Curriculum of

Concettina Buccella

Contents

1	General data	3
2	Degrees	3
3	Chronological list of the top stories	4
4	Societies member	5
5	Spin-off	5
6	Reviewer activities	5
7	Activities in the committees and as plenary speaker	7
8	Editorial activities	12
9	Awards	12
10	Visiting professor	13
11	List of publications	13

1 General data

- Place and date of birth: L'Aquila, 8/12/1962
- Current residence: L'Aquila, Via L'Aquila-Pianola n. 9A
- Telephone numbers: 0862-434437 (office), 3209231080 (mobile)
- E-mail addresses: concettina.buccella@univaq.it, c.buccella@ieee.org
- URL: http://www.diel.univaq.it/people/buccella

2 Degrees

- Degree in Electrical Engineering achieved July 20, 1988 at the University of L'Aquila, vote 110/110.
- PhD obtained in 1995 from the University of Rome "La Sapienza".

3 Chronological list of the top stories

- $\bullet\,$ 1988: Degree in Electrical Engineering at the University of L'Aquila, vote 110/110.
- 1988: Taking as a "designer in research and development area" at the "Italtel Italian Society Technologies", Industrial District of L 'Aquila.
- 1989: Discharge from Soc. Italtel S.p.A. and beginning of the scientificeducational collaboration with Prof. Saverio Cristina, Professor of Electrical Engineering at the University of L'Aquila.
- 1989: Winner of a abroad specialization scholarship banned by the "Foundation Ferdinand Filauro."
- 1990: Winner of the open competition, based on tests and qualifications, a n. 1 VII^o salary level functional, functional area technical, scientific and socio-health professional profile of technical assistant at the Department of Electrical Engineering at the University of L 'Aquila. Service outlet at the Faculty of Engineering on January 16, 1991.
- 1994: Winner of the Researcher competition in the group n. I17X (Electrical). Service outlet at the University of L'Aquila Faculty of Engineering on April 26.
- 1995: PhD graduation from the University of Rome *La Sapienza*. Thesis: "Analysis of the electric field in an electrostatic precipitator powered by impulse voltage and assessment of its characteristic VI", supervisor: Prof. Saverio Cristina.
- 1997: Confirm in the Role of Researcher.
- 2002: Attainment of the suitability in the Associate Professor competition in the group ING-IND/31 banned from the University of L'Aquila.
- 2002: Service outlet at the University of L'Aquila Faculty of Engineering on 30 dicembre.
- 2012: Italian habilitation as Full Professor in Electrotechnics (ING-IND/31) valid from 29/04/2019 to 29/04/2025.
- 2014: Italian habilitation as Full Professor in Power Converters, Drivers, Machines and Power Systems (ING-IND/32).
- 2017: Italian habilitation as Full Professor in Electrotechnics (ING-IND/31).

4 Societies member

- 1998-2002: Electrostatic Process Committee Member of the IEEE Industry Applications Society.
- 2003: Senior Member of the IEEE.
- Member of Smart grid Committee of the IEEE Industrial Electronics Society.
- Member of Power Electronic Committee of the IEEE Industrial Electronics Society.
- 2003: Senior Member of the IEEE.
- from 2004-2013: Member of the Commission for the Right to University of L'Aquila.
- 2016-2018: Elected Chair of IEEE-IES Renewable Energy Systems Technical Committee.
- from 2013: Member of PhD Committee in Information and Communication Technology, Department of Information Engineering, Computer Science and Mathematics, University of L'Aquila.

5 Spin-off

- 2007: Founding Member of DigiPower s.r.l. (www.digipower.it), a spin-off of the University of L'Aquila working in the field of industrial electronics, modeling and numerical electromagnetic compatibility, with the goal of producing goods and services and operate the technology transfer in the fields of electronics and information industrial, energy, consumer, medical and, more generally, where it is possibile to use its know-how.
- from 2012 to 2017: Chairman of the Board of Directors of DigiPower s.r.l..
- Founding Member of "NEXTION" project (NEXT innovatION model) (www.nextion.it) aimed at creating a modern center of excellence based on a new business model for innovation in the Abruzzo region.

