

Curriculum Vitae

INFORMAZIONI PERSONALI

Nome GIANPAOLO
Cognome VITALE
Telefono 091-6809685
E-mail gianpaolo.vitale@unipa.it
gianpaolo.vitale@icar.cnr.it

FORMAZIONE TITOLI

Livello conoscenza lingua inglese: B2

ATTIVITA' DIDATTICA

1999-2000	Professor of "Electronics" M.D. Electrical Engineering, University of Palermo, Italy.
2000-2001	Professor of "Power Electronics" M.D. Electrical Engineering, University of Palermo, Italy.
2002-2003	Professor of "Power Electronics" M.D. Electrical Engineering, University of Palermo, Italy.
2003-2004	Professor of "Power Electronics" M.D. Electrical Engineering, University of Palermo, Italy.
2004-2005 Italy.	Professor of "Applied Electronic" M.D. Mechanical Engineering, University of Palermo, Italy.
2005-2006 Italy.	Professor of "Applied Electronic" M.D. Mechanical Engineering, University of Palermo, Italy.
2006-2007 Italy.	Professor of "Applied Electronic" M.D. Mechanical Engineering, University of Palermo, Italy.
2013-2014	Professor of "Electronics 3" M.D. Electronic Engineering, University of Palermo, Italy.
2014-2015	Professor of "Electronics 3" M.D. Electronic Engineering, University of Palermo, Italy.
2015-2016	Professor of "Electronics 3" M.D. Electronic Engineering, University of Palermo, Italy.
2016-2017	Professor of "Elettronica 3" (Power Electronics) M.D. Electronic Engineering, Univ. of Palermo, Italy
2017-2018	Professor of "Industrial Electronics" M.D. Electronic Engineering, Univ. of Palermo, Italy
2018-2019	Professor of "Industrial Electronics" M.D. Electronic Engineering, Univ. of Palermo, Italy
2019-2020	Professor of "Industrial Electronics and laboratory" M.D. Electronic Engineering, Univ. of Palermo, Italy
2021-2022	Professor of "Industrial Electronics and laboratory" M.D. Electronic Engineering, Univ. of Palermo, Italy

2022-2023	Professor of "Industrial Electronics and laboratory" M.D. Electronic Engineering, Univ. of Palermo, Italy
2023-2024	Professor of "Industrial Electronics and laboratory" M.D. Electronic Engineering, Univ. of Palermo, Italy
2024-2025	Professor of "Industrial Electronics and laboratory" M.D. Electronic Engineering, Univ. of Palermo, Italy

RICERCHE FINANZIATE

Scientific Responsibility of Research Projects

1995..... Responsible of the CERISEP-CNR research project "Progetto CAD di circuiti elettronici VLSI ed MMIC", (Computer Aided Design of VLSI integrated Circuits and MMIC), Finalized project funded by CNR.

1995..... Responsible of the CERISEP-CNR research project "Microprocessori e microcontrollori per robotica" (Microprocessors for Robotica)

1997..... Responsible of the CERISEP-CNR research project "Prove di compatibilità elettromagnetica (EMC) su azionamenti e su componenti per auto elettrica" (Electromagnetic Compatibility of Electrical Drives and Electric Vehicles).

1998..... Responsible of the CERISEP-CNR research project "Compatibilità elettromagnetica (EMC) su azionamenti elettrici su componenti per auto elettrica" (Electromagnetic Compatibility of Electrical Drives and Electric Vehicles).

1999..... Responsible of the CERISEP-CNR research project "Compatibilità elettromagnetica (EMC) degli azionamenti elettrici e dei componenti nei veicoli a guida vincolata e su gomma" (Electromagnetic Compatibility of Electrical Drives and Electric Vehicles).

2001..... Coordinator of the research activities of the CERISEP-CNR in the research projects "Sistema integrato con veicoli a propulsione elettrica per la mobilità collettiva e singola dei disabili in ambiente urbano" (Integrated Systems for Electrical Vehicles for Urban Disabled Mobility) facente parte dei programmi di ricerca scientifica di rilevante interesse nazionale cofinanziato dal MURST per gli anni 2000 e 2001.

2004..... Responsible of the CERISEP-CNR research project "studio e progettazione di convertitori statici di potenza per azionamenti elettrici e per generazione distribuita da fonti non inquinanti" (Analysis and Design of Power Electronics Converters for Electrical Driver and Distributed Generation from Renewables and non Polluting Sources).

