Andrea Formentini

Academic qualifications

2011-2013	PhD in Electrical Engineering – University of Genova (Italy) Excellent
2008-2010	MSc in Computer Science Engineering, Robotics e Automation – University of Genova (Italy) 110/110
2005-2007	BSc in Computer Science Engineering - University of Genova (Italy) 110/110

Design experiences

uCube	uCube is a general purpose, high performance control platform for regulation of power converters. It is based on the Xilinx System on Chip Zynq which integrates a dual-core ARM Cortex-A9 processor with a FPGA. The system has been equipped with fiber optic channels for an isolated communication with the inverter, low-noise ADC for the sampling of currents and voltages and encoder and resolver interfaces for drive application. For more details, refer to: Galassini, Alessandro, G. Lo Calzo, Andrea Formentini, C. Gerada, Pericle Zanchetta, and Alessando Costabeber. "uCube: Control platform for power electronics." In Electrical Machines Design, Control and Diagnosis (WEMDCD), 2017 IEEE Workshop on, pp. 216-221. IEEE, 2017.

Research grants

PRIN	PI and coordinator of the national research project *N-ModEP: a New MODdular Electric Powertrain concept for road vehicles* € 225k
Phase Motion Control	PI of an industrial project with the Italian company Phase Motion Control for the development of a power charger for electric vehicle. £ 175k
Phase Motion Control	Co-investigator of an industrial project with the Italian company Phase Motion Control for the development of a control architecture for a 500kW matrix converter prototype. £ 145k
BMT	Co-investigator of an industrial project with the Chinese company BMT for the development of new control algorithms for high performance servo drive. £ 290k

Research Collaborations

Tampere University	I am currently co-supervising a PhD student with Tampere University about MPC for grid connected inverters.

University of Pavia	I am currently co-supervising a PhD student from University of Pavia. The research activity is about the design of new converter topologies for electric vehicle applications.

Teaching experiences

Sep 2023-Present	Università di Genova – IT *Associate professor* *Electronics*
Sep 2021-Present	Università di Genova – IT *Associate professor* *Digital Control*
Sep 2021-Present	Università di Genova – IT *Associate professor* *Electrical machines*
Sep 2019-Dec 2020	University of Nottingham – UK *Assistant professor* *Advanced Control*
Sep 2019-Dec 2020	University of Nottingham – UK *Assistant professor* *HDL for Programmable Devices*
Sep 2018-Dec 2020	University of Nottingham – UK *Assistant professor* *Integrated Circuits and Systems*
Sep 2018-Dec 2018	University of Nottingham – UK *Assistant professor* *Scalable cross-platform software design*
Sep 2013-Dec 2013	University of Genova - Italy *Lecturer* Course of Mechatronics for MSc in Computer Science and European Master of Robotics (EMARO)
Sep 2012-Dec 2012	University of Genova – Italy *Teaching Assistant* Computer Science – BSc Electrical Engineering

Academic Positions

Nov 2023 - Present	Università di Genova - IT *Associate professor*

Nov 2020 - Nov 2023	Università di Genova - IT *Assistant professor*
Gen 2021 - Jul 2021	University of Oxford - UK *Lecturer*
Sep 2018 - Dec 2020	University of Nottingham - UK *Assistant professor*
Oct 2014 - Aug 2018	University of Nottingham - UK *Research Fellow*
Nov 2013 - Sep 2014	University of Genova - Italy *Research Fellow*

Working Positions

Jun 2010 - Apr 2011	Motronica – Genova - Italy *Software engineer*

Academic services

Associate editor for:

- IEEE Transactions on Industry Applications

Reviewer for:

- IEEE Transactions on Control Systems Technology
- IEEE Transactions on Power Electronics
- IEEE Transactions on Industry Applications
- IEEE Transactions on Industrial Electronics
- Energy Conversion Congress and Exposition (ECCE) 2019
- Energy Conversion Congress and Exposition (ECCE) 2018
- Energy Conversion Congress and Exposition (ECCE) 2017
- Energy Conversion Congress and Exposition (ECCE) 2016

Topic chair for:

