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CURRICULUM VITAE

Alberto Reatti
Associate Professor of Electrical Engineering, Power Electronics and Renewable
Power Sources
Università degli Studi di Firenze, Florence, Italy

| EDUCATION | |
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| 1988 | Five-year Degree in Electronic Engineering inclusive of post-graduate qualification , Florence University |
| 1991 - 1993 | PhD Degree in Electrical Engineering, University of Bologna, – Italy Ph. D thesis Title: "Class D and Class E dc-ac and ac-dc resonant converter topologies" |
| FIELDS OF MAJOR SCIENTIFIC RESEARCH INTEREST | |
| Power Electronics Renewable Power Sources Electric Machine and Drives Smart Grids Resonant Power Converters Multilevel Inverters for Renewable Power Sources Solar Hybrid Electro-Thermal Concentrators Electric Circuit Theory and Analysis Switching Converter Modeling | |

POSITIONS/APPOINTMENTS

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|----------------|---|
| 2000 - Present | Associate Professor, Florence University School of Engineering, Italy Focus of research and teaching activities: Electrical Engineering, Power Electronics, Photovoltaics and Electric Drives |
| 1998-2000 | Associate Researcher, University of Florence School of Engineering, Italy - Areas of focus: Electrical Engineering, Power Electronic, Photovoltaics. |
| 1992 | Research Associate, Wright State University, Department of Electrical Engineering, Dayton, Ohio, USA Research area: power electronics Supervisor: Prof. Marian K. Kazimierczuck |
| 1994 - 1996 | Postdoctoral Researcher in Electrical Engineering, University of Florence School of Engineering, Italy |

ACADEMIC AND PROFESSIONAL ACTIVITIES

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|----------------|--|
| 2016 - 2017 | Chancellor delegate for University of Florence inside "Coordinamento della formazione post-laurea di ingegneri professionisti (CofIP) tra l'Università di Pisa, di Firenze, di Siena e La Federazione degli Ordini degli Ingegneri della Toscana". which stays for "Committee for post-degree learning for professional engineers of all Tuscany Engineer Federation" |
| 2017 - Present | IEEE Italy Section – Professional & Career Activity Committee Coordinator |
| 2016 - 2017 | IEEE Italy Section – Industry Relation Group. Member |
| 2015 - Present | International Agreement Chief Responsible , Responsible for a Cooperation Agreement among University of Florence and University of Sulaimanian |
| 2014 - Present | International Agreement Chief Responsible , Responsible for a Cooperation Agreement among University of Florence and Wright State University |
| 2013 - Present | Co-Founder and Steering Committee Member , of BIP Best Idea Project (No profit Association for dissemination of Innovation) |
| 2012 - Present | Member , Technical Committee of CET (Tuscany Region Energy Board) |
| 2013 - Present | Member , Research Committee of DINFO (Committee for the Research Policies at the Department of Information Engineering, University of Florence) |
| 2013 - Present | Member , Editorial Board of "Bollettino degli Ingegneri" (Journal of Tuscan Engineers) |
| 2012 - Present | Member , ANTER (Italy National Association for the Protection of Renewable Energy Sources) |
| 2010 - 2015 | Energy Consultant , Electric Plants Energy Saving, at the University of Florence |
| 2009 - Present | Co-Founder of a Start-up for the development of a Thermo-Electric Solar Concentrator. suitable for installation of building roofs. The start-up has been founded by Italian Ministry for the Environment, under the project "Solar Energy for Urban Areas" Grant Amount: Euro 494.000 . |
| 2007 - 2015 | Co-Founder of a Start-up for the development of PV plants. |
| 2004 - Present | Tutor , provides support to prospective undergraduate and graduate students at the Faculty of Electrical Engineering, Florence University |
| 2004 - Present | Erasmus Program Advisor , provides support to graduate students who want to spend part of their Career at Universities Inside European Community |
| 2005 - 2014 | Member , Graduate School Advisory Committee, Florence University Department of Energetics and Industrial Technologies |

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| 2006-2009 | Member , Scientific Committee at IRPET (Tuscan Institute for Economic Planning – Governmental Institution), Florence, Italy |
| 2005-2009 | Member , Scientific Committee at "CREAR" (Research Centre for Renewable Power Sources) – authorized by the Italian Ministry for Research, Florence, Italy |
| 2002 - 2005 | Member , Graduate School Evaluation Advisory Committee, Florence University Department of Electronics |
| 1990-1998 | Magnetek S.p.A. (Power One, and now ABB), Terranova, Arezzo, Italy External Consultant in the sector of power electronics and energy saving and renewable power sources |
| 1989-1990 | Italian Army – Military Geographic Institute - Second Lieutenant in the Italian Army. Computer aided maps design |