6 Reviewer activities

• from 1998: Reviewer of the IEEE Transactions on Industry Applications.

- 2000: Evaluator of research projects on behalf of the "Dean of Scientific Research, Ministry of Higher Education", King Fahd University of Petroleum & Minerals, Dhahran, Saudi Arabia. (Project: Z. Al-Hamouz, "Finite Element Computation of Corona Power Loss on Bundled Bipolar Transmission Lines," KFUPM Project # FT-2000-19, KFUPM, (SR 43,200)).
- from 2000: Reviewer of the Journal of Electrostatics.
- 2003: Evaluator of research carried out by Dr. B. S. Rajanikanth, Assistant Professor in the Department of High Voltage at Indian Institute of Science, Bangalore, India. This activity was required in order to assess the suitability of Dr. Rajanikanth to become Associate Professor.
- 2005: Evaluator of the thesis for the PhD degree carried out by Mr. A. D. Srinivasan, entitled "Electrical Discharge Plasma Promoted Adsorption/Catalysis, for Removal of NOx, HC and CO from an Actual Diesel Engine Exhaust", at the Indian Institute of Science, Bangalore, India.
- 2005: Reviewer of the IEEE Sensors Journal.
- 2008: Reviewer of the PIER & JEMWA Journals.
- 2008: Evaluator of a research project entitled "Experimental and numerical study of fly ash precipitation in a proto-type model", submitted to the King Fahd University of Petroleum & Minerals (KFUPM) by Dr. Zakariya M. Al-Hamouz, Associate Professor, Electrical Engineering.
- 2009: Evaluator of the PhD thesis of Mr Jayan M V entitled "Modeling of dust loaded electrical characteristics and collection efficiency of industrial electrostatic precipitators." The request for evaluation has been made by the Academic Senate of the Indian Institute of Science Bangalore 560 012, India.
- 2009: Evaluator for the Promotion Review of Dr. BS Rajanikanth, EE, IISc to Full Profesor. The request for evaluation has been made by the Academic Senate of the Indian Institute of Science Bangalore 560 012, India.
- from 2009: Reviewer of the: IET Science, Measurement & Technology; Bioelectromagnetics; IEEE Transactions on Industrial Electronics, IEEE Transactions on Power Electronics, IEEE Journal of Emerging and Selected Topics in Power Electronics, IEEE Transactions on Dielectrics and Electrical Insulation.
- from 2011: Reviewer of the IEEE Transactions on Industrial Informatics.
- from 2012: Reviewer of the Journal of Circuits, Systems, and Computers, Circuits and Systems-Scientific Research, Electric Power Systems Research (Elsevier), Energy Conversion and Management Elsevier, IEEE Transactions on Vehicular Technology, IECON Conferences.

- 2012: Evaluator for the research project: "Human protection from RF electromagnetic radiation". The evaluation request was made by the Croatian Science Foundation (CSF). Project leader Krešimir Malarić.
- 2012: Evaluator of the research project No. 13-01100P submitted by Ing. Pavel Lafata, Ph.D. and entitled: "The Influence of the Physical Environmental Parameters on the Transmission Lines Performance at High Frequencies". The evaluation request was made by Czech Science Foundation - the main public funding agency in the Czech Republic supporting all areas of basic scientific research.
- 2012: Evaluator of the research project RG121-CES-09: "Seismic Deconvolution of Sparse Reflectivity using Compressed Sensing Techniques", proposed by Dr. Dr. Tareq Y. Al-Naffouri, Electrical Engineering. The evaluation request was made by King Fahd University of Petroleum & Minerals, Deanship of Scientific Research.
- from 2013: Reviewer of IEEE Transactions on Smart Grid.
- from 2013: Reviewer of the British Journal of Applied Science & Technology.
- from 2013: Reviewer of Robotics and Computer-Integrated Manufacturing: an International Journal of Manufacturing, Product and Process Development (Elsevier Editorial), International Journal of Hydrogen Energy (Elsevier Editorial), ISIE, IWIES Conferences.
- 2013: Evaluator of the research project "Robust communication in Smart Grid environments by Optical Fibre networks", Cooperation India (DST) Joint Research on Smart Grids 2013 EW on behalf of the NWO Physical Sciences Divisional Board, Main applicant Prof. ir. A.M.J. Koonen .
- from 2013: Reviewer of Energies MDPI Journal.
- Reviewer at the 2019 IEEE PES Innovative Smart Grid Technologies Europe (ISGT-Europe), September 29-October 2, 2019 in Bucharest, Romania.
- Reviewer at the 2019"ACEMP-OPTIM19 Automated Conference Submission System" <submit@ieee-ies.org>.