- Energy Conversion Congress and Exposition (ECCE) 2022
- Energy Conversion Congress and Exposition (ECCE) 2019
- Energy Conversion Congress and Exposition (ECCE) 2018
- Energy Conversion Congress and Exposition (ECCE) 2017
- Energy Conversion Congress and Exposition (ECCE) 2016

Awards

Industrial Power Converter Committee of the IEEE Industry Applications Society - 2020 Third Prize Paper Award for: "*Disturbance Rejection Ability Enhancement Using Repetitive Observer in Phase-locked Loop for More Electric Aircraft*"

Industrial Power Converter Committee of the IEEE Industry Applications Society - 2017 Third Prize Paper Award for: "*Fixed frequency finite-state model predictive control for indirect matrix converters with optimal switching pattern*"

Publications

Journal publications:

1. Di Benedetto, M., Tang, M., Lidozzi, A., Solero, L., Formentini, A. and Zanchetta, P., 2022. Resonant and a new disturbance-observer combined control for off-grid voltage source inverter. International Journal of Power Electronics and Drive Systems, 13(1), p.223.

2. Tang, M., Bifaretti, S., Pipolo, S., Formentini, A., Odhano, S. and Zanchetta, P., 2021. A novel low computational burden dual-observer phase-locked loop with strong disturbance rejection capability for more electric aircraft. IEEE Transactions on Industry Applications, 57(4), pp.3832-3841.

3. Czerniewski, B., Formentini, A., Dewar, D., Zanchetta, P. and Schanen, J.L., 2021. Interaction of AC Grid Filters in Aircraft and Influence of the System Dynamic Behavior. IEEE Transactions on Industry Applications, 58(2), pp.2134-2143.

4. Pipolo, S., Formentini, A., Trentin, A., Zanchetta, P., Calvini, M. and Venturini, M., 2021. A novel Matrix converter modulation with reduced number of commutations. IEEE Transactions on Industry Applications.

5. Wen, Z., Valente, G., Formentini, A., Papini, L., Gerada, C. and Zanchetta, P., 2021. Open-Circuit Fault Control Techniques for Bearingless Multisector Permanent Magnet Synchronous Machines. IEEE Transactions on Industry Applications, 57(3), pp.2527-2536.

6. Dewar, D., Formentini, A., Li, K., Zanchetta, P. and Wheeler, P., 2021. Optimal and automated decentralised converter control design in more electrical aircraft power electronics embedded grids. IET Power Electronics, 14(3), pp.690-705.

7. Rohten, J.A., Dewar, D.N., Zanchetta, P., Formentini, A., Muñoz, J.A., Baier, C.R. and Silva, J.J., 2021. Multivariable Deadbeat Control of Power Electronics Converters with Fast Dynamic Response and Fixed Switching Frequency. Energies, 14(2), p.313.

8. Li, K., Formentini, A., Dewar, D. and Zanchetta, P., 2021. Controller Design of an Active Front-End Converter Keeping in Consideration Grid Dynamic Interaction. IEEE Transactions on Industrial Electronics.

9. Rovere, L., Valente, G., Formentini, A. and Zanchetta, P., 2021. Parameters and Volt-Ampere Ratings of a Floating Capacitor Open-End Winding Synchronous Motor Drive for extended CPSR. IEEE Transactions on Industrial Electronics.

10. Wen, Z., Valente, G., Formentini, A., Papini, L., Gerada, C. and Zanchetta, P., 2021. A Novel Current Limitation Technique Exploiting the Maximum Capability of Power Electronic Inverter and Bearingless Machine. IEEE Transactions on Industry Applications.

11. Tang, M., Odhano, S., Formentini, A. and Zanchetta, P., 2020. Reuse of a damaged permanent magnet synchronous motor for torque ripple and acoustic noise elimination using a novel repetitive observer. IEEE Transactions on Industry Applications, 56(4), pp.3790-3798.

12. Amerise, A., Rovere, L., Formentini, A., Mengoni, M., Zarri, L. and Zanchetta, P., 2020. Electric Drive Based on an Open-End Winding Surface PM Synchronous Machine with a Floating Capacitor Bridge. *IEEE Transactions on Industry Applications*, 56(3), pp.2709-2718.