RESEARCH GRANTS

Public Funding

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| 2012-2014 | <p>Team leader of the Scientific Board, Italian Ministry for the Environment, "Solar Energy for Urban Areas"</p> <p>Grant Amount: Euro 494.000 .</p> |
| 2007-2011 | <p>CREAR Principal Investigator, European Community, "UPP-SOL - Urban Photovoltaics: Polygeneration with Solar Energy".</p> <p>Grant total amount: Euro 3,5 million</p> <p>Partners:</p> <ul style="list-style-type: none">Consorzio Roma Ricerche (Mr. Lino Fiorentino Ms. Manuela Bistolfi)Solar Heat And Power (Arch.Tullio Caselli)Besel (Mr. Antonio Benitez)Tel Aviv University (Prof. Abraham Kribus, Prof. Joseph Appelbaum, Mr. Gil Shelef)Università di Firenze – CREAR (Prof. Francesco Martelli, Prof. Alberto Reatti)Fraunhofer Institute of Solar Energy (Dr. Andreas Bett, Ms. Maik Wiesenfarth)Comune di Colleferro (Mr. Roberto Priori) |
| 2002-2004 | <p>Principal Investigator and National Supervisor, Italian Ministry of Research, "Study, Design and Optimization of Static Power Converters for Hybrid Electric Generation Plants"</p> <p>Grant Amount: 133,800Euro</p> <p>Partner: Universities of Firenze, Bologna, Salerno.</p> |
| 2006-2007 | <p>Principal Investigator and National Supervisor, Italian Ministry of Research, "Study Design and Optimization of a Modular Photovoltaic Module Provided with a Solar Concentrator, Heat Recovery System, and dc-ac Converter"</p> <p>Grant Amount: Euro136,430</p> <p>Partner: Universities of Firenze, Bologna, Salerno, Milano Politecnico</p> |

Private Funding

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| 2014-2015 | Principal Investigator , University of Florence, Italy, "Maintenance, Monitoring, and Innovation of Electric Power Plants at Florence University Grant Amount: Euro 22.000 Grant period: 12 months |
| 2012-2014 | Principal Investigator , University of Florence, Italy, "Maintenance, Monitoring, and Innovation of Electric Power Plants at Florence University Grant Amount: Euro 20.000 Grant period: 24 months |
| 2010-2012 | Principal Investigator , University of Florence, Italy, "Maintenance, Monitoring, and Innovation of Electric Power Plants at Florence University Grant Amount: Euro 20.000 Grant period: 24 months |
| 2008 | CREAR Principal Investigator , IRPET, Italy "Development of Hydrogen Technology in Tuscany " Grant Amount: Euro 19.000 Grant period: 6 months |
| 2005-2006 | Principal Investigator , STRHOLD S.p.A. (Reggio Emilia, Italy), "An innovative system for monitoring and controlling electric power plants " Grant Amount: Euro 100.000,00 Grant period: 24 months |
| 2005 | Principal Investigator , ASL 10 (Florence, Italy), "Healthcare Quality and Innovation in Florence" Grant Amount: Euro 25.000,00 Grant period: 24 months |
| 2003 | Principal Investigator , IRMIE IMPIANTI s.r.l. (Firenze, Italy) "Design and installation of a PV power plant on the roof of an industrial building" Grant Amount: Euro 103.291,38 Grant period: 12 months |

EDITORIAL ACTIVITIES

Refereed Journals and Conference Proceedings/Symposium Contributions

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| 1992 – Present | Reviewer <i>IEEE Transactions on Circuits and Systems</i> <i>IEEE Transactions on Power Electronics</i> <i>IEEE Transactions on Industrial Electronics</i> <i>IEEE International Symposium on Circuits and Systems</i> |
| 2002 - 2003 | Associate Editor <i>Power Electronics for IEEE Transactions on Circuits and System.</i> |
| 1994 – 1995 | Guest Editor <i>Journal on Circuits, Systems, and Computers</i> published by World Scientific. |

Book Reviews

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| 2014 | M.Kazimierczuk, "Laboratory Manual for Pulse-Width Modulated DC-DC Power Converters" (Review process in progress) |
| 2008 | M.Kazimierczuk, "Pulse-width Modulated DC-DC Power Converters" ISBN: 978-0-470-77301-7, 808 pages |