7 Activities in the committees and as plenary speaker

• 1997: Member of the Organizing Committee of the 3rd International Conference on Applied Electrostatics (97 ICAES) held in Shanghai, China, 14-16 November 1997.

- 1999: Member of the Organizing Committee of the 1999 Annual Meeting of the National Coordination Group of Electrical Engineering.
- 2000: Member of the Organizing Committee in the Conference IEEE Industry Applications Annual Meeting, Electrostatic Process Committee, Rome, October 2000.
- 2007: Member of the Design and Management Group of the Project Multi "Centres of Higher Education in the fields of Manufacturing and Services" (POL_AF) funded with POR Abruzzo money (cost of intervention: € 4,256,000).
- 2007: Member of the Organizing Committee of the Second Level Master "Energy Manager", of the Faculty of Engineering of the University of L'Aquila.
- 2013: Power Systems Track Chair of the 39th Annual Conference of the IEEE Industrial Electronics Society (IECON 2013), November 10-13, 2013, Vienna, Austria.
- 2013: Technical Program Committee Member of the 2013 IEEE International Workshop on Intelligent Energy Systems "Managing the Complexity in Energy Systems" (IWIES 2013), November 14, 2013, Vienna, Austria.
- 2013: Member of Scientific Committee of International Conference on Clean Electrical Power Renewable Energy Resources Impact, Alghero, Sardinia – Italy, June 11th-13th, 2013.
- 2013: Plenary speaker alla International Conference of Energy and Water, September 25-27, 2013, Luanda, Angola. Title of presentation: "Standards for smart grids with emphasis on their realization in remote and rural areas" (by invitation from the Ministry of Energy and Water of Angola).
- 2014: Technical Committee Member of IEEE International Conference titled "International Conference on Consumer Electronics" (ICCE), 7-10 September, 2014, Berlin.
- 2014: Program Committee Member of IEEE IWIES 2014 which will be held in conjunction with IEEE SMC 2014 (www.smc2014.org) on October 8, 2014 in San Diego, CA, USA.
- 2014: Program Committee Member of International Symposium on Environment Friendly Energies and Applications, (EFEA 2014), Supmeca Campus in Paris, 19-21 November, 2014.
- 2014: Member of Scientific Committee of International Conference on Renewable Energy for Developing Countries (REDEC'14) Beirut, Lebanon, Nov. 26-27, 2014.