13. Wang, X., Sala, G., Zhang, H., Gu, C., Buticchi, G., Formentini, A., Gerada, C. and Wheeler, P., 2019. Torque Ripple Reduction in Sectored Multi Three-Phase Machines Based on PWM Carrier Phase Shift. *IEEE Transactions on Industrial Electronics*.

14. M. Tang, A. Formentini, S. A. Odhano and P. Zanchetta, "Torque Ripple Reduction of PMSMs using a Novel Angle-based Repetitive Observer," *IEEE Transactions on Industrial Electronics* (2019). DOI: 10.1109/TIE.2019.2912798.

15. L. Rovere, A. Formentini, G. Lo Calzo, P. Zanchetta and T. Cox, "Zero-Sequence Voltage Elimination for Dual Fed Common dc-link Open-End Winding PMSM High Speed Starter-Generator, Part I: Modulation," *IEEE Transactions on Industry Applications* (2019). DOI: 10.1109/TIA.2019.2907073.

16. L. Rovere, A. Formentini, G. Lo Calzo, P. Zanchetta and T. Cox, "Zero-Sequence Voltage Elimination for Dual Fed Common dc-link Open-End Winding PMSM High Speed Starter-Generator, Part II: Dead Time Hysteresis Control of Zero Sequence Current," *IEEE Transactions on Industry Applications* (2019). DOI: 10.1109/TIA.2019.2907095.

17. Rovere, Luca, Andrea Formentini, and Pericle Zanchetta. "FPGA Implementation of a Novel Oversampling DeadBeat Controller for PMSM Drives." *IEEE Transactions on Industrial Electronics*, vol. 66, no. 5, pp. 3731-3741, May 2019. DOI: 10.1109/TIE.2018.2851994.

18. Sala, Giacomo, Giorgio Valente, Andrea Formentini, Luca Papini, David Gerada, Pericle Zanchetta, A. Tani, and C. Gerada. "Space Vectors and Pseudoinverse Matrix Methods for the Radial Force Control in Bearingless Multisector Permanent Magnet Machines." *IEEE Transactions on Industrial Electronics*, vol. 65, no. 9, pp. 6912-6922, Sept. 2018. DOI: 10.1109/TIE.2018.2795590.

19. Valente, Giorgio, Andrea Formentini, Luca Papini, Pericle Zanchetta, and Christopher Gerada. "Performance improvement of bearingless multi-sector PMSM with optimal robust position control." *IEEE Transactions on Power Electronics*, vol. 34, no. 4, pp. 3575-3585, April 2019. DOI: 10.1109/TPEL.2018.2853038.

20. Salis, Valerio, Alessandro Costabeber, Stephen M. Cox, Andrea Formentini, and Pericle Zanchetta. "Stability assessment of high-bandwidth DC voltage controllers in single-phase active-front-ends: LTI vs LTP models." *IEEE Journal of Emerging and Selected Topics in Power Electronics*, vol. 6, no. 4, pp. 2147-2158, Dec. 2018. DOI: 10.1109/JESTPE.2018.2810282.

21. Valente, Giorgio, Luca Papini, Andrea Formentini, Chris Gerada, and Pericle Zanchetta. "Radial Force Control of Multi-Sector Permanent Magnet Machines for Vibration Suppression." *IEEE Transactions on Industrial Electronics*, vol. 65, no. 7, pp. 5395-5405, July 2018. DOI: 10.1109/TIE.2017.2780039.

22. Tang, Mi, Alberto Gaeta, Andrea Formentini, and Pericle Zanchetta. "A fractional delay variable frequency repetitive control for torque ripple reduction in PMSMs." *IEEE Transactions on Industry Applications*, vol. 53, no. 6, pp. 5553-5562, Nov.-Dec. 2017. DOI: 10.1109/TIA.2017.2725824.

