



## Professor Pericle Zanchetta, Fellow IEEE

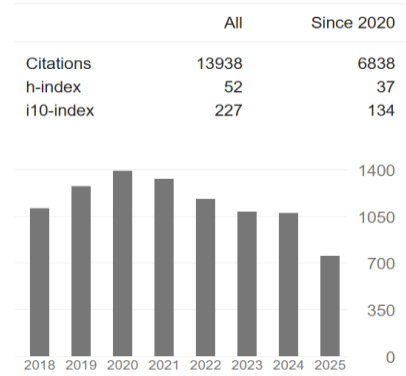
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### Education

- Ph.D. in Power Electronics, Technical University of Bari, Italy, 1998
- 5 years Master degree in Electronic Engineering, Technical University of Bari, Italy.

### Academic Career

- November 2018 – Present
  - *Full Professor in Power Electronics* (Full time since October 2022)
  - Dept. of Electrical, Computer and Biomedical Engineering, University of Pavia, Italy
- August 2013 – September 2024
  - *Full Professor in Control and Power Electronics Systems* (0.3 FTE since October 2022)
  - Dept. of Electrical and Electronic Engineering, University of Nottingham, UK
- August 2009 – July 2013:
  - *Associate professor in Control and Power Electronics Systems*
  - Dept. of Electrical and Electronic Engineering, University of Nottingham, UK.
- October 2003 – July 2009:
  - *Lecturer in Control of Power Electronics Systems*
  - School of Electrical and Electronic Engineering, University of Nottingham, UK.
- October 2001 – September 2003:
  - *Visiting Lecturer in Power Electronics and Control*
  - School of Electrical and Electronic Engineering, University of Nottingham, UK.
- October 1998 – September 2007:
  - *Assistant Professor in Power Electronics*
  - Electrical and Electronic Engineering Department, Technical University of Bari, Italy.
- November 1997 to September 1998:
  - *Research Associate* (Converters, Electrical Machines and Drives Group)
  - Electrical and Electronic Engineering Department, Technical University of Bari, Italy.
- November 1994 to October 1997:
  - *PhD student* (Converters, Electrical Machines and Drives Group)
  - Electrical and Electronic Engineering Department, Technical University of Bari, Italy.

### Scientific Publications (See attached Bibliography)

- **148** Papers published in Scientific Journals
- **318** Papers Published in Refereed International Conferences

### Research Projects (*budget as Principal investigator over 6 Million Euro*)

- **Principal Investigator:** PE NEST Program, Network 4, Next Generation EU Spoke 6 “Grid Active Node for DC Electrical Systems” – (160k Euro) 2025
- **Principal Investigator:** Network 4 Energy Sustainable Transition (NEST), Next Generation EU Spoke 5 “Intelligent, Modular and Adaptive Power Conversion Technology for Battery Energy Storage Systems” – (160k Euro) 2024-2025
- **Principal Investigator:** ENI “SiC MOSFET-Based Power Supply for high-current applications” PhD scholarship – (75k Euro) 2025-2028
- **Principal Investigator:** Analog Devices “Design control and implementation of an LLC resonant converter using GaN technology” – (90k Euro) 2025-2028
- **Principal Investigator:** Infineon “Solid State Transformers for next generation AI server stations” – (225k Euro) 2025-

