Curriculum Prof. Alessandro Salvini

Alessandro Salvini è nato a Roma nel 1962.

Studi:
Ha conseguito la Laurea in Ingegneria Elettrotecnica con Lode e ha ricevuto una “Menzione di Merito” per la tesi svolta dal titolo: “Analisi di un generatore MHD attraverso un modello 3D a parametri concentrati non lineari”.
E’ abilitato alla professione di Ingegnere.

Ruoli Accademici Ricoperti:
Ricercatore:
Presso l’Università degli Studi “Roma Tre” e dall’ottobre 1994 all’ottobre 2001 ha ricoperto tale ruolo.
Professore Associato:
Dal Novembre 2001 al dicembre 2011 è stato Professore Associato nel SSD Elettrotecnica.
Professore Ordinario:
Dal 1 gennaio 2012 è Professore di Prima Fascia presso l’Università degli Studi Roma Tre.

Attività di Organizzazione e Supporto, organizzazione Congressi e referente di accordi internazionali:

Attualmente è membro, presso l’Università degli Studi “Roma Tre”:
1) della Facoltà di Ingegneria
2) del Consiglio di Corso di Studi in Ingegneria Elettronica
3) del Dipartimento di Elettronica Applicata
4) del Collegio dei Docenti per il Dottorato dell’ Elettronica Biomedica dell’Elettromegnatismo e delle Telecomunicazioni.
Inoltre è
1) Responsabile del Laboratorio di Elettrotecnica del Dipartimento di Elettronica Applicata
2) Responsabile dell’Unità di “Roma Tre” in seno al Gruppo Nazionale di Coordinamemento di Elettrotecnica.
e in campo internazionale è membro:
1) dell’Institute of Electrical and Electronic Engineering (IEEE) dal 2002
2) dell’Institute of Compumag Society
3) dell’Institute of Magnetic Society
Ha organizzato due Workshop Internazionali sulle FEM (nel 2008 e 2010), e la Riunione annuale dei Ricercatori di Elettrotecnica (2005).
E’ il referente dell’accordo internazionale tra le Facoltà di Ingegneria di Roma Tre e della Okayama University (Japan).

Attività di Revisore ed Editoriali:

Ha svolto e svolge attività di revisore di articoli scientifici presso riviste internazionali quali:
IEEE Transactions on Magnetics,

IEEE Transactions on Neural Networks,
IEEE Transaction on Evolutionary Computation,
International journal of magnetism and magnetic materials,
COMPEL: The International Journal for Computation and Mathematics in Electrical and Electronic Engineering,
Journal of Computational and Applied Mathematics

Guest Editor per due special issue di COMPEL: The International Journal for Computation and Mathematics in Electrical and Electronic Engineering (2009 e 2013)

Attività seminariale su invito all'estero:
Alessandro Salvini è stato professore invitato presso le seguenti università straniere:
• Okayama University – Japan nel Novembre 2008, (invito del Prof. Norio Takahashi, IEEE Fellow e Vice President of the International Compumag Society for Asia and Oceania) sul tema "Identification and Optimization for Hysteresis modeling based on soft computing and modern heuristics".
• Institut National des Sciences Appliquées de Lyon (INSA-Lyon) – France, invito del Prof. B. Allard dell'Electrical Enginering Department e membro dell'Ampere-Lab.

Attività didattica:

Svolge e/o ha svolto attività didattica per la Laurea e la Laurea Magistrale tenendo i corsi di:
1) Teoria dei Circuiti
2) Elettrotecnica
3) Circuiti non lineari
4) Sicurezza Elettrica
5) Circuiti e sistemi elettrici

Per gli studenti di Phd, tiene i corsi di:
1) Reti e tecnologie neurali
2) Sintesi delle reti

Attività Scientifica:

Svolge attività scientifica nei seguenti campi
1) Analisi e modelli per generatori MHD (dal 1993)
2) Comportamento elettromagnetico di materiali e dispositivi (dal 1995): risposta in frequenza di dispositivi multistrato e conduttori massicci.
3) Isteresi magnetica dinamica, con analisi basata su neural networks (dal 2000), Genetic Algorithms (dal 2001), soft-computing (dal 2003)
4) Neural Networks per segnali biologici (dal 2000)
5) Ottimizzazione attraverso Evolutionary Algorithms e modern heuristics di sistemi elettrici e apparati elettromagnetici (dal 2005)

Alessandro Salvini ha partecipato in questi anni a molti progetti di ricerca quali: MURST ex 60%, CNR, PRIN

E' autore di più di 90 lavori pubblicati su riviste internazionali e su proceedings di congressi internazionali.