23. Odhano, Shafiq, Radu Bojoi, Andrea Formentini, Pericle Zanchetta, and Alberto Tenconi. "Direct flux and current vector control for induction motor drives using model predictive control theory." *IET Electric Power Applications*, vol. 11, no. 8, pp. 1483-1491, 9 2017. DOI: 10.1049/iet-epa.2016.0872.

24. Salis, Valerio, Alessandro Costabeber, Stephen Cox, Pericle Zanchetta, and Andrea Formentini. "Stability boundary analysis in single-phase grid-connected inverters with PLL by LTP theory." *IEEE Transactions on Power Electronics*, vol. 33, no. 5, pp. 4023-4036, May 2018. DOI: 10.1109/TPEL.2017.2714860.

25. Formentini, Andrea, Alberto Oliveri, Mario Marchesoni, and Marco Storace. "A switched predictive controller for an electrical powertrain system with backlash." *IEEE Transactions on Power Electronics*, vol. 32, no. 5, pp. 4036-4047, May 2017. DOI: 10.1109/TPEL.2016.2587756.

26. Tarisciotti, Luca, Jiaxing Lei, Andrea Formentini, Andrew Trentin, Pericle Zanchetta, Patrick Wheeler, and Marco Rivera. "Modulated Predictive Control for Indirect Matrix Converter." *IEEE Transactions on Industry Applications*, vol. 53, no. 5, pp. 4644-4654, Sept.-Oct. 2017. DOI: 10.1109/TIA.2017.2699666

27. Tarisciotti, Luca, Andrea Formentini, Alberto Gaeta, Marco Degano, Pericle Zanchetta, Roberto Rabbeni, and Marcello Pucci. "Model predictive control for shunt active filters with fixed switching frequency." *IEEE Transactions on Industry Applications*, vol. 53, no. 1, pp. 296-304, Jan.-Feb. 2017. DOI: 10.1109/TIA.2016.2606364.

28. Tang, Mi, Alberto Gaeta, Andrea Formentini, Kazuhiro Ohyama, Pericle Zanchetta, and Greg Asher. "Enhanced DBCC for high-speed permanent magnet synchronous motor drives." *IET Power Electronics*, vol. 9, no. 15, pp. 2880-2890, 14 12 2016. DOI: 10.1049/iet-pel.2015.0232.

29. Rovere, Luca, Andrea Formentini, Alberto Gaeta, Pericle Zanchetta, and Mario Marchesoni. "Sensorless finite-control set model predictive control for IPMSM drives." *IEEE Transactions on Industrial Electronics*, vol. 63, no. 9, pp. 5921-5931, Sept. 2016. DOI: 10.1109/TIE.2016.2578281.

30. Formentini, Andrea, Andrew Trentin, Mario Marchesoni, Pericle Zanchetta, and Pat Wheeler. "Speed finite control set model predictive control of a PMSM fed by matrix converter." *IEEE Transactions on Industrial Electronics*, vol. 62, no. 11, pp. 6786-6796, Nov. 2015. DOI: 10.1109/TIE.2015.2442526.

31. Calvini, Marco, Mauro Carpita, Andrea Formentini, and Mario Marchesoni. "PSO-based self-commissioning of electrical motor drives." *IEEE Transactions on Industrial Electronics*, vol. 62, no. 2, pp. 768-776, Feb. 2015. DOI: 10.1109/TIE.2014.2349478.

Conference publications:

1. Tresca, G., Formentini, A., Di Salvo, S., Leuzzi, R., Anglani, N. and Zanchetta, P., 2022, June. Reconfigurable Cascaded Multilevel Converter design for Battery Energy System Storage. In 2022 International Symposium on Power Electronics, Electrical Drives, Automation and Motion (SPEEDAM) (pp. 725-729). IEEE.

2. Tresca, G., Formentini, A., Gemma, F., Lusardi, F., Leuzzi, R. and Zanchetta, P., 2022, September. SOC governed algorithm for an EV Cascaded H-Bridge connected to a DC charger. In 2022 24th European Conference on Power Electronics and Applications (EPE'22 ECCE Europe) (pp. 1-9). IEEE.