CONFERENCE ACTIVITY

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|-----------------|---|
| 2017, June 6-9 | Industry Relation Chair; Board of International Steering Committee; Board of Technical Program Committee <i>17th IEEE International Conference on Environment and Electrical Engineering and 1st Industry Commercial Power System Europe</i> <i>Milan, Italy, June 6-9, 2017</i> |
| 2016, June 7-10 | Local Co-Chair <i>16th IEEE International Conference on Environment and Electrical Engineering</i> <i>Florence, Italy, June 7-10, 2016</i> |
| 2016, June 7-10 | Chairman for <i>16th IEEE International Conference on Environment and Electrical Engineering</i> Florence, Italy, June 7-10, 2016 TECHNICAL SESSION 4 (M1-TS4) - SPECIAL SESSION Power Converters: Power Quality Improvement, Harmonics Mitigation and fault detection and identification -1 TECHNICAL SESSION 10 (N1-TS4) - SPECIAL SESSION Power Converters: Power Quality Improvement, Harmonics Mitigation and fault detection and identification -2 TECHNICAL SESSION 48(M3-TS6)-Electrical Machines and Power Converters-1 TECHNICAL SESSION 54(N3-TS6)-Electrical Machines and Power Converters-2 |
| 2016, June 7-10 | Reviewer of several paper for <i>16th IEEE International Conference on Environment and Electrical Engineering</i> <i>Florence, Italy, June 7-10, 2016</i> |
| 2015 | IEEE EEEIC15 Several Paper Reviewed and Chair of Sessions: Technical Session 50 (M4-TS1): POWER ELECTRONICS AND COMPONENTS - 3 Session Chair: Alberto Reatti, University of Florence, Italy, Saturday, June 13th, 2015 Technical Session 53 (N4-TS1): POWER ELECTRONICS AND COMPONENTS - 4 Session Chair: Alberto Reatti, University of Florence, Italy, Saturday, June 13th, 2015 |
| 2014 | Invited Speaker International Symposium on Fundamentals on Electrical Engineering, Bucharest, Romania, November 28-29, 2014. F. Grasso, A. Luchetta, S. Manetti, M. C. Piccirilli, A. Reatti, "SapWin 4.0 - An Enhanced Tool for Analysis and Design of Analog Circuits". Invited Paper |
| 2007 | Member of the Scientific Committee at the 22nd European Photovoltaic Solar Energy Conference - Milan, Italy |
| 1997 | Chairman at the IEEE International Symposium on Circuits and Systems (ISCAS), Hong Kong, June 9 - 12 1997 Session 2L7 - Power Electronics . International conference on Circuits and Systems. |
| 1999 | Chairman at the IEEE ECCTD'99, European Conference on Circuit Theory and Design, Stresa, Italy August 29-September 2, 1999. Session R14 - Power Electronics I. |
| 2001 | Invited Lecturer. Italian School for Electric Engineering PhD students "Ferdinando Gasparini", Seminar on "Current Issues in Power Electronic Circuits" Naples, Italy, January 30-31, 2001, |
| 2006 | Member of the Scientific Committee at the IX WORLD RENEWABLE ENERGY CONGRESS AND EXHIBITION (IX WREC), Florence, Italy, August 19-25, 2006 |

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| 2003 | Member of the Scientific Committee at the MULTIMEDIA DELIVERY OF MODERN POWER ELECTRONICS CURRICULUM September 3-5, 2003 Salerno (Italy) |
| 2001 | Member of the Scientific Committee at the National Workshop on Finite Element Method as Applied to Electrical and Information technology April 19-20, 2001, Cassino, Italy |

PATENTS

| | |
|-------------|---|
| 2011 | M. Beltramini, P. Lombardi, F. Martelli, A. Reatti, A. Simonti, (inventors) "Apparato di piccola taglia a bassa concentrazione ed inseguimento monoassiale per la cogenerazione di energia elettrica e termica da fonte solare". "Small Size solar concentrator with a single axis solar tracking suitable for electrical and thermal power generation from solar energy" Italian Patent Number 0000271397, September 2011 |
| 2011 | M. Beltramini, A. Reatti, L. Serri (Inventors) "Dispositivo fotovoltaico a recupero termico". "Solar Photovoltaic collector equipped with thermal power recovery" Italian Patent Number 0000271384 , September 2011 |