1997-2001..... Responsible of the CNR Finalized project "Beni Culturali" del CNR: "Diagnostica e controllo automatizzato delle condizioni ambientali del clima museale attraverso sistemi innovativi di sensori intelligenti" (Diagnosis and Control of a Museum Environmental Climate through Innovative and Intelligent Sensors). Funded by CNR with about 50.000 euro.

2000-2006..... Responsible of the CERISEP-CNR research project: "Laboratorio e ricerche di compatibilità elettromagnetica per l'innovazione e la sperimentazione sugli azionamenti elettrici intelligenti, sul software di gestione e sui sistemi di telecomunicazione ad essi associati nei sistemi di trasporto al fine di garantirne la sicurezza di funzionamento (dependability), la sicurezza attiva (safety) e la sicurezza passiva (security)" (Laboratory and Research on Electromagnetic Compatibility of Intelligent Electrical drives and Related Management Software, of Communication Systems and of Transportation Systems to assure their dependability, safety and Security), project CLUSTER 13 EMC of MIUR. Funded by Italian Ministry of Education, University and Research (MIUR) with 2.272.742 €.

2004-2008 Responsible of the CERISEP-CNR research project: "Automazione della gestione intelligente della generazione distribuita di energia elettrica da fonti rinnovabili e non inquinanti e della domanda di energia elettrica, anche con riferimento alle compatibilità interne e ambientali, all'affidabilità e alla sicurezza" (Automatic Intelligent Management of Electric Energy Distributed Generation by Renewable and non Polluting Sources also with Reference to Environmental Compatibility, to Safety and Security) Funded by Italian Ministry of Education, University and Research (MIUR) with 350.000 €.

2012 Responsible for the Palermo section of the ISSIA-CNR research project "RITmare, Italian Research for the sea" funded by CNR with 1.000.000 €. Project duration from 2012 to 2017.

2012.....Responsible for the Palermo section of the ISSIA-CNR research project "TESEO" (High Efficiency technologies for On-board environmental sustainability) , units: 1.4.1 "Analysis and design of electric energy storage systems" and 1.5 "Experimental characterization of subsystems", PON02005132939517, funded with 430.000 euro, Project duration from 2012 to 2015.

INCARICHI / CONSULENZE

Responsabile scientifico per l'ISSIA del contratto "Valutazione delle possibili cause degli incendi avvenuti nelle cabine di trasformazione dell'impianto fotovoltaico "La sugarella" Canino (Viterbo) aprile 2016.

ASSOCIAZIONI SCIENTIFICHE

Since 2004 IEEE member (since 2013 senior Member)

PUBBLICAZIONE

Textbooks

Di Piazza M. C., **Vitale G.** 'Photovoltaic Sources: Modelling and Emulation', Springer, date of publication: 2013 ISBN: ISSN 1865-3529 ISSN 1865-3537 (electronic), ISBN 978-1-4471-4377-2 ISBN 978-1-4471-4378-9 (eBook) , DOI 10.1007/978-1-4471-4378-9

Cirrincione M., Pucci M. , **Vitale G.** 'Power Converters and AC Electrical Drives with Linear Neural Networks', CRC PRESS of Taylor and Francis Group, June 2012, ISBN: 978-1-4398-1814-5.

Papers on engineering education practice.

Vitale, G. (2024). Power Converters for Green Hydrogen: State of the Art and Perspectives. Electronics, 13(22), 4565.

Guilbert, D., & **Vitale, G.** (2021). Hydrogen as a clean and sustainable energy vector for global transition from fossil-based to zero-carbon. Clean Technologies, 3(4), 881-909.

Yodwong, B., Guilbert, D., Phattanasak, M., Kaewmanee, W., Hinaje, M., & **Vitale, G.** (2020). AC-DC converters for electrolyzer applications: State of the art and future challenges. Electronics, 9(6), 912.

Edited books

Manuel Pérez-Donsi3n, **Gianpaolo Vitale** "Trends in Renewable Energy and Power Quality", Cambridge Scholars Publishing, ISBN-13: 978-1-5275-9433-3 ISBN-10: 1-5275-9433-5., Date of Publication: 27/03/2024.

Manuel Pérez-Donsi3n, **Gianpaolo Vitale** "Advances in Renewable Energy and Power Quality", Cambridge Scholars Publishing, ISBN-13: 978-1-5275-4530-4 ISBN-10: 1-5275-4530-X., Date of Publication: 01/03/2020.