3. Tresca, G., Formentini, A., Granata, S., Leuzzi, R. and Zanchetta, P., 2022, October. Direct AC charging of EV Reconfigurable Cascaded Multilevel Converter. In 2022 IEEE Energy Conversion Congress and Exposition (ECCE) (pp. 1-8). IEEE.

4. Tresca, G., Leuzzi, R., Formentini, A., Rovere, L., Anglani, N. and Zanchetta, P., 2021, October. Reconfigurable Cascaded Multilevel Converter: A New Topology For EV Powertrain. In 2021 IEEE Energy Conversion Congress and Exposition (ECCE) (pp. 1454-1460). IEEE.

5. Tang, M., Bifaretti, S., Pipolo, S., Formentini, A., Odhano, S. and Zanchetta, P., 2020, October. Disturbance Rejection Ability Enhancement Using Repetitive Observer in Phase-locked Loop for More Electric Aircraft. In 2020 IEEE Energy Conversion Congress and Exposition (ECCE) (pp. 6379-6384). IEEE.

6. Rovere, L., Pipolo, S., Formentini, A. and Zanchetta, P., 2020, October. AC-DC Isolated Matrix Converter Charger: Topology and Modulation. In 2020 IEEE Energy Conversion Congress and Exposition (ECCE) (pp. 1583-1588). IEEE.

7. Minaglia, D., Rovere, L., Formentini, A., Leuzzi, R., Pipolo, S., Marchesoni, M. and Zanchetta, P., 2020, October. Control of a Dual Fed Open End Winding SPMSM with a Floating Capacitor. In 2020 IEEE Energy Conversion Congress and Exposition (ECCE) (pp. 4036-4043). IEEE.

8. Wen, Z., Valente, G., Formentini, A., Papini, L., Zanchetta, P. and Gerada, C., 2020. Mechanical Vibration Suppression on Multi-Sector PMSM with Optimal Active Vibration Control.

9. Wen, Z., Valente, G., Formentini, A., Papini, L., Zanchetta, P. and Gerada, C., 2019, November. Smart Current Limitation Technique for a Multiphase Bearingless Machine with Combined Winding System. In 2019 IEEE Energy Conversion Congress and Exposition (ECCE) (pp. 6099-6105). IEEE.

10. Dewar, D., Rhoten, J., Formentini, A. and Zanchetta, P., 2019, October. Fast Self-Tuning Decentralized Variable Frequency Optimal Controller Design for Three-Phase Embedded Grids. In IECON 2019-45th Annual Conference of the IEEE Industrial Electronics Society (Vol. 1, pp. 3894-3899). IEEE.

11. Li, K., Dewar, D., Formentini, A., Zanchetta, P. and Wheeler, P., 2019, September. Grid Impedance Identification and Structured-h2 Optimization Based Controller Design of Active Front-end in Embedded AC Networks. In 2019 IEEE Energy Conversion Congress and Exposition (ECCE) (pp. 4840-4845). IEEE.

12. Formentini, A., Pipolo, S., Trentin, A. and Zanchetta, P., 2019, September. Optimal Control of Matrix Converters. In 2019 21st European Conference on Power Electronics and Applications (EPE'19 ECCE Europe) (pp. 1-8). IEEE.

13. Tang, M., Formentini, A. and Zanchetta, P., 2019, September. Repetitive Observer Design for Torque Ripple Reduction in PMSM Drives. In 2019 21st European Conference on Power Electronics and Applications (EPE'19 ECCE Europe) (pp. 1-9). IEEE.

14. Czerniewski, B., Formentini, A., Dewar, D., Zanchetta, P. and Schanen, J.L., 2019, September. Impact of Converters Interactions on Control Design in a Power Electronics Dense Network: Application to More Electric Aircraft. In *2019 21st European Conference on Power Electronics and Applications (EPE'19 ECCE Europe)* (pp. P-1). IEEE.

15. Pipolo, S., Formentini, A., Trentin, A., Zanchetta, P., Calvini, M. and Venturini, M., 2019, May. A New Modulation Approach for Matrix Converter. In *2019 10th International Conference on Power Electronics and ECCE Asia (ICPE 2019-ECCE Asia)* (pp. 1021-1027). IEEE.