English Version

Alessandro Salvini was born in Rome, Italy in 1962

He received the Electrical Engineering Master degree "Summa cum Laude" and he received from the Commission a "Mention of Merit" for his Thesis titled (in Italian) "Analysis of a MHD generator by a 3D lumped non-linear parameter model".
He is habilitated Engineer.
He was Assistant Professor in Electrical Engineering at University "Roma Tre" and he held this position from October 1994 to October 2001.
In November 2001 he became Associate Professor and, currently, he is full professor at University "Roma Tre".
He is member of:
1) the Faculty of Engineering
2) the Electronic Engineering Educational Council
3) the Applied Electronic Department
4) the Educational College of Academics for the PhD in: Biomedical Engineering, Telecommunications and Electromagnetism
Moreover, he is
1) Chief of the Electrotechnics Laboratory of the Applied Electronic Dept.
2) Scientific Coordinator of the Research Unit of "Roma Tre" in the Scientific Council of the National Group of Electrotechnics.
and in international field, he is member of the:
1) Institute of Electrical and Electronic Engineering (IEEE) from 2002
2) Institute of Compumag Society
3) Institute of Magnetic Society

He serves as reviwer for several scientific journals: IEEE Transactions on Magnetics, IEEE Transactions on Neural Networks, IEEE Transactions on Evolutionary Computation, COMPEL.
He has served as Guest editor for ntwo special issue of COMPEL in 2009 and 2013.

Alessandro Salvini has been visiting professor:
• Okayama University – Japan nel Novembre 2008, (invited by Prof. Norio Takahashi, IEEE Fellow e Vice President of the International Compumag Society for Asia and Oceania) for delivering a seminar titled: "Identification and Optimization for Hysteresis modeling based on soft computing and modern heuristics".
• Institut National des Sciences Appliquées de Lyon (INSA-Lyon) – France, invito del Prof. B. Allard dell'Electrical Enginering Department and member of

Ampere-Lab.

He is involved in the following listed Educational Activities for Graduated or Master students:
1) Circuit Theory
2) Eletrotechnics
3) Non-linear Circuits
4) Electric Safety
5) Electric Circuits and Systems

For Phd students:
1) Neural Networks and Technology
2) Syntesis of Networks

His main scientific interests are:
1) Analysis and Modelling of MHD generators (from 1993)
2) Electromagnetic behaviour of Materials and Devices (from 1995): frequency response of multilayer magnetic thin films and massive conductors
3) Magnetic Dynamic Hysteresis: Macromodels based on neural networks (from 2000), Genetic Algorithms (from 2001), soft-computing (from 2003)
4) Neural Networks for biological signals (from 2000)
5) Optimization by means of Evolutionary Algorithms and modern heuristics of Electrical and Electromagnetic Systems (from 2005)

Alessandro Salvini was involved in several Research Project like: MURST ex 60%, CNR, PRIN.
He is author of more than 90 papers published on International Journals or in Proceedings of International Conferences.

Pubblicazioni più recenti (dal 2009 al giugno 2013)				
1	in press	Coco S, Laudani A, Riganti Fulginei F, Salvini A (in stampa). Neural Fem approach for the analysis of hysteretic materials in unbounded domain. COMPEL, vol. 32, ISSN: 0332-1649		
2	in press	Coco S, Laudani A, Pulcini G, Riganti Fulginei F, Salvini A (in stampa). Optimization of multistage depressed collectors using fem and parallel algorithm Meteo. COMPEL, vol. 32, ISSN: 0332-1649		
3	2013	Fulginei F R, Laudani A, Salvini A, Parodi M (2013). Automatic and Parallel Optimized Learning for Neural Networks performing MIMO Applications. ADVANCES IN ELECTRICAL AND COMPUTER ENGINEERING, vol. 13, p. 3-12, ISSN: 1582-7445, doi: 10.4316/AECE.2013.01001		