Manuel Pérez-Donsi3n, Silvano Vergura and **Gianpaolo Vitale**: "Renewable energy – selected issues vol. II", edited book, Cambridge Scholars Publishing, Lady Stephenson Library, Newcastle upon Tyne, NE6 2PA, UK, ISBN (13): 978-1-4438-8803-5, 2016.

Manuel Pérez-Donsi3n, Silvano Vergura and **Gianpaolo Vitale**: "Renewable energy – selected issues vol. I", edited book, Cambridge Scholars Publishing, Lady Stephenson Library, Newcastle upon Tyne, NE6 2PA, UK, ISBN (13): 978-1-4438-8377-1, 2015.

Book chapters

[6] G. Vitale, et al. "Adaptive Tuning System and Parameter Estimation of a Digitally Controlled Boost Converter with STM32." International Conference on Applications in Electronics Pervading Industry, Environment and Society. Springer, Cham, 2018.

[5] G. Vitale, "Frequency Stability Improvement in Weak Grids by Storage Systems" ch. 8, of: Islam, F.M. Rabiul, Mamun, Kabir Al, Amanullah, Maung Than Oo (Eds.) "Smart Energy Grid Design for Island Countries, Challenges and Opportunities", ISBN 978-3-319-50197-0, Springer, 2017.

[4] M. Di Piazza, G. Vitale, "A Reduced-order PV Model Parameter Identification Solution by using a Linear Regression-based Approach", chap. XXXIV, "Renewable energy – selected issues vol. II", edited book, Cambridge Scholars Publishing, Lady Stephenson Library, Newcastle upon Tyne, NE6 2PA, UK, ISBN (13): 978-1-4438-8803-5, 2016.

[3] A. Di Piazza, M. Di Piazza, G. Vitale, "Energy Forecast in a Large PV Plant under Partial Shading by Kriging-based Approach", chap III, "Renewable energy – selected issues vol. I", Cambridge Scholars Publishing, Lady Stephenson Library, Newcastle upon Tyne, NE6 2PA, UK, ISBN (13): 978-1-4438-8377-1, 2015.

[2] A. Di Piazza, M. Di Piazza, G. Vitale, "Data Clustering for Accurate Energy Planning of a Photovoltaic Plant", chap I, "Renewable energy – selected issues vol. I", Cambridge Scholars Publishing, Lady Stephenson Library, Newcastle upon Tyne, NE6 2PA, UK, ISBN (13): 978-1-4438-8377-1, 2015.

[1] F. Viola, "Quaderno di Elettrotecnica", Ed. UniService, ottobre 2011, (Capitolo 9). ISBN 978-88-6178-775-9

Invited lectures

[I 1] G. Vitale, "Compatibilit  Electromagnetique: Le Directives et le Normes Techniques Europeennes et le Role Du Laboratoire D'Essais Pour Les Pays Europeennes et Extraeuropeennes", 17 mes journ es tunisiennes d'electrotechnique el d'automatique (JTEA), Nabeul, Tunisia 5- 6 novembre 1997,

[I 2] M. Cirrincione, M. Pucci, G. Vitale, "Linear Neural Networks applied to Power Converters and AC Electrical Drives", Invited Paper, Plenary session PL5, International Conference on Renewable Energy and Power Quality (ICREPQ'13), Bilbao (Spain), 20-22 of March 2013.

[I 3] G. Vitale, "Renewable Energies – Future Perspectives", WREC 2015, XIV World Renewable Energy Congress, U. Politehnica Bucharest, Romania, June 8-12, 2015.

[I 4] G. Vitale, "Energy saving by power electronics: towards a new concept of renewable source", International Conference on Renewable Energies and Power Quality (ICREPQ'16), Madrid (Spain) 4-6 May 2016,

ISI Journals

[A68] Vitale, G. (2024). Power Converters for Green Hydrogen: State of the Art and Perspectives. *Electronics*, 13(22), 4565.

[A67] Scirè, D., Lullo, G., & Vitale, G. (2024). A Quasi-Constant On-Time Control for SMPS With a Nonlinear Inductor Based on Power Switch Conduction Time Estimation. *IEEE Transactions on Industrial Informatics*.

