received his PhD from the University of Messina with the dissertation: "Advanced Algorithms for Multidimensional and Multiresolution Analysis: Independent Component Analysis, Wavelet Transform and Biomedical Signal Processing". From 2005 to 2016 he has been Assistant Professor of Electrical Engineering at the *Mediterranea* University of Reggio Calabria. In 2012 he receives the National Scientific Qualification as Associate Professor of Electrical Engineering. Since 2016 he is Associate Professor of Electrical Engineering at the *Mediterranea* University of Reggio Calabria. Since 2006 he conducts his teaching activity in the "Laurea, BS" and "Laurea Magistrale, MS" Courses in Engineering at *Mediterranea* University of Reggio Calabria. Fabio La Foresta conducts his research activity in the following areas: Circuits and System for Information extraction, processing and transmission; Circuits and System based on Artificial Intelligence; Electromagnetic Characterization of nano and micro materials. The specific topics are: Advanced systems for the study of the EEG spatio-temporal dynamics with applications on epileptic seizures prediction and Early Detection of Alzheimer; Classification of sEMG, ECG, fECG and EEG by Multiresolution and Multidimensional Analysis; Classification of EEG signals corrupted by superimposed Magnetic Resonance Field; Modeling of pathologic ECG signals; Non-Destructive Testing; Since 2006, he is Member of the Institute of Electrical and Electronic Engineers (IEEE). He is author/co-author of about 100 papers and he is reviewer of international journals and conferences.

CURRENT POSITION

Fabio La Foresta is Associate Professor of Electrical Engineering and since 2012 he is with the Department of Civil, Energy, Environmental and Materials Engineering at the *Mediterranea* University of Reggio Calabria (I).

BIBLIOMETRIC INDICATORS *(last 15 years)*

Citations: **568**
h-index: **14**
Indexed journal papers: **30**

FIELDS OF RESEARCH

Electrical Engineering, Biomedical Signal and Image Processing, Artificial Intelligence, Neural Networks, Multidimensional and Multiresolution Analysis, Non Linear time series Prediction and Modeling, Nonlinear Dynamics, Computational Neural Engineering, Non-Destructive Testing.

EDUCATION

1998 *Laurea* Electronic Engineering Degree *summa cum laude*, University of Messina (I).
1998 Stage at ISEN in Simulation and Design of Fuzzy Control Systems, Lille (F).
1999 Training Course for Navy Officers at the Naval Academy of Livorno (I).
1999 Engineer Profession Qualification, University of Messina (I).
2000 National Teaching High School Qualification in Electrical Sciences.
2004 Ph.D. Degree in Advanced Technologies for Information Engineering, University of Messina (I).
2012 National Scientific Qualification as Associate Professor of Electrical Engineering.

UNIVERSITY POSITIONS

2000-2003 PhD Student in "Advanced Technologies for Information Engineering", University of Messina (I).
2003-2005 Post-doctoral Researcher in Biomedical Engineering, *Mediterranea* University of Reggio Calabria (I).
2005-2016 Assistant Professor of Electrical Engineering, *Mediterranea* University of Reggio Calabria (I).
2016-todate Associate Professor of Electrical Engineering at the *Mediterranea* University of Reggio Calabria (I).

Fabio LA FORESTA, Ph.D.

Associate Professor of Electrical Engineering

(update January 2017)