4	2012	COCO S, LAudani A, Riganti FULGINEI F, SALVINI A (2012). Accurate design of Helmholtz coils for ELF Bioelectromagnetic interaction by means of continuous FSO. INTERNATIONAL JOURNAL OF APPLIED ELECTROMAGNETICS AND MECHANICS, vol. 39, p. 651-656, ISSN: 1383-5416, doi: 10.3233/JAE-2012-1524		
5	2012	F. RIGANTI FULGINEI, SALVINI A, M. PARODI (2012). Learning optimization of neural networks used for MIMO applications based on multivariate functions decomposition. INVERSE PROBLEMS IN SCIENCE & ENGINEERING, vol. 20, p. 29-39, ISSN: 1741-5977, doi: 10.1080/17415977.2011.629047		
6	2012	RIGANTI FULGINEI F, SALVINI A, PULCINI G (2012). Metric-topological-evolutionary optimization. INVERSE PROBLEMS IN SCIENCE & ENGINEERING, vol. 20, p. 41-58, ISSN: 1741-5977, doi: 10.1080/17415977.2011.624624		
7	2012	RIGANTI FULGINEI F, SALVINI A (2012). Neural Network Approach for Modelling Hysteretic Magnetic Materials under Distorted Excitations. IEEE TRANSACTIONS ON MAGNETICS, vol. 48, p. 307-310, ISSN: 0018-9464, doi: 10.1109/TMAG.2011.2176106		
8	2012	COCO S, LAUDANI A, RIGANTI FULGINEI F, SALVINI A (2012). Shape Optimization of Multistage Depressed Collectors by Parallel Evolutionary Algorithm. IEEE TRANSACTIONS ON MAGNETICS, vol. 48, p. 435-438, ISSN: 0018-9464, doi: 10.1109/TMAG.2011.2174035		
9	2012	S. COCO, A. LAUDANI, F. RIGANTI FULGINEI, SALVINI A (2012). TEAM PROBLEM 22 APPROACHED BY A HYBRID ARTIFICIAL LIFE METHOD. COMPEL, vol. 31, p. 816-826, ISSN: 0332-1649, doi: 10.1108/03321641211209726		
10	2012	COCO S, LAUDANI A, POLLICINO G, RIGANTI FULGINEI F, SALVINI A (2012). TWT MAGNETIC FOCUSING STRUCTURE OPTIMIZATION BY PARALLEL EVOLUTIONARY ALGORITHM. COMPEL, vol. 31, p. 1338 -1346, ISSN: 0332-1649, doi: 10.1108/03321641211246347		
11	2009	RIGANTI FULGINEI F, SALVINI A (2009). Hysteresis model identification by the Flock-of-Starlings Optimization. INTERNATIONAL JOURNAL OF APPLIED ELECTROMAGNETICS AND MECHANICS, vol. Volume 30, Number 3-4, p. 321-331, ISSN: 1383-5416, doi: 10.3233/JAE-2009-1032		
N°	Anno			
12	2010	RIGANTI FULGINEI F, SALVINI A (2010). The Flock of Starlings Optimization: Influence of Topological Rules on the Collective Behavior of Swarm Intelligence. In: SLAWOMIR WIAK AND EWA NAPIERALSKA-JUSZCZAK. Studies in Computational Intelligence - Computational Methods for the Innovative Design of Electrical Devices. vol. 327, p. 129-145, doi: 10.1007/978-3-642-16225-1_7		

N°	Anno			
13	2013	Laudani A, Riganti Fulginei F, Salvini A (2013). Closed Forms for the Fully-Connected Continuous Flock of Starlings Optimization Algorithm. In: 2013 UKSim 15th International Conference on Computer Modelling and Simulation UKSim 2013. p. 45-50, IEEE, ISBN: 978-0-7695-4994-1, Cambridge University (Emmanuel College), 10 - 12 April 2013		
14	2012	Mancilla-David F, Riganti Fulginei F, Cerroni M, Laudani A, Salvini A (2012). A Neural-Network Based Maximum Power Point Tracker for Improved Dynamics of Variable DC-Link GRid Connected Photovoltaic Power Plant. In: Oipe 2012 - Proceedings. Gent - BELGIUM, September 19 – 21, 2012, p. 70-71, ISBN: 978-94-6197-069-5		
15	2012	COCO S, LAUDANI A, RIGANTI FULGINEI F, SALVINI A (2012). BACTERIAL CHEMOTAXIS SHAPE OPTIMIZATION OF ELECTROMAGNETIC DEVICES. In: Oipe- Proceedings. Gent - BELGIUM, September 19 – 21, 2012, p. 54-55, ISBN: 978-94-6197-069-5		
16	2012	Riganti Fulginei F, Laudani A, Biagetti R, Altomonte D, Salvini A (2012). Minimization of joule losses in Smart Grid systems by the Metric - Topological - Evolutionary Optimization. In: Energy Conference and Exhibition (ENERGYCON), 2012 IEEE International . p. 337-342, Firenze, 9-12 september 2012, doi: 10.1109/EnergyCon.2012.6347778		
17	2012	Laudani A, Pulcini G, Riganti Fulginei F, Salvini A (2012). Swarm Circuit Performing Optimization and Inverse Problems. In: OIPE 2012. Oipe2012 - Proceedings . Gent - BELGIUM, September 19 – 21, 2012, p. 38-39, ISBN: 978-94-6197-069-5		
18	2011	S. COCO, A. LAUDANI, F. RIGANTI FULGINEI, SALVINI A (2011). Accurate design of Helmholtz coils for ELF Bioelectromagnetic interaction by means of continuous FSO. In: JSAEM Studies in Applied Electromagnetics and Mechanics, 14 -. Naples - Italy, 6-9 September 2011, p. 121-122, ISBN: 978-4-931455-19-1		
19	2011	RIGANTI FULGINEI F, SALVINI A (2011). Neural Network approach for modelling hysteretic magnetic materials under distorted excitations. In: COMPUMAG2011. Sydney - Australia, 12-15 July 2011		
20	2011	RIGANTI FULGINEI, SALVINI A, LAUDANI A, COCO S, PULCINI G (2011). Shape Optimization of Multistage Depressed Collectors by Parallel Evolutionary Algorithm. In: COMPUMA2011. Sydney-Australia, 12-15 July 2011		