PUBLICATIONS

Peer Reviewed International Journals

- A1 A. Reatti, M. K. Kazimierczuk, R. Redl, "Class E full-wave low dv/dt rectifier", IEEE Transactions on Circuits and Systems, Part I, Vol. 40, Nr. 2, February 1993, pp.73-85;
- A2 A. Reatti, "Steady-state analysis including parasitic components and switching losses of buck and boost dc-dc converters under any operating condition", International Journal of Electronics, Vol. 77, Nr. 5, November 1994, pp. 679-702.
- A3 A. Liberatore, S. Manetti, M. C. Piccirilli, A. Reatti, "Simulation of switching power converters using symbolic techniques, " Alta Frequenza, Special Issue on Symbolic methods and applications to circuit design, Vol. 5, Nr. 6, November-December 1993, pp.16-23;
- A4 M. Bartoli, N. Noferi, A. Reatti, M. K. Kazimierczuk, "Modelling Winding Losses in High-Frequency Power Inductors", Journal on Circuits Systems and Computers, Special Issue on Power Electronics, Part II, Vol. 5 Nr. 4, December 1995, pp. 605-612;
- A5 A. Reatti, "Analysis and design of a current-driven two inductor ZCS low di_D/dt full wave rectifier", IEEE Transactions on Circuits and Systems, Part I, Vol. 43, No. 9, September 1996, pp. 745-759;
- A6 A. Reatti, "Low-Cost High Power-Density Electronic Ballast for Automotive H.I.D. Lamp", IEEE Transactions on Power Electronics, Vol. 15, No. 2, March 2000, pp. 361-368.
- A7 A. Luchetta, S. Manetti, A. Reatti, "SPAWIN-A Symbolic Simulator as a Support in Electrical Engineering Education", IEEE Transactions on Education, Vol. 44, No. 2, May 2001, pp. 213 and CD-ROM folder 12, Publisher Item Identifier S 0018-9359(01)05715-6.
- A8 A. Reatti, M. K. Kazimierczuk "Comparison of Various Methods for Calculating the AC Resistance of Inductors," IEEE Transactions on Magnetics, Vol. 38, No. 3, May 2002, pp. 1-7.
- A9 G. Pelosi, M. Pierozzi, A. Reatti, S. Selleri, "Field radiated by inductors with a ferrite core," Special Section on The Finite Element Method as Applied to Electrical and Information Engineering in Italy, G. Pelosi, G. Rubinacci, [Eds.], COMPEL The International Journal for Computation and Mathematics in Electrical and Electronic Engineering , Vol. 21, No. 3, 2002, p. 491.
- A10 A. Reatti, M. K. Kazimierczuk "Small-signal model of PWM converters for discontinuous conduction mode and its application for boost converter", IEEE Transactions on Circuits and Systems I: Fundamental Theory and Applications, Part I, Vol. 50, No. 1, Jan. 2003, pp. 65-73.
- A11 P. Bernardi, R. Cicchetti, G. Pelosi, A. Reatti, S. Selleri, and M. Tatini "An Equivalent Circuit for Emi Prediction in Printed Circuit Boards Featuring a Straight-to-Bent Microstrip Line Coupling," Progress In Electromagnetics Research B, Vol. 5, 107-118, 2008.
- A12 F. Grasso, A. Luchetta, S. Manetti, M. C. Piccirilli, A. Reatti "Symbolic analysis techniques for fault diagnosis and automatic design of analog circuits". In: M. Fakhfakh, E. Tlelo-Coutle, F. U. Fernandez. Design of analog circuits through symbolic analysis. p. 361-398, Bentham Science Publishers, ISBN: 9781608050956, doi: 10.2174/97816080509561120101, 2012.
- A13 F. Grasso, A. Luchetta, S. Manetti, M. C. Piccirilli, A. Reatti "SapWin 4.0–A New Simulation Program for Electrical Engineering Education Using Symbolic Analysis". Wiley Computer Applications in Engineering Education, Vol. 4, No. 1, pp. 44-57, July 2015.
- A14 A. Cappelletti, A. Reatti, F. Martelli "Numerical and Experimental Analysis of a CPV/T Receiver Suitable for Low Solar Concentration Factors" ENERGY PROCEDIA, vol. 82, November 2015, pp.724-729. DOI:10.1016/j.egypro.2015.11.798. In - ISSN:1876-6102.
- A15 M. Catelani, L. Ciani, A. Reatti, M. K. Kazimierczuk, "Matlab PV solar concentrator performance prediction based on triple junction solar cell model". Elsevier Measurement Journal of the International Measurement Confederation (IMEKO), no. 88, pp. 310-317, March 2016.

- A16 A. Cappelletti M. Catelani, L. Ciani, M. K. Kazimierczuk, A. Reatti, "Practical Issues and Characterization of a Photovoltaic/Thermal Linear Focus 20x Solar Concentrator". IEEE Transactions on Instrumentation & Measurement, vol. 65, no. 11, pp. 2464- 2475, November 2016.
- A17 A. Ayachit, A. Reatti, M. K. Kazimierczuk, "Magnetising Inductance of Multiple-Output Flyback DC-DC Converter for Discontinuous-Conduction Mode". IET Power Electronics, Vol. 10, No. 4, pp. 451-461.
- A18 A. Reatti, M. K. Kazimierczuk, M. Catelani, L. Ciani, "Monitoring and Field Data Acquisition System for Hybrid Static Concentrator Plant", Elsevier Measurement Journal of the International Measurement Confederation (IMEKO), Volume 98, Pages 384–392, February 2017.
- A19 G. Fontana, F. Grasso, S. Manetti, M. C. Piccirilli, A. Reatti, "A symbolic program for parameter identifiability analysis in systems modeled via equivalent linear time-invariant electrical circuits, with application to electromagnetic harvesters", International Journal of Numerical Modelling: Electronic Networks, Devices and Fields, Volume XX, Pages XXX–XXX, In Press. Article ID: JNM2251, DOI: 10.1002/jnm.2251
- A20 D. K. Saini, A. Ayachit, A. Reatti, M. K. Kazimierczuk, "Analysis and Design of Choke Inductors for Switched-Mode Power Inverters", IEEE Transactions on Industrial Electronics, Volume xx, Pages xxx–xxx, December 2017.