[A66] Di Caro, A., & Vitale, G. (2024). Direct-Coupled Improvement of a Solar-Powered Proton Exchange Membrane Electrolyzer by a Reconfigurable Source. *Clean Technologies*, 6(3), 1203-1228.

[A65] Pilato, G., Vitale, G., Vassallo, G., & Scirè, D. (2024). Neural modeling of power nonlinear inductors by the E- α Net network. *Nonlinear Dynamics*, 112(19), 17069-17086.

[A64] Yodwong, B., Guilbert, D., Kaewmanee, W., Phattanasak, M., Hinaje, M., & Vitale, G. (2023). Improved Sliding Mode-Based Controller of a High Voltage Ratio DC–DC Converter for Electrolyzers Supplied by Renewable Energy. *IEEE Transactions on Industrial Electronics*.

[A63] Giuliano, F., Pagano, A., Croce, D., Vitale, G., & Tinnirello, I. (2023). Adaptive algorithms for batteryless lora-based sensors. *Sensors*, 23(14), 6568.

[A62] Vella, A., Galioto, **G.**, **Vitale, G.**, Lullo, G., & Giaconia, G. C. (2023). GaN and SiC Device Characterization by a Dedicated Embedded Measurement System. *Electronics*, 12(7), 1555.

[A61] Yodwong, B., Sikkabut, S., Guilbert, D., Hinaje, M., Phattanasak, M., Kaewmanee, W., & **Vitale, G.** (2023). Open-Circuit Switch Fault Diagnosis and Accommodation of a Three-Level Interleaved Buck Converter for Electrolyzer Applications. *Electronics*, 12(6), 1349.

[A60] Pagano, A., Croce, D., Tinnirello, I., & **Vitale, G.** (2022). A Survey on LoRa for Smart Agriculture: Current Trends and Future Perspectives. *IEEE Internet of Things Journal*.

[A59] Scirè, D., Lullo, G., & **Vitale, G.** (2023). Assessment of the Current for a Non-Linear Power Inductor Including Temperature in DC-DC Converters. *Electronics*, 12(3), 579.

[A58] Scirè, D., Lullo, G., & **Vitale, G.** (2022). Non-Linear Inductor Models Comparison for Switched-Mode Power Supplies Applications. *Electronics*, 11(15), 2472.

[A57] Augello, A., Infantino, I., Pilato, G., **Vitale, G.** (2022). Extending affective capabilities for medical assistive robots. *Cognitive Systems Research*, 73 (2022) 21–25.

[A56] **G. Vitale**, G. Lullo, D. Scirè, (2021). Thermal stability of a DC/DC converter with inductor in partial saturation. *IEEE Transactions on Industrial Electronics*, 68(9), 7985-7995.

[A55] Ferrante, **G.**, **Vitale, G.**, Licari, A., Montalbano, L., Pilato, G., Infantino, I., ... & La Grutta, S. (2021). Social robots and

therapeutic adherence: A new challenge in pediatric asthma?. *Paediatric respiratory reviews*, 40, 46-51

[A54] D. Guilbert, **G. Vitale**, (2021). Hydrogen as a Clean and Sustainable Energy Vector for Global Transition from Fossil-Based to Zero-Carbon. *Clean Technologies*-MDPI, 3(4), 881-909.

[A46] P. Ribino, M. Bonomolo, C. Lodato, **G. Vitale**, (2021). A humanoid social robot based approach for indoor environment quality monitoring and well-being improvement. *International Journal of Social Robotics*, 13(2), 277-296.

[A53] B. Yodwong, D. Guilbert, M. Hinaje, M. Phattanasak, W. Kaewmanee, **G. Vitale**, (2021). Proton exchange membrane electrolyzer emulator for power electronics testing applications. *Processes*-MDPI, 9(3), 498.

[A52] D. Scirè, **G. Vitale**, M. Ventimiglia, G. Lullo, (2021). Non-Linear Inductors Characterization in Real Operating Conditions for Power Density Optimization in SMPS. *Energies*-MDPI, 14(13), 3924.

[A51] Yodwong, B., Guilbert, D., Phattanasak, M., Kaewmanee, W., Hinaje, M., & **Vitale, G.** (2020). Faraday's Efficiency Modeling of a Proton Exchange Membrane Electrolyzer Based on Experimental Data. *Energies*-MDPI, 13(18), 4792.