16. Wen, Z., Valente, G., Formentini, A., Papini, L., Zanchetta, P. and Gerada, C., 2019, May. Single-Phase Open-Circuit Fault Operation of Bearingless Multi-Sector PM Machines. In *2019 IEEE International Electric Machines & Drives Conference (IEMDC)* (pp. 1087-1092). IEEE.

17. Rovere, L., Formentini, A. and Zanchetta, P., 2019, May. Finite Control Set-Model Predictive Control for the Dual Fed Common Dc-Link Open-End Winding PMSM Drive. In *2019 IEEE International Electric Machines & Drives Conference (IEMDC)* (pp. 2203-2209). IEEE.

18. Amerise, Albino, Luca Rovere, Andrea Formentini, Michele Mengoni, Luca Zarri, and Pericle Zanchetta. "Control System for Open-End Winding Surface PM Synchronous Machines with a Floating Capacitor Bridge." In 2018 IEEE Energy Conversion Congress and Exposition (ECCE), pp. 6585-6591. IEEE, 2018.

19. Dewar, David, Kang Li, Andrea Formentini, Pericle Zanchetta, and Pat Wheeler. "Performance Analysis of H_2 Optimally Controlled Three-Phase Grids." In 2018 IEEE Energy Conversion Congress and Exposition (ECCE), pp. 2258-2264. IEEE, 2018.

20. Sabatini, V., A. Lidozzi, L. Solero, A. Formentini, P. Zanchetta, and S. Bifaretti. "Real-Time Implicit Model Predictive Control for 3-phase VSI." In 2018 IEEE Energy Conversion Congress and Exposition (ECCE), pp. 4015-4020. IEEE, 2018.

21. Di Benedetto, Marco, Alessandro Lidozzi, Luca Solero, Mi Tang, Andrea Formentini, and Pericle Zanchetta. "Disturbance-Observer Assisted Controller for Stand-Alone Four-Leg Voltage Source Inverter." In 2018 IEEE Energy Conversion Congress and Exposition (ECCE), pp. 2265-2270. IEEE, 2018.

22. Li, Kang, David Dewar, Andrea Formentini, Pericle Zanchetta, and Pat Wheeler. "Optimized control design for power converters in power electronics embedded networks integrating grid model identification." In 2018 IEEE Industry Applications Society Annual Meeting (IAS), pp. 1-6. IEEE, 2018.

23. Odhano, Shafiq, Mi Tang, Andrea Formentini, Pericle Zanchetta, and Radu Bojoi. "Identification of Linear Permanent Magnet Synchronous Motor Parameters and Inverter Non-Linearity Effects." In 2018 International Symposium on Power Electronics, Electrical Drives, Automation and Motion (SPEEDAM), pp. 26-32. IEEE, 2018.

24. Dewar, David, Andrea Formentini, and Pericle Zanchetta. "Automated and scalable optimal control of three-phase embedded power grids including PLL." *Energy Conversion Congress and*

Exposition (ECCE), 2017 IEEE. IEEE, 2017.

25. Rovere, Luca, Andrea Formentini, Giovanni Lo Calzo, Ferióle Zanchetta, and Tom Cox. "IGBT-SiC dual fed open end winding PMSM drive." In Electric Machines and Drives Conference (IEMDC), 2017 IEEE International, pp. 1-7. IEEE, 2017.

26. Rovere, Luca, Andrea Formentini, Giovanni Lo Calzo, Pericle Zanchetta, and Tom Cox. "IGBT-SiC dual fed open end winding PMSM drive." In Electric Machines and Drives Conference (IEMDC), 2017 IEEE International, pp. 1-7. IEEE, 2017.

27. Valente, G., L. Papini, A. Formentini, C. Gerada, and P. Zanchetta. "Radial force control of Multi-Sector Permanent Magnet machines considering radial rotor displacement." In Electrical Machines Design, Control and Diagnosis (WEMDCD), 2017 IEEE Workshop on, pp. 140-145. IEEE, 2017.