Peer Reviewed International Conferences

- B1 M. Papi, A. Reatti, "An improved method for Thyristor Simulation by SPICE", Proceedings of IEEE-ICHPS IV, Budapest, October 5-6 1989, pp. 56-62.
- B2 A. Liberatore, G. Niccolini Serragli, A. Reatti, "Class E DC-DC converter: an experimental approach", Proceedings of PCIM'91, Nureberg, Germany, June 25-27, 1991, pp. 406-420
- B3 A. Liberatore, S. Manetti, M.C. Piccirilli, A. Reatti, "A new symbolic approach to the analysis of switch power converters", Proceedings of EPE 1991, Firenze, Settembre 1991, vol. 4, pp. 489-494;
- B4 A. Liberatore, S. Manetti, M.C. Piccirilli, A. Reatti, "SAPDEC: A program devoted to automatic fault diagnosis of electric circuits", Proceedings of 3rd biennial conference on Automation, Simulation & Measurement, Tallin (Estonia), Oct. 1991, Section A, pp. 16-21.
- B5 A. Liberatore, S. Manetti, M.C. Piccirilli, A. Reatti, "Class-E Inverter: SPICE simulation including parasitic elements", Proceedings 3rd biennial conference on Automation, Simulation & Measurement, Tallin (Estonia), Oct. 1991, Section S, pp. 68-75.
- B6 A. Liberatore, A. Reatti, "A new high-frequency full-wave center-tapped rectifier", Proceedings of PCIM'92, Nureberg, Germany, April 24-26, 1992, pp. 361-372.
- B7 A. Liberatore, S. Manetti, M.C. Piccirilli, A. Reatti, "Symbolic analysis of DC-DC converters in the frequency domain", Proceedings of the Second Symbolic Analysis Methods for Circuit Design Workshop, Florence, Italy, October 7/8, 1992, pp. 37-49.
- B8 A. Reatti, M. K. Kazimierczuk, "Efficiency of the transformer version of the class E half-wave low dv_D/dt rectifier", Proceedings of ISCAS'93, International Symposium on Circuit and Systems, Chicago, USA, May 3-6, 1993, Vol. 4, pp. 2331-2334.
- B9 A. Liberatore, A. Reatti, "Efficiency optimization of the transformer of a flyback dc-dc converter", Proceedings of IV European Space Power Conference, Graz, Austria, August 23-27, 1993.
- B10 A. Reatti, "Winding losses optimization in Flyback converter transformer", Proceedings of PCIM'93, Nurnberg, Germany, 22-24 June, 1993, pp. 371-382.
- B11 A. Reatti, M. K. Kazimierczuk, "Comparison of the efficiencies of class D and class E rectifiers", Proceedings of 36th Midwest Symposium on Circuits and Systems, Detroit, USA, August 16-18, 1993, Vol. 2, pp. 872-874.
- B12 M. K. Kazimierczuk, R.C. Cravens, and A. Reatti, "Closed-Loop Input impedance of PWM Buck-Boost DC-DC Converters", Proceedings of ISCAS'94, International Symposium on Circuit and Systems, London, England, May 30-June 2, 1994, Vol. 6, pp.61-64.
- B13 M. Bartoli, A. Reatti, M. K. Kazimierczuk, "Efficiency of a class E dc-dc converter with a center tapped rectifier at any loaded quality factor", Proceedings of 37th Midwest Symposium on Circuits Systems, Lafayette, LA, August 3-5, 1994, pp. 1257-1260.
- B14 M. Bartoli, A. Reatti, M. K. Kazimierczuk, "An off-line full-range high-frequency high-efficiency class D² resonant power supply", Proceedings of IECON'94, Bologna, Italy, September 5-9, 1994, Vol. 1, pp.159-163.
- B15 M. Bartoli, A. Reatti, M. K. Kazimierczuk, "High-frequency models of ferrite inductors", Proceedings of IECON'94, Bologna, Italy, September 5-9, 1994, Vol. 3, pp1670-1675.
- B16 M. Bartoli, A. Reatti, M. K. Kazimierczuk, "Predicting the high-frequency ferrite core inductors performance", Proceedings of Electrical Manufacturing & Coil Winding Association Meeting, Rosemont, Chicago, IL, USA, September 27-9, 1994, pp. 409-413.