- 2014: Technical Committee Member of International Conference in Science, Engineering and Management Research" (ICSEMR- 14) from 27th November 2014 to 29th November 2014, Avadi, Chennai, Tamilnadu, India.
- 2014: Co-Chair of the session MoB8 "Power Converters, Control, and Energy Management for Distributed Generation at International Symposium on Industrial Electronics (ISIE2014), June 1-4, 2014, Istanbul, Turkey.
- 2015: Track Chair of the Power Electronics Track at International Symposium on Industrial Electronics (ISIE2015), June 3-5, 2015, Buzios-Rio de Janeiro, Brazil.
- 2015: Track Chair for "Power Systems" at the 41-st Annual Conference of the IEEE Industrial Electronics Society (IECON2015), November 9-12, 2015 Yokohama, Japan.
- 2015: Technical Committee Member of International Conference on Fuzzy System and Data Mining (FSDM2015) which will be held in Shanghai, China, December 12-15, 2015.
- 2015: *Tutorial instructor* at Harbin Institute of Technology, Cina, "Modulation techniques applied to multilevel inverters".
- 2016: Treasurers at 2016 Annual Conference of the IEEE Industrial Electronics Society.
- 2016: Power Systems Track Chair of the 42nd Annual Conference of the IEEE Industrial Electronics Society (IECON 2016), Oct. 24-27, 2016, Florence, Italy.
- 2016: *Tutorial instructor* at Bohai University, Jinzhou Shi, Cina, "Fundamenta frequency modulating algorithms".
- 2016: Summer course teacher of Electrical Science at Harbin Institute of Technology.
- 2016: Member of Scientific Committee of International Conference on Renewable Energy for Developing Countries (REDEC'16) Beirut, Lebanon.
- 2017: Power Systems Track Chair of the 43rd Annual Conference of the IEEE Industrial Electronics Society (IECON 2017), Oct. 29 Nov. 1, 2017, Beijing, Cina.
- 2017: Organizing Committee Member of 2017 International Conference on Mechatronics, Automation & Intelligent Materials November 13-14, 2017, Paris, France.
- 2017: Technical Program Committee Member at 7th IEEE International Conference on Consumer Electronics Berlin (ICCE-Berlin).

- 2018: Member of the International Scientific Committee of SPEEDAM, Symposium on Power Electronics, Electrical Drives, Automation and Motion, 20-22 June, Amalfi.
- 2018: Member of Scientific Committee of International Conference on Renewable Energy for Developing Countries (REDEC'18) Beirut, Lebanon.
- 2018: Technical Track for "Renewable Energy Systems" ICIT'2018 the 19th IEEE International Conference on Industrial Technology of the IEEE IES society will be held in Lyon, France, February 20-22, 2018.
- 2018: Organizing Committee Member (OCM) for 3rd International Conference on Power and Energy Engineering, June 18-19, 2018, at Rome, Italy.
- 2018: Committee Members for ENERGY 2018, the Eighth International Conference on Smart Grids, Green Communications and IT Energy-aware Technologies, May 20 - 24, 2018 - Nice, France.
- 2018: Committee Members for DBKDA 2018, The Tenth International Conference on Advances in Databases, Knowledge, and Data Applications, May 20 - 24, 2018 - Nice, France.
- 2018: Tutorial-Workshop Chairs at 5th International Symposium on Environment Friendly Energies and Applications (EFEA) 2018, Rome 24-26 September 2018.
- 2018: Member of Steering Committee at the 5th International Symposium on Environment Friendly Energies and Applications (EFEA) 2018, Rome 24-26 September 2018.
- 2018: Technical Program Committee Member of AEIT Automotive Conference 2018, Milano 9-11 July, 2018.
- 2018: Steering Committee Member at AEIT International Annual Conference, Bari, Italy, 3-5 October, 2018.
- 2018: Plenary speaker alla International Conference on Renewable Energy Research and Applications, (ICRERA-2018), Paris, France, October 14-17, 2018.
- 2018: TPC Member for 3ICT'18 (International Conference on Innovation and Intelligence for Informatics, Computing, and Technologies), Bahrain, 18-20 November, 2018.
- 2018: Technical Program Committee Member at 8th IEEE International Conference on Consumer Electronics Berlin (ICCE-Berlin).
- 2018: Tutorial at the Petroleum Institute University and Research Center, Abu Dhabi: "Modulation technique for multilevel converters".