UNIVERSITY SERVICES

2001-2002 Committee Member of the 13th National Meeting of Electrical Engineering, University of Messina (I).
2001-2005 "Cultore della Materia S.S.D. ING-IND/31" at the Faculty of Engineering, University of Messina (I).
2006-2008 Ph.D. Committee Member Biomedical Engineering, *Mediterranea* University of Reggio Calabria (I).
2008-2012 Ph.D. Committee Member Information Engineering, *Mediterranea* University of Reggio Calabria (I).
2010-todate Delegate to the relationship with the CISIA, *Mediterranea* University of Reggio Calabria (I).
2006-todate Technical Coordinator of the *NeuroLab* Laboratory, *Mediterranea* University of Reggio Calabria (I).
2007-todate Committee Associate Member Engineer Qualification, *Mediterranea* University of Reggio Calabria (I).
2013-todate Ph.D. Committee Member Civil and Safety Engineering, *Mediterranea* University of Reggio Calabria (I).
2013-todate Committee President Orientation Activity, DICEAM *Mediterranea* University of Reggio Calabria (I).
2014-todate Coordinator of the TFA Course in Electrical Engineering, *Mediterranea* University of Reggio Calabria (I).
2015-todate Committee President TFA in Electrical Engineering, *Mediterranea* University of Reggio Calabria (I).
2015-todate Committee Member of the Admission Test, *Mediterranea* University of Reggio Calabria (I).
2015-todate Coordinator of the Academic Tutoring, DICEAM *Mediterranea* University of Reggio Calabria (I).

TEACHING ACTIVITY

2006-2015 Professor of Circuits and Algorithms for Signal Processing, *Mediterranea* University of Reggio Calabria (I).
2013-2014 Professor of Neuromorphic Sensors and Circuits, Post-Degree Master Course, MAMETEK (Biomedical Engineering), Medalics, *Dante Alighieri* University of Reggio Calabria (I).
2013-todate Professor of Electrical Engineering, *Energy Efficiency* ITS of Reggio Calabria (I).
2013-todate Professor of Fundamentals of Electrical Energy and Electrical Networks for Energy, *Mediterranea* University of Reggio Calabria (I).
2006-todate Professor of Electrical Engineering, *Mediterranea* University of Reggio Calabria (I).

RESEARCH ACTIVITY

2014-todate Unity Leader in National Program GR-2011-02351397 "System for the Automatic Artifact Detection and Removal from Electroencephalographic Signals", Italian Ministry of Health.
2007-2013 Unity Member in the National Operational Program for Research and Competitiveness PON04a2_F "AQUASYSTEM".
2007-2013 Unity Member in the National Operational Program for Research and Competitiveness PONa3_00308 "Wind Generator with Magnetic Levitation (GELMINCAL)".
2007-2013 Unity Member in the National Operational Program for Research and Competitiveness PON01_01869 "Innovative Materials and Technologies for the territory and environmental protection (TEMADITUTELA)".
2005-2007 Unity Member in Research Program of Italian MIUR PRIN 2004 "Applications of Methods of Diagnostics Electromagnetic (AMDE)".
2010-2011 Coordinator of the Program of Scientific Research RdB2010 "Multiresolution and Multidimensional Analysis for EEG Artefact Removal", *Mediterranea* University of Reggio Calabria (I).
2009-2010 Coordinator of the Program of Scientific Research RdB2009 "ICA Algorithms for EEG processing", *Mediterranea* University of Reggio Calabria (I).
2008-2009 Coordinator of the Program of Scientific Research RdB2008 "Multiresolution Analysis for biomedical data processing", *Mediterranea* University of Reggio Calabria (I).
2007-2008 Unity Member of the Program of Scientific Research RdB2007 "Acquisition and processing of signals recorded from non-destructive testing", *Mediterranea* University of Reggio Calabria (I).
2006-2007 Unity Member of the Program of Scientific Research RdB2006 "Linear and non linear methods for epileptic seizures prediction from EEG signals", *Mediterranea* University of Reggio Calabria (I).
2004-2006 Unity Member of the Research Project PRA2004 (cod. ORME040209) "Advanced techniques for biomedical data processing", University of Messina (I).
2003-2005 Unity Member of the Research Project PRA2003 (cod. ORME033980) "Advanced non linear models for the study of magnetic hysteresis", University of Messina (I).
2002-2004 Unity Member of the Research Project PRA2002 (cod. ORME028230) "Field Computation for applications on magnetic hysteresis", University of Messina (I).
2001-2003 Unity Member of the Research Project PRA2001 (cod. CONO013570) "Model identification for hysteretic system", University of Messina (I).