- B17 M. Bartoli, A. Reatti, M. K. Kazimierczuk, "Modeling iron-powder inductors at high frequencies", Proceedings of 1994 IEEE-IAS Annual Meeting, Denver, CO, October 2nd, 1994, Vol. 2, pp. 1225-1232.
- B18 M. Bartoli, A. Liberatore, A. Reatti, G. Gomisil, "Design optimization of a railway car 45 kW dc-dc PWM forward converter", Proceedings of European Power Electronic Symposium on Electric Drive Design and Applications, Lausanne, Switzerland, October 19-20, 1994, pp. 537-542.
- B19 A. Luchetta, S. Manetti, M.C. Piccirilli, A. Reatti, "Frequency Domain Analysis of DC-DC Converters Using a Symbolic Approach", Proceedings of ISCAS'95, International Symposium on Circuit and Systems, Special Session on Circuit Theory Aspects in Power Electronics, Seattle, WA, April 29 - May 3, 1995, pp. 2043-2046.
- B20 M. Bartoli, A. Reatti, M. K. Kazimierczuk, "Class-E Current-Driven Center-Tapped Low dv/dt Rectifier" Proceedings of 1995 IEEE-IAS Annual Meeting, Orlando, FL, October 5-8, 1995, pp.874-881.
- B21 M. Bartoli, A. Liberatore, M.C. Piccirilli, A. Reatti, "Analysis of Buck-Boost dc-dc PWM Converter Including Parasitic Components and Switching Losses", Proceedings of ECCTD'95 European Conference on Circuit Theory and Design, Special Session on Cyclically Switching-Mode Circuits with Internally-Controlled Switches, Istanbul, Turkey, 27-31 August, 1995, pp. 1157-1160.
- B22 M. Bartoli, A. Reatti, M. K. Kazimierczuk "Hybridge Zero-Current-Switching Rectifier for High-Frequency DC-DC Converter Applications", Proceedings of Intelec'95-International Telecommunications Energy Conference, The Hague, The Netherlands, October 29 - November 1, 1995, pp 510-517.
- B23 M. K. Kazimierczuk, R.S. Geise, A. Reatti, "Small Signal Analysis of a PWM DC-DC Converter with A Non-Symmetric Integral-Lead Controller", Proceedings of Intelec'95-International Telecommunications Energy Conference, The Hague, The Netherlands, October 29 - November 1, 1995, pp 608-615.
- B24 M. Bartoli, A. Reatti, M. K. Kazimierczuk, "Open loop small-signal control-to-output transfer function of PWM buck converter for CCM: modelling and measurements", Proceedings of MELECON'96, 8th Mediterranean Electrotechnical Conference, Bari, Italy, May 13-16, 1996, pp. 1203-1206.
- B25 M. Bartoli, N. Noferi, A. Reatti, M. K. Kazimierczuk, "Modelling Litz-wire Winding Losses in High-Frequency Power Inductors", PESC'96, Power Electronics Specialistic Conference, Baveno, Italy, June 24-27, 1996, pp 1690-1996.
- B26 M. Bartoli, A. Reatti, M. K. Kazimierczuk, "Minimum copper and core losses power inductor design", Proceedings of IEEE IAS Meeting 1996, S. Diego, CA, October 5-10, 1996, pp. 1369-1376.
- B27 A. Liberatore, M. Bartoli, A. Reatti, M. K. Kazimierczuk, "Full-Range Power Supply based on a Two Inductor Resonant Current-Clamped (L^2R -CC) DC-DC Converter", Proceedings of IEEE ISCAS'97, Hong Kong, June 9-12, 1997, pp. 873-876.
- B28 A. Luchetta, A. Reatti, "Small-signal symbolic analysis of PWM DC-DC converters operated in continuous and discontinuous current mode", Proceedings of ECCTD'99, Stresa, Italy, August 29-September 2, 1999. pp. 873-876.
- B29 A. Pasquini, F. C. Lee, A. Reatti, "A Cost Effective High-power Density Electronic Ballast For HID Automotive lamps", Proceedings of 17th Annual Virginia Tech Power Electronic Seminar, Blacksburg, VA, September 19-21, 1999, pp. 213-218.
- B30 A. Reatti, M. K. Kazimierczuk, "Current-Controlled Current-Source Model for a PWM dc-dc Boost Converter operated in Discontinuous Current Mode", Proceedings of ISCAS'2000 International Symposium on Circuits and Systems, Geneva, Switzerland, May 28-31, 2000, pp. III/239-III/242.