- 2019: International Advisory Board Member at CPE/POWERENG Conference, 23-25 April 2019, Sønderborg, DK.
- 2019: Smart Grid Track Chair at CPE/POWERENG Conference, 23-25 April 2019, Sønderborg, DK.
- 2020: Program Committee Member of Distributed Computing for Emerging Smart Networks (DiCES-N19), October 30, 2019, Hammamet, Tunisia.
- 2019: Track Co-Chair on Renewable Electric Energy Conversion, Processing and Storage for IEEE-ISIE, Vancouver, Canada.
- 2019: Advisory Committee Members at 2nd International Conference on Power and Embedded Drive Control-2019 (ICPEDC-2019) during 21-23 August 2019 in association with IEEE Madras Section.
- 2019: Member of International Scientific Committee of 4th International Conference on Power Electronics and their Applications ICPEA 2019, which will be held on 25-27 September 2019 in Elazig, Turkey.
- 2019: TPC member for 23rd 2019 IEEE International Symposium on Consumer Technologies (ISCT2019) 19th 21st June 2019, Ancona, Italy.
- 2019: Technical Program Committee Member of AEIT Automotive Conference 2018, Turin 2-4 July, 2019.
- 2019: Technical Committee Member at AEIT International Annual Conference, 18-20 September, 2019, Florence, Italy.
- 2019: Technical Program Committee Member for the 2019 IEEE 9th International Conference on Consumer Electronics Berlin (ICCE-Berlin 2019): http://www.icce-berlin.org.
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- 2020: Member of Scientific Committee of 5th International Conference on Renewable Energy for Developing Countries (REDEC'20) Marocco, March 24-26, 2020.
- 2020: Special Session Chair in the IES-IEEE 14th International Conference on Compatibility, Power Electronics and Power Engineering (CPE-POWERENG2020), Setubal (Portugal), 1 3 April, 2020.
- 2020: Special Session Chair in the IESES 2020 IEEE 2ND International Conference on Industrial Electronics for Sustainable Energy Systems Cagliari, Sardinia 20 Apr 2020 - 22 Apr 2020.
- 2020: Power Systems and Smart Grid Track Chair at the 29th IEEE International Symposium on Industrial Electronics (ISIE2020), 17-19 June 2020, Delft, the Netherlands.

• 2020: Technical Committee Member of IEEE-PES-ISGT-Europe-2020, 10th International Conference on Innovative Smart Grids Technologies, Delft University of Technology, The Netherlands, from 26-28 October 2020.

8 Editorial activities

- 2014: Associate editor of IEEE Transactions on Industrial Electronics.
- 2014: Associate Editor of Springer's Journal of Intelligent Industrial Systems.
- 2009: Co-organizer of the *IEEE Transactions on Industrial Electronics* Special Section, "Methods and Systems for Smart Grids Optimization".
- 2015: Co-organizer of the *IEEE Transactions on Industrial Electronics* Special Section, "Recent Advances in Multilevel Inverters and their Applications".
- 2019: (january) Member of Editorial Bord of International Journal of Smart Grid (web site: www.ijSmartGrid.org)
- 2019: *Guest Editor of Special* Issue "Multilevel Power Converters Control and Modulation Techniques" *MDPI Energies*.

9 Awards

- 2018: Best Paper Award at International Conference on Smart Grids (ic-SmartGrids), December 4 -6, 2018, Prefectural Art Museum, Nagasaki, Japan for the presented paper: "Mixed Harmonic Elimination Control for a Single-Phase 9-Level Grid-Connected Inverter", authors: F. Viola, V. Castiglia, G. Schettino, C. Cecati, C. Buccella, M. Cimoroni, R. Miceli.
- 2013: Best 2013 Paper Award for the IEEE Transactions on Industrial Informatics. The award is for the paper "Digital Control of Power Converters - A Survey," *IEEE Transactions on Industrial Informatics, Vol.* 8, N. 3, pp. 437-447, Aug. 2012, authors: C. Buccella, C. Cecati, H. Latafat.
- 2012: Best 2012 Paper Award for the IEEE Transactions on Industrial Informatics. The award is for the paper "Smart Grid Technologies: Communication Technologies and Standards", *IEEE Trans. on Industrial Informatics, vol.7, no.4, pp.529-539, Nov. 2011*, authors: V.C. Gungor, D. Sahin, T. Kocak, S. Ergut, C. Buccella, C. Cecati and G.P. Hancke.