28. Galassini, Alessandro, G. Lo Calzo, Andrea Formentini, C. Gerada, Pericle Zanchetta, and Alessando Costabeber. "uCube: Control platform for power electronics." In Electrical Machines Design, Control and Diagnosis (WEMDCD), 2017 IEEE Workshop on, pp. 216-221. IEEE, 2017.

29. Rovere, Luca, Andrea Formentini, and Pericle Zanchetta. "Oversampled deadbeat current control strategy for PMSM drives." In Industrial Electronics Society, IECON 2016-42nd Annual Conference of the IEEE, pp. 2868-2872. IEEE, 2016.

30. Odhano, S. A., Andrea Formentini, Pericle Zanchetta, R. Bojoi, and A. Tenconi. "Finite control set and modulated model predictive flux and current control for induction motor drives." In Industrial Electronics Society, IECON 2016-42nd Annual Conference of the IEEE, pp. 2796-2801. IEEE, 2016.

31. Tang, Mi, Andrea Formentini, S. Odhano, and Pericle Zanchetta. "Design of a repetitive controller as a feed-forward disturbance observer." In Industrial Electronics Society, IECON 2016-42nd Annual Conference of the IEEE, pp. 78-83. IEEE, 2016.

32. Li, Q., Andrea Formentini, Arnaud Baraston, Xiangliang Zhang, Pericle Zanchetta, Jean-Luc Schanen, and Dushan Boroyevich. "Taking into account interactions between converters in the design of aircraft power networks." In Energy Conversion Congress and Exposition (ECCE), 2016 IEEE, pp. 1-7. IEEE, 2016.

33. Lei, Jiaxing, Luca Tarisciotti, Andrew Trentin, Pericle Zanchetta, Patrick Wheeler, and Andrea Formentini. "Fixed frequency finite-state model predictive control for indirect matrix converters with optimal switching pattern." In Energy Conversion Congress and Exposition (ECCE), 2016 IEEE, pp. 1-8. IEEE, 2016.

34. Valente, Giorgio, Luca Papini, Andrea Formentini, C. Gerada, and Pericle Zanchetta. "Radial force control of multi-sector permanent magnet machines." In Electrical Machines (ICEM), 2016 XXII International Conference on, pp. 2595-2601. IEEE, 2016.

35. Formentini, Andrea, David Dewar, Pericle Zanchetta, Pat Wheeler, Dushan Boroyevich, and Jean-Luc Schanen. "Optimal control of three-phase embedded power grids." In Control and Modeling for Power Electronics (COMPEL), 2016 IEEE 17th Workshop on, pp. 1-6. IEEE, 2016.

36. Tang, Mi, Alberto Gaeta, Andrea Formentini, and Pericle Zanchetta. "A variable frequency angle-based repetitive control for torque ripple reduction in PMSMs." (2016): 6-6.

37. Rabbeni, Roberto, Luca Tarisciotti, Alberto Gaeta, Andrea Formentini, Pericle Zanchetta, Marcello Pucci, Marco Degano, and Marco Rivera. "Finite states modulated model predictive control for active power filtering systems." In Energy Conversion Congress and Exposition (ECCE), 2015 IEEE, pp. 1556-1562. IEEE, 2015.

38. Formentini, Andrea, Liliana De Lillo, Mario Marchesoni, Andrew Trentin, Patrick Wheeler, and Pericle Zanchetta. "A new mains voltage observer for PMSM drives fed by matrix converters." In Power Electronics and Applications (EPE'14-ECCE Europe), 2014 16th European Conference on, pp. 1-10. IEEE, 2014.

39. Formentini, A., G. Maragliano, M. Marchesoni, and L. Vaccaro. "A sensorless PMSM drive with inductance estimation based on FPGA." In Power Electronics, Electrical Drives, Automation and Motion (SPEEDAM), 2012 International Symposium on, pp. 1039-1044. IEEE, 2012.

40. Calvini, M., A. Formentini, G. Maragliano, and M. Marchesoni. "Self-commissioning of direct drive systems." In Power Electronics, Electrical Drives, Automation and Motion (SPEEDAM), 2012 International Symposium on, pp. 1348-1353. IEEE, 2012.