- B31 A. Reatti, F. Grasso, "Solid and Litz-wire winding non-linear resistance comparison," Proceedings of MWSCAS'00 - The 43rd IEEE Midwest Symposium on Circuits and Systems, 8-11 Aug. 2000, Leansing, MI, Vol. 1, pp. 466-469.
- B32 M. K. Kazimierczuk, A. J. Edstrom, and A. Reatti, "Buck PWM DC-DC converter with reference-voltage-modulation feedforward control", Proceedings of ISCAS'2001 International Symposium on Circuits and Systems, Sidney, Australia, May 06-09, 2001. ,Vol. 2, pp 537-540.
- B33 A. Gaggelli, A. Reatti, S. Manetti, A. G. Violi, "An Artificial Neural Network System for Trainborne Equipment BACC Signalling Recognition," Presentato a WCRR, Koln, Germany, November 25-29, 2001.
- B34 L. Pellegrini, A. Reatti, and Marian K. Kazimierczuk "Measurement of Open-Loop Small-Signal Control-to-Output Transfer Function of A PWM Boost Converter Operated in DCM", Proceedings of ISCAS'2002 International Symposium on Circuits and Systems, Scottsdale, Arizona, May 26-29, 2002. Volume: 5 , 26-29 May 2002, Vol. 5, pp. V-849-V-851.
- B35 L. Pellegrini, A. Reatti, and Marian K. Kazimierczuk "Impact of Boost Converter Parameters On Open-Loop Dynamic Performance for DCM," Proceedings of ISCAS'2002 International Symposium on Circuits and Systems, Scottsdale, Arizona, May 26-29, 2002, Special Sessions: Modeling, Simulation and Design of Power Electronics Circuits, Vol. 5, pp. V-513-V-516.
- B36 F. Grasso, A. Reatti, "Feedback-loop computer aided design for PWM DC-DC converters operated in continuous conduction mode and its application for a buck converter," Proceedings of MWSCAS'04- The 47th Midwest Symposium on Circuits and Systems, Hiroshima, Japan, July 25-28, 2004, Volume: 3 Pages:III_283 - III_286.
- B37 A. Reatti, M. Balzani, "Neural network based model of a PV array for the optimum performance of PV system," Proceedings of IEEE Research in Microelectronics and Electronics, Lausanne, Switzerland, Volume 2, 25-28 July 2005 Page(s):123 - 126, Digital Object Identifier 10.1109/RME.2005.1542952.
- B38 A. Reatti, M. Balzani, "PWM switch model of a buck-boost converter operated under discontinuous conduction mode," Proceedings of IEEE Circuits and Systems, 2005. 48th Midwest Symposium on Circuits and Systems, Cincinnati, OH, USA, August 7-10, 2005 Page(s): 667 - 670, Digital Object Identifier 10.1109/MWSCAS.2005.1594189.
- B39 A. Reatti, M. Balzani, "Computer aided small-signal analysis for PWM DC-DC converters operated in discontinuous conduction mode," Proceedings of IEEE Circuits and Systems, 2005 48th Midwest Symposium on Circuits and Systems, Cincinnati, OH, USA, August 7-10, 2005 Page(s): 1561 - 1564, Digital Object Identifier 10.1109/MWSCAS.2005.1594413.
- B40 A. Reatti, M. Balzani, M. Beltramini, F. Grasso, "Grid-Connected Inverters for Photovoltaic Plants: from the centralized to multistring inverters," Proceedings of IX World Renewable Energy Congress and Exhibition (IX WREC), Florence, Italy, August 19-25, 2006 Page(s): 552 (abstract) and Full paper on CD ROM File: "PV42, Reatti, Italy.
- B41 P. Bernardi, R. Cicchetti, G. Pelosi, A. Reatti, S. Selleri, M. Tatini, "A circuit model for straight-to-bent microstrip line coupling", Proceeding of International Symposium Antennas and Propagation Society, July 5-11, 2008, pp. 1-4.
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- E2 A. Liberatore, S. Manetti, M. C. Piccirilli, A. Reatti, "Circuiti Elettrici ed Elettronici", ETAS LIBRI, RCS Grandi Opere, Giugno 1996.
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COURSES TAUGHT

Unless otherwise specified all Courses have been taught at the University of Florence School of Engineering.