[A50] Guida, V., Guilbert, D., **Vitale, G.**, & Douine, B. (2020). Design and Realization of a Stacked Interleaved DC–DC Step-Down Converter for PEM Water Electrolysis with Improved Current Control. *Fuel Cells*.

[A49] Yodwong, B., Guilbert, D., Phattanasak, M., Kaewmanee, W., Hinaje, M., **Vitale, G.** (2020). AC-DC Converters for Electrolyzer Applications: State of the Art and Future Challenges. *Electronics*, 9(6), 912.

[A48] Ribino, P., Bonomolo, M., Lodato, C., **Vitale, G.** (2020). A Humanoid Social Robot Based Approach for Indoor Environment Quality Monitoring and Well-Being Improvement. *International Journal of Social Robotics*, , 13(2), 277-296..

[A47] Alonge, F., Collura, S. M., D'ippolito, F., Guilbert, D., Luna, M., **Vitale, G.** (2020). Design of a robust controller for DC/DC converter–electrolyzer systems supplied by μ WECSs subject to highly fluctuating wind speed. *Control Engineering Practice*, 98, 104383

[A46] D. Guilbert, and **G. Vitale**. "Improved Hydrogen-Production-Based Power Management Control of a Wind Turbine Conversion System Coupled with Multistack Proton Exchange Membrane Electrolyzers." *Energies* 13.5 (2020): 1239.

[A45] D. Guilbert, D. Sorbera, and **G. Vitale**. "A stacked interleaved DC-DC buck converter for proton exchange membrane electrolyzer applications: Design and experimental validation." *International Journal of Hydrogen Energy* 45.1 (2020): 64-79.

[A44] E. Pipitone, and **G. Vitale**. "A regenerative braking system for internal combustion engine vehicles using supercapacitors as energy storage elements-Part 1: System analysis and modelling." *Journal of Power Sources* (2019): 227368.

[A43] E. Pipitone, and **G. Vitale**. "A regenerative braking system for internal combustion engine vehicles using supercapacitors as energy storage elements-Part 2: Simulation results." *Journal of Power Sources* (2019): 227258.

[A42] Collura SM, Guilbert D, Vitale G, Luna M, Alonge F, D'ippolito F, Scipioni A (2019). Design and experimental validation of a high voltage ratio DC/DC converter for proton exchange membrane electrolyzer applications. *International Journal of Hydrogen Energy*, vol. 44, p. 7059-7072, ISSN: 0360-3199, doi: 10.1016/j.ijhydene.2019.01.210

[A41] **G. Vitale** et al.. "Design and experimental validation of a high voltage ratio DC/DC converter for proton exchange membrane electrolyzer applications." *International Journal of Hydrogen Energy* 44.14 (2019): 7059-7072.

[A40] D. Guilbert and **G. Vitale**. "Dynamic Emulation of a PEM Electrolyzer by Time Constant Based Exponential Model."

Energies 12.4 (2019): 750.

[A39] G. Giglia, G. Ala, M. C. Di Piazza, G. C. Giaconia, M. Luna, , **G. Vitale**, P. Zanchetta, "Automatic EMI Filter Design for Power Electronic Converters Oriented to High Power Density", Electronics 2018, 7, 9; doi:10.3390/electronics7010009.

[A38] F. Alonge, M. Pucci, R. Rabbeni, **G. Vitale**, "Dynamic modelling of a quadratic DC/DC single-switch boost converter", Electric Power Systems Research, Jul 2017, ISSN 0378-7796, 152 (2017) 130–139.

[A37] G. Ala; G. C. Giaconia, G. Giglia; M. C. Di Piazza, G. Vitale , " Design and performance evaluation of a high power density EMI filter for PWM inverter-fed induction motor drives, IEEE Transactions on Industry Applications, Year: 2016, Volume: 52, Issue: 3. Pages: 2397 – 2404.

[A36] F. Alonge, M. Pucci, R. Rabbeni, G. Vitale, " Identification and Robust Control of a Quadratic DC/DC Boost Converter by Hammerstein Model, IEEE Transactions on Industry Applications. Year: 2015, Volume: 51, Issue: 5 Pages: 3975 – 3985.

[A35] A. Accetta, M. Cirrincione, M. Pucci, G. Vitale, " Closed-Loop MRAS Speed Observer for Linear Induction Motor Drives", IEEE Transactions on Industry Applications. Industry Applications, Year: 2015, Volume: 51, Issue: 3, Pages: 2279 – 2290.