- 2012: Best 2012 Session Paper Award IEEE International Conference on Industrial Electronics (IECON 2012), Montréal, Canada, October 25
 - 28, 2012 Title of the paper: "Implementation of Digital PID and Fuzzy Control in a LLC Resonant Converter," (co-authors: C. Cecati, H. Latafat, K. Razi)
- 2007: Best Student Paper/Best Symposium Paper Award from the 2007 IEEE Electromagnetic Compatibility Society International Symposium, Honolulu, USA, July 8-13, 2007 Title of paper: "Numerical Prediction of SAR and Thermal Elevation in a 0.25-mm 3-D Model of the Human Eye Exposed to Handheld Transmitters", (co-authors: V. De Santis, M. Feliziani)
- 2006: Second Best Paper at Bioelectromagnetic (BEMS) 28th Annual Meeting, Cancun, Mexico, June 11-15, 2006. Title of paper: "Investigation of Temperature Increase in Human Eyes Due to Different RF Sources", (co-authors: V. De Santis, M. Feliziani).

10 Visiting professor

- July 2014: Visiting professor at the Harbin Institute of Technology.
- September 2015: Visiting professor at the Harbin Institute of Technology.
- July 2016: Visiting professor at the Harbin Institute of Technology.

11 List of publications

Riferimenti bibliografici

- C. Buccella, M.G. Cimoroni, M. Tinari, C. Cecati, "A new pulse active width modulation for multilevel converters," *IEEE Transactions on Power Electronics*, vol. 34, no. 8, pp. 7221-7229, Aug. 2019.
- [2] C. Buccella, M.G. Cimoroni, C. Cecati, "Low-Frequency Harmonic Elimination Technique in Three Phase Cascaded H-Bridges Multilevel Inverters for Renewable Energy Applications," *Int. Journal* of Smart Grid, vol.3, no.1, pp. 1-9, March, 2019.
- [3] C. Buccella, C. Cecati, M. G. Cimoroni, H. A. Khalid, "Chebyshev Partition Based Modulation Technique Applied to Power Converters," *IEEE Journal of Emerg. and Select. topic in Pow. Elec.*, vol. 7, no. 1, pp. 414 - 421, March 2019.

- [4] E. Babaei, C. Buccella, C. Cecati, "New 8-Level Basic Structure for Cascaded Multilevel Inverters with Reduced Number of Switches and DC Voltage Sources," *Journal of Circuits, Systems, and Computers*, vol. 28, no. 03, 2019.
- [5] C. Buccella, C. Cecati, M.G. Cimoroni, G. Kulothungan, A. Edpuganti, A. Kumar Rathore, "A Selective Harmonic Elimination Method for Five-Level Converters for Distributed Generation," *IEEE Journal of Emerg. and Select. topic in Pow. Elec.*, vol. 5, no. 2, pp. 775 - 783, June 2017.
- [6] K. Gnanasambandam, A. Edpuganti, A. K. Rathore, D. Srinivasan, C. Cecati, C. Buccella, "Optimal Low Switching Frequency Pulsewidth Modulation of Current-Fed Three-Level Converter for Solar Power Integration," *IEEE Transactions on Industrial Electronics*, Vol. 63, No. 11, pp. 6877 - 6886, Nov. 2016.
- [7] E. Babaei, C, Buccella, M. Saeedifard, Guest Editorial of Special Section: "Recent Advances in Multilevel Inverters and Their Applications—Part II," *IEEE Transactions on Industrial Electronics*, Vol. 63, No. 12, pp. 7777 - 7779, Dec. 2016.
- [8] E. Babaei, C, Buccella, M. Saeedifard, Guest Editorial of Special Section: "Recent Advances in Multilevel Inverters and Their Applications—Part I," *IEEE Transactions on Industrial Electronics*, vol. 63, no. 11, pp. 7145 - 7147, Nov. 2016.
- [9] P. Giammatteo, C. Buccella, C. Cecati, "A Proposal for a Multi-Agent based Synchronization Method for Distributed Generators in Micro-Grid Systems," *EAI EA Endorsed Transactions on Industrial Networks and Intelligent Systems*, vol. 3, no. 5, pp. 1-17, Apr. 2016.
- [10] B. Li, S. Zhou, D. Xu, R. Yang, D. Xu, C. Buccella, C. Cecati, "An Improved Circulating Current Injection Method for Modular Multilevel Converters in Variable-Speed Drives," *IEEE Transactions on Industrial Electronics*, vol. 63, no. 11, pp. 7215 - 7225, Nov. 2016.
- [11] N. A. Al-Emadi, C. Buccella, C. Cecati, H. A. Khalid, "A Novel DSTATCOM with 5-Level CHB Architecture and Selective Harmonic Mitigation Algorithm," *Electric Power Systems Research*, Elsevier, vol. 130, pp. 251-258, Jan. 2016.
- [12] C. Buccella, C. Cecati, H. Latafat, K. Razi, "Multi String Grid-Connected PV System with LLC Resonant DC/DC Converter," *Intelligent Industrial Systems*, Springer, pp. 37-49, May 2015.