21	2011	S. COCO, A. LAUDANI, G. POLLICINO, G. PULCINI, F. RIGANTI FULGINEI, SALVINI A (2011). TWT Magnetic Focusing Structure Optimization by Parallel Evolutionary Algorithm. In: CD-Proceedings of the XV International Symposium on Electromagnetic Fields in Mechatronics, Electrical and Electronic Engineering. Funchal - Madeira island, Portugal, 1-3 September 2011, ISBN: 978-972-8822-24-8		
22	2010	F. RIGANTI FULGINEI, SALVINI A, M. PARODI (2010). LEARNING OPTIMIZATION OF NEURAL NETWORKS USED FOR MIMO APPLICATIONS BASED ON MULTIVARIATE FUNCTIONS DECOMPOSITION. In: OIPE2010 Proocedings. Sofia Bulgaria, 14-18 september 2010, p. 74-75, ISBN: 978-954-438-855-3		
23	2010	G. PULCINI, F. RIGANTI FULGINEI, SALVINI A (2010). METRIC-TOPOLOGICAL-EVOLUTIONARY OPTIMIZATION. In: OIPE2010 Proceedings. Sofia - Bulgaria, 14-18 september 2010, p. 3-4, ISBN: 978-954-438-855-3		
24	2010	S. COCO, A. LAUDANI, F. RIGANTI FULGINEI, SALVINI A (2010). TEAM 22 PROBLEM APPROACHED BY A HYBRID ARTIFICIAL LIFE METHOD. In: OIPE2010 Proceedings. Sofia - Bulgaria, 14-18 september 2010, p. 47-48, ISBN: 978-954-438-855-3		
25	2009	COCO S, LAUDANI A, RIGANTI FULGINEI F, SALVINI A (2009). Equivalent Source model and Parallel Neural Networks hybrid approach for ELF magnetic field in indoor enviroment. In: EMF2009 Book of Summaries. Mondovì (Italy), 26-29 May 2009, vol. 1, p. 125-126		
26	2009	SALVINI A, RIGANTI FULGINEI F (2009). From metric to topological Swarm Intelligence: Optimization Based on Flock-of-Starlings Behaviour. In: International Symposium on Electromagnetic Fields - Book of Digest. Arras (France), 10-12 September 2009, vol. 1, p. 553-554, ISBN: 978-2-84832-111-0		
27	2009	COCO S, LAUDANI A, RIGANTI FULGINEI F, SALVINI A (2009). Neural FEM for Hysteretic Materials Unbounded Magnetic Field Analysis. In: Proceedings of the 17th Conference on the Computation of Electromagnetic Fields. Florianopolis, Brasile, , 22-26 Novembre 2009, p. 554-555		
28	2009	COCO S, LAUDANI A, RIGANTI FULGINEI F, SALVINI A (2009). Parallel hybrid algorithms based on Artificial Life for Multimodal Optimization. In: Proceedings. In: Proceedings of the 17th Conference on the Computation of Electromagnetic Fields. Florianopolis, Brasile, 22-26 Novembre 2009, p. 314-315		

N°	Anno		
29	2013	Laudani A, Riganti Fulginei F, Salvini A (2013). Accurate Design of Array Coils for Transcranial Magnetic Stimulation by means of Continuous FSO. In: EMF 2013 Abstracts - ISSN: 2030-546X. Bruges - Belgium, april 22-25 2013	
N°	Anno		
30	2010	Salvini A, Riganti Fulginei F, Altomonte D. (2010). PIEZO-ELECTROMECHANICAL DEVICE FOR RECOVERING ENERGY FROM VEHICLE TRANSIT . 11731062.3-2315, UNIVERSITÁ DEGLI STUDI ROMA TRE [IT/IT]; Via Ostiense, 159 I-Roma (IT) (For All Designated States Except US). SALVINI, Alessandro [IT/IT]; (IT) (For US Only). RIGANTI FULGINEI, Francesco [IT/IT]; (IT) (For US Only). ALTOMONTE, Daniele [IT/IT]; (IT) (For US Only)	