[A34] F. Alonge, M. Cirrincione, M. Pucci, A. Sferlazza, F. D'Ippolito, G. Vitale, " Descriptor-type Kalman Filter and TLS EXIN Speed Estimate for Sensorless Control of a Linear Induction Motor", 2013-IDC-195 IEEE Transactions on Industry Applications. Vol. 50, No. 6, Nov/Dec 2014.

[A33] M. C. Di Piazza, M. Luna, G. Vitale, "EMI Reduction in DC-fed Electric Drives by Active Common Mode Compensator", IEEE transaction on Electromagnetic Compatibility Volume:56, Issue: 5, 2014 , Page(s): 1067- 1076.

[A32] A. Accetta, M. Cirrincione, M. Pucci, G. Vitale, "Neural Sensorless Control of Linear Induction Motors by a Full-Order Luenberger Observer considering the End-effects", 2012-IDC-680. IEEE Transactions on Industry Applications, Volume:50, Issue: 3, 2014, Page(s): 1891- 1904

[A31] M. C. Di Piazza, M. Pucci, G. Vitale, "Intelligent Power Conversion System Management for Photovoltaic Generation", Sustainable Energy Technologies and Assessments journal SETA, 2 (2013) pp. 19–30, DOI: 10.1016/j.seta.2013.02.003.

[A30] M. C. Di Piazza, M. Luna, G. Vitale, "Dynamic PV Model Parameter Identification by Least Square Regression " IEEE Journal of Photovoltaics, 2013 pp 1-8.

[A29] M. C. Di Piazza, M. Pucci, G. Vitale, "Intelligent Power Conversion System Management for Photovoltaic Generation", Sustainable Energy Technologies and Assessments journal SETA, 2 (2013) pp. 19–30, DOI: 10.1016/j.seta.2013.02.003.

[A28] M. C. Di Piazza, M. Luna, G. Vitale, "Dynamic PV Model Parameter Identification by Least Square Regression " IEEE Journal of Photovoltaics, 2013 pp 1-8.

[A27] M. Cirrincione, M. Pucci, G. Vitale, "Neural MPPT of Variable Pitch Wind Generators with Induction Machines in a Wide Wind Speed Range", IEEE Transactions on Industry Applications, VOL. 49, NO 2, March/April 2013..

[A26] A. Accetta, M. Cirrincione, M. Pucci, G. Vitale, "MRAS Speed Observer for High Performance Linear Induction Motor Drives based on Linear Neural Networks", IEEE Transactions on Power Electronics VOL. 28, NO. 1, Jan. 2013

[A25] G. Ala, M. C. Di Piazza A. Ragusa, F. Viola, G. Vitale, "EMI Analysis in Electrical Drives under Lightning Surge Conditions", IEEE Transactions on Electromagnetic Compatibility, vol 54, issue 4, pp 850-859 Aug. 2012.

[A24] M. Cirrincione, M. Pucci, G. Vitale, "Neural MPPT of Variable Pitch Wind Generators with Induction Machines in a Wide Wind Speed Range", accepted for publication in the IEEE Transactions on Industry Applications.

[A23] M. Cirrincione, M. Pucci, G. Vitale, "Growing Neural Gas based MPPT of Variable Pitch Wind Generators with Induction Machines", IEEE Transactions on Industry Applications, vol. 48, n. 3, May/June 2012.

[A22] G. Ala, M. C. Di Piazza A. Ragusa, F. Viola, G. Vitale, "EMI Analysis in Electrical Drives under Lightning Surge Conditions", accepted for publication on IEEE Transactions on Electromagnetic Compatibility

*[A21] A. Accetta, M. Cirrincione, M. Pucci, G. Vitale, "Sensorless Control of PMSM Fractional Horsepower Drives by Signal Injection and Neural Adaptive-Band Filtering", IEEE transaction on Industrial Electronics, vol. 59, no. 3, March 2012

[A20] A. Ragusa, M. C. Di Piazza, G. Vitale, "Magnetic material performance of transformers in common mode active EMI filters for bearing currents suppression", PRZEGLĄD ELEKTROTECHNICZNY Vol 2011, No 6, pp 198-201.