- [13] T. Strasser, F. Andrén, J. Kathan, C. Cecati, C. Buccella, P. Siano, P. Leitão, G. Zhabelova, V. Vyatkin, P. Vrba, V. Mařík, "A Review of Architectures and Concepts for Intelligence in Future Electric Energy Systems," *IEEE Transactions on Industrial Electronics*, vol. 62, no. 4, pp. 2424-2438, Apr. 2015.
- [14] C. Buccella, C. Cecati, H. Latafat, P. Pepe, K. Razi, "Observerbased Control of LLC DC/DC Resonant Converter Using Extended Describing Functions," *IEEE Transactions on Power Electronics*, vol. 30, no. 10, pp. 5881 - 5891, Oct. 2014.
- [15] P. Giammatteo, C. Buccella, C. Cecati, "Matlab/simulink modeling of SIC power mosfets," *International Review of Electrical Engineering*, vol. 9, no. 4, pp. 671-680, Aug. 2014.
- [16] C. Buccella, C. Cecati, H. Abu-Rub, "An overview on distributed generation and smart grid concepts and technologies," Abu-Rub H, Malinowsky M, Al-Haddad K, *Power Electronics for Renewable Energy Systems, Transportation and Industrial Applications*, pp. 50-68, Wiley, ISBN: 9781118634035, 2014.
- [17] C. Buccella, C. Cecati, M. G. Cimoroni, K. Razi, "Analytical Method for Pattern Generation in Five-Level Cascaded H-Bridge Inverter Using Selective Harmonic Elimination," *IEEE Transactions* on *Industrial Electronics*, vol. 61, no. 11, pp. 5811 - 5819, Nov. 2014.
- [18] V. C. Gungor, D. Sahin, T. Kocak, S. Ergut, C. Buccella, C. Cecati, G. Hancke, "A Survey on Smart Grid Potential Applications and Communication Requirements", *IEEE Transactions on Industrial Informatics*, vol. 9, no. 1, pp. 28-42, February 2013.
- [19] V. C. Gungor, D. Sahin, T. Kocak, S. Ergüt, C. Buccella, C. Cecati, G. P. Hancke "Smart Grid and Smart Homes Key Players and Pilot Projects", *IEEE Industrial Electronics Magazine*, vol. 6, no. 4, pp. 18-34, December 2012.
- [20] C. Buccella, C. Cecati, H. Latafat, "Digital Control of Power Converters - A Survey," *IEEE Transactions on Industrial Informatics*, vol. 8, no. 3, pp. 437-447, Aug. 2012, 2013 IEEE Transactions Industrial Informatics Best Paper Award.