As contract Professor

1994/95

Electric Circuit Analysis - BSc Degree in Environmental Engineering
Electric Circuit Analysis - BSc Degree in Mechanical Engineering
Electric Circuit Analysis - BSc Degree in Electronic Engineering
Electric Circuit Analysis - BSc Degree in Computer Science (University of Siena)
Electric Circuit Analysis - BSc Degree in Telecommunications (University of Siena)

1995/96

Power Electronics - MSc Degree in Industrial Electronic Engineering
Power Electronics - MSc Degree in Mechanical Engineering
Electric Circuit Analysis - BSc Degree in Environmental Engineering

1996/97

Power Electronics - MSc Degree in Industrial Electronic Engineering
Power Electronics - MSc Degree in Mechanical Engineering
Electric Circuit Analysis - BSc Degree in Environmental Engineering

As Assistant Professor

1997-1998

Power Electronics - MSc Degree in Mechanical Engineering
Power Electronics - MSc Degree in Industrial Electronic Engineering

1998-1999

Power Electronics - MSc Degree in Mechanical Engineering
Power Electronics - MSc Degree in Industrial Electronic Engineering

1999-2000

Power Electronics. MSc Degree in Mechanical Engineering
Power Electronics. MSc Degree in Industrial Electronic Engineering

As an Associate Professor

2000-2001

Power Electronics. MSc Degree on Mechanical Engineering
Power Electronics. MSc Degree on Industrial Electronic Engineering

2001-2002 and 2002-2003

Electric Circuit Analysis - BSc. Degree in Mechanical Engineering
Electrical Engineering Fundamentals – BSc Degree in Management Engineering
Electrical Engineering Fundamentals – BSc Degree in Electrical Engineering
Electric Drives – BSc Degree in Electrical Engineering
Power Electronics – MSc Degree in Industrial Electronic Engineering
Power Electronics - BSc Degree in Electrical Engineering

2003-2004

Power Electronics MSc Degree in Electronic Engineering - 7 CFU (credits)*
Industrial Electrotechnics MSc Degree in Electronic Engineering – Advanced Course in Industrial Electric Plants - 5 CFU
Electric Engineering – BSc Degree in Mechanical Engineering - 6 CFU
Electric Drives Basics Bs degree in Electrical Engineering- 6 CFU.

2004-2005

“Power Electronics” 5 years MSc degree Electronic Engineering- 7 CFU.
“Industrial Electric Plants Fundamentals” BSc degree in Electrical Engineering- 5 CFU

"Advanced in Industrial Electric Plants" MSc degree in Electrical Engineering - 5 CFU

"Circuit Analysis" BSc degree in Mechanical Engineering - 6 CFU

"Electric Drives Basics" BSc degree in Electrical Engineering .

"Advanced in Electrical Drives Basics" MSc degree in Electrical Engineering -- 5 CFU.

2005-2006 / 2006-2007 / 2007-2008 / 2008-2009

"Power Electronics" 5 years MSc degree Electronic Engineering - 7 CFU

"Industrial Electric Plants Fundamental" BSc degree in Electrical Engineering - 5 CFU

"Advanced in Industrial Electric Plants" MSc degree in Electrical Engineering - 5 CFU

"Advanced in Electrical Drives" MSc degree in Electrical Engineering - 5 CFU

2009-2010

"Circuit Analysis" BSc degree in Management Engineering- 3 CFU

"Electric Drives Basics" BSc degree in Electrical Engineering - 5 CFU.

"Power Electronics" MSc degree in Control and Automation Engineering - 7 CFU

"Electric Drives" MSc degree in Control and Automation Engineering - 7 CFU

2010-2011

"Power Electronics" MSc degree Electrical and Automation Engineering - 7 CFU

"Advanced in Electrotechnics" MSc. degree Electrical and Automation Engineering - 7 CFU

"Electric Circuit Lab" for students working for their Bs degree in Electrical Engineering - 6 CFU

2011-2012 / 2012-2013

"Power Electronics" MSc degree Electrical and Automation Engineering - 7 CFU

"Photovoltaic Plants inside the course "Advanced in Electrotechnics" MSc. degree Electrical and Automation Engineering - 7 CFU

"Electric Circuit Lab" for students working for their Bs degree in Electrical Engineering - 6 CFU

2012-2013

"Power Electronics" MSc degree Electrical and Automation Engineering - 7 CFU

"Advanced in Electrotechnics" MSc. degree Electrical and Automation Engineering - 7 CFU

"Electric Circuit Lab" for students working for their Bs degree in Electrical Engineering - 6

2013-2014 / 2014-2015

"Industrial Electric Plants" BSc degree in Electrical Engineering - 6 CFU

"Photovoltaic Plants inside the course "Advanced in Electrotechnics" MSc degree Electrical and Automation Engineering - 6 CFU

"Electric Circuit Lab" for students working for their Bs degree in Electrical Engineering - 6 CFU

2015-2016 / 2017-2018

"Industrial Electric Plants" BSc degree in Electrical Engineering - 6 CFU

"Renewables Power Sources" MSc degree Electrical and Automation Engineering - 6 CFU

"Circuit Analysis" BSc degree in Management Engineering- 6 CFU

2004-2017

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*Since 2003-2004 Italian degree programmes have been structured in credits (CFU = *crediti formativi universitari*); a university credit corresponds to 25 hours of work per student, time for personal study included. The average annual workload of a full time student is conventionally fixed at 60 credits.