[A19] A. Ragusa, M. C. Di Piazza, G. Vitale, "An Optimized Feedback Common Mode Active Filter for Vehicular Induction Motor Drives", accepted to the IEEE Transactions on Power Electronics, Forthcoming

[A18] A. Ragusa, M. C. Di Piazza, G. Vitale, "Power Losses Evaluation in CM Active EMI Filters for Bearing Currents Suppression", IEEE Transactions on Industrial Electronics, Vol. 58, N. 11, November 2011.

[A17] M. Pucci, G. Vitale, M. Cirrincione, "Direct Power Control of Three-Phase VSIs for the Minimization of Common-Mode Emissions in Distributed Generation Systems", Electric Power Systems Research. vol. 81, issue 4, april 2011. DOI 10.1016/j.epsr.2010.11.007. 81 (2011)830–839

[A16] M. Cirrincione, M. Pucci, G. Vitale, "Growing Neural Gas (GNG) based Maximum Power Point Tracking for High Performance Wind Generator with an Induction Machine", IEEE Transactions on Industry Applications VOL. 47, NO. 2, MARCH/APRIL 2011 pp. 861-872.

[A15] A. Ragusa, A. Di Piazza, M. C. Di Piazza, G. Vitale, "Environmental Data Processing by Clustering Methods for Energy Forecast and Planning", Renewable Energy (2010), doi:10.1016/j.renene.2010.09.011. Online available <http://dx.doi.org/10.1016/j.renene.2010.09.011>, RENEWABLE ENERGY vol. 36 Issue 3, March 2011, pp. 1063-1074

[A14] A. Ragusa, M. C. Di Piazza, M. Pucci, G. Vitale, "Analytical versus Neural Real-time Simulation of a Photovoltaic Generator based on a DC-DC Converter", IEEE Transactions on Industry Applications vol. 46, no. 6, nov/dec 2010. pp. 2501-2510.

[A13] M.C. Di Piazza, A. Ragusa, G. Vitale, "Effects of Common Mode Active Filtering in Induction Motor Drives for Electric Vehicles", IEEE Transactions on Vehicular Technology, Special Section on Vehicle Power and Propulsion. VOL. 59, NO. 6, JULY 2010

[A12] M.C. Di Piazza, G. Vitale, "A Laplace Domain Modelling Approach for CM Active EMI Filters", PRZEGLĄD ELEKTROTECHNICZNY (Electrical Review), ISSN 0033-2097, R. 86 NR 3/2010, pp. 200-204.

[A11] M.C. Di Piazza, G. Vitale, "Photovoltaic field emulation including dynamic and partial shadow conditions", APPLIED ENERGY, n. 87 (2010) pp. 814–823.

[A10] M.C. Di Piazza, A. Ragusa, G. Vitale, "Input EMI in Inverter-fed Motor Drives with Active Filtering of Motor CM Voltage", PRZEGLĄD ELEKTROTECHNICZNY (Electrical Review), ISSN 0033-2097, R. 85 NR 10/2009, pp. 248-252.

[A9] M.C. Di Piazza, A. Ragusa, G. Vitale, "EMI Filter Design Issues in AC Motor Drives with Motor-Side Common Mode Active

Compensation", IEEE Transaction on Electromagnetic compatibility Volume 51, [Issue 3](#), Part 2, Aug. 2009 Page(s):673 – 682.

[A8] G. Marsala, M. Pucci, G. Vitale, M. Cirrincione, A. Miraoui, "A Prototype of a Fuel Cell PEM Emulator Based on a Buck Converter", APPLIED ENERGY, vol. 86, issue 10, pp.2192-2203, Oct 2009.

[A7] M. Cirrincione, M. Pucci, G. Vitale A. Miraoui, "Current Harmonic Compensation by a Single-Phase Shunt Active Power Filter Controlled by Adaptive Neural Filtering" IEEE Transactions on Industrial Electronics Vol. 56, No. 8, August 2009.

[A6] M. Cirrincione, M. Pucci, G. Scordato, G. Vitale, "A Single-Phase Shunt Active Power Filter for Current Harmonic Compensation by Adaptive Neural Filtering", EPE Journal, vol 19, n° 1, March 2009.

*[A5] M. Cirrincione, M. Pucci, G. Vitale, "A Single-Phase DG Generation Unit With Shunt Active Power Filter Capability by Adaptive Neural Filtering", IEEE Transaction on Industrial Electronics, Vol. 55, n. 5, pp. 2093-2110, May 2008.

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AMBITI DI RICERCA

- Power Electronics
- Electromagnetic Compatibility
- Social robotics