- [21] V. C. Gungor, D. Sahin, T. Kocak, S. Ergüt, C. Buccella, C. Cecati, G. P. Hancke "Smart Grid Technologies: Communication Technologies and Standards", *IEEE Transactions on Industrial Informatics*, vol. 7, no. 4, pp. 529 539, November 2011, 2012 IEEE Transactions Industrial Informatics Best Paper Award.
- [22] C. Buccella, C. Canizares, C. Cecati, F. Muzi, P. Siano, Guest Editorial of Special Section: "Methods and Systems for Smart Grids Optimization", *IEEE Transactions on Industrial Electronics*, vol. 58, no. 10, pp. 4483 - 4486, October 2011.
- [23] C. Buccella, C. Cecati, A. Piccolo, P. Siano, "Fuzzy Control of Multilevel Inverters for Fuel Cell Generator Sets", A. Keyhani and M. Marwali (Eds.): Smart Power Grids 2011, POWSYS, Chapter 4, pp. 83–102, springerlink.com, Springer-Verlag Berlin Heidelberg 2011.
- [24] C. Buccella, V. De Santis, M. Feliziani, F. Maradei, "Finite Element Analysis of Temperature Increase in Vascularized Biological Tissues Exposed to RF Sources", *IEEE Transactions on Magnetics*, vol. 45, no.3, pp. 1682-1685, March 2009.
- [25] V. De Santis, M. Feliziani, C. Buccella, and P. Tognolatti, "Prototype Design of a Thin-Film Bulk Acoustic-Wave Resonator by the Finite Element Method", *IEEE Transactions on Magnetics*, vol. 45, no. 3, pp. 1116-1119, March 2009.
- [26] C. Buccella, C. Cecati, F. de Monte, "A Coupled Electro-Thermal Model for Planar Transformers Temperature Distribution Computation in Planar Transformer Design", *IEEE Transactions on Industrial Electronics*, vol. 55, no. 10, pp. 3583-3590, October 2008.
- [27] C. Buccella, V. De Santis, M. Feliziani, P. Tognolatti, "Finite Element modelling of a thin-film bulk acoustic resonator (FBAR)", *International Journal for Computation and Mathematics in Electrical and Electronic Engineering (COMPEL)*, vol. 27 no. 6, pp. 1296-1306, Sept. 2008.

- [28] C. Buccella, V. De Santis, M. Feliziani, "Prediction of Temperature Increase in Human Eyes Due to RF Sources", *IEEE Transactions on Electromagnetic Compatibility*, vol. 49, no. 4, pp. 825-833, November 2007.
- [29] Buccella, M. Feliziani, G. Manzi, "Three-Dimensional FEM Approach to Model Twisted Wire Pair Cables", *IEEE Transactions on Magnetics*, vol. 43, no. 4, pp. 1373 1376, April 2007.
- [30] C. Buccella, M. Feliziani, G. Manzi, "Pulse Shaping Numerical Procedures for Ultra Wide Bandwidth Systems", *IEEE Transactions on Magnetics*, vol. 43, no. 4, pp. 1549-1552, April 2007.
- [31] C. Buccella, M. Di Renzo, F. Graziosi, M. Feliziani, G. Manzi, R. Tiberio, "Ultra Wide Band Propagation Measurements in Indoor Working Environments and Through Building Material", *IEEE EMC Newsletter*, Spring 2006.
- [32] C. Buccella, M. Feliziani, G. Manzi, "Wavelet Denoising Approach to Extract Accurate FDTD Solution With Coarse Discretization In Transmission Lines", *IEEE Transactions on Magnetics*, vol. 41, no. 5, pp. 1732-1735, May 2005.
- [33] C. Buccella, M. Feliziani, F. Maradei, G. Manzi, "Magnetic Field Computation in Physically Large Domain with Thin Metallic Shields", *IEEE Transactions on Magnetics*, vol. 41, no. 5, pp. 1708-1711, May 2005.
- [34] C. Buccella, A. Orlandi, "Clousure to discussion of an efficient technique for the evaluation of lightning-induced voltage in a cylindrical vessel containing charged oil", *IEEE Transactions on Industry Applications*, vol. 41, no. 2, pp. 536, March/April 2005.
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