- **Principal Investigator:** EU – Marie Curie “Development of high reliability motor drives for next generation propulsion applications” – Dorna (University of Pavia partner around 116k Euro) 2022-2025
- **Principal Investigator:** Marelli “Isolated DC/DC LLC resonant GaN converter for motor sport applications” PhD scholarship– (45k Euro) 2022-2025
- **Principal Investigator:** ABB “Apollo Split Power Electronics: AC/DC parallel connection. Analysis Control and Stability” (around 66k Euro) 2024
- **Principal investigator:** NIDEC Italia Spa, Power electronics Multilevel converters based on Cascade H-Bridge and their control for high power applications, (around 680k Euro) 2021-2027
- **Principal investigator:** Yako China, FPGA based implementation of advanced control for electrical drives, (around 350k Euro) 2021-2024
- **Principal investigator:** ENI Italia Spa, Power conversion system for redox vanadium battery interface in PV applications, (around 200k Euro) 2020-2023
- **Principal investigator:** Phase Italia Spa, SiC Power converter for fast battery charger in automotive applications, (around 200k GBP) 2019-2021
- **Principal investigator:** Best Motion Technology Co. Ltd China: High performance PM servo drive control around 970k GBP) 2017-2022
- **Principal investigator:** Phase Italia Spa, Design and development of a 500kW Matrix converter for drives applications, (around 150k GBP) 2017-2020
- **Principal investigator:** EPSRC GCRF Institutional Sponsorship Awards “Smart Micro-grid Systems for Remote Islands in the South Pacific” (around 20k GBP) 2017-2018.
- **Principal investigator:** Nowforever Technology Co. Ltd China: Advanced high performance control of induction and PM motor drives, (around 800k GBP) 2012-2017
- **Principal investigator:** EPSRC: IeMRC-Cummins generators “Fuel consumption Optimization of diesel generator power packs” 3 years project (around 60k GBP) 2007 – 2010.
- **Principal investigator:** KTP with Water Research Centre (WRc): Non-Intrusive load and efficiency monitoring for in service induction motors, 2 years project (around 130k GBP) 2009 – 2011
- **Principal investigator:** Water Research Centre (WRc): “Controlling energy costs using non-intrusive monitoring” 2 years contract (around 20k GBP) 2006 - 2008.
- **Principal investigator:** University new lecturers fund “*Biologically Inspired System Identification for Materials Characterization in the Aerospace Industry*” (around 12k GBP) 2005 - 2006
- **Principal Investigator** of a “*Marie Curie Early Stage Training Area*” having University of Nottingham as leading partner, funded by the European Commission (around 1600k Euro) 2004 - 2008.
- **Principal investigator:** “*Investigation of the electromagnetic emissions produced by power converters in railway systems*”. Technical University of Bari, financed by the Italian Ministry of University and Scientific Research (MURST) and “Ansaldo Trasporti” Italy – (50K Euro). 1999 - 2000
- **Co-investigator:** EPSRC Power Electronics centre. 2014-2019 (around 1M GBP).  
**Principal investigator** for the development of a SiC open end winding PM machine drive for aircraft starter generator (value around 200k GBP).
- **Co-investigator:** “Project AMSRL-DS-E/R&D 9780-EE-01 (70-1s)” funded by US Army (180k USD yearly)  
**Principal investigator** for a part of the previous project: “GA optimisation of a 400kW induction motor drive using a SiC inverter” funded by US Army (about 50k USD) 2004 - 2006
- **Co-investigator:** EU JTI (CLEAN SKY) – 2009 – 2016
- **Co-investigator:** EU (MOET) – 2006 - 2009
- **Co-investigator:** EU (UNIFLEX) (about 2M Euro) 2006 - 2009
- **Co-investigator:** EPSRC: PEMC group Nottingham Platform grant (around 1M GBP) 2006 – 2009
- **Co-investigator:** “90kVA Matrix Converter Ground Power Unit” funded by AXA POWER (40k Euro) - 2004.
- **Co-Investigator/Manager** of a “*Marie Curie Early Stage Training Area*” having University of Nottingham as leading partner, funded by the European Commission (around 800k Euro) 2002 - 2006.
- **Co-investigator** “*Development of a 40KVA matrix converter to provide aircraft ground power supply*” University of Nottingham and PEMS, financed by MOD (around 100K GBP) 2001 – 2003.
- **Other Grants:** Many travel grants from different funding bodies among which Royal society, Santander, University of Nottingham.
- **Co-investigator:** “*Low power electrical drives for home-applications*” financed at the Technical University of Bari by Italian MURST (50K Euro) 2001 - 2003.
- **Co-investigator:** “*LISAR: Development of Scientific Laboratory of Automation and Robotics*” Technical University of Bari, financed by Italian MURST (300k Euro) 2001 -2003.

- **Co-investigator:** “Cluster 13 – Electromagnetic Compatibility”, Technical University of Bari, financed by the Italian MURST (700K Euros).2000 – 2003

## Research Interests

***My general research interests are in the field of Power Electronics for transportation (Automotive and Aerospace) and Renewable energy systems, Electrical drives and Control.*** In particular:

- Power Electronics and drives for automotive and aerospace applications
- SiC and GaN converters design and implementation
- Innovative modelling and advanced control of power converters.
- Power quality, active filtering and impedance estimation
- AC power supplies
- Grid connected power converters
- Matrix and Multilevel converters
- Control design, optimization and system identification using Heuristic Algorithms.
- Model Predictive Control and Repetitive Control
- Advanced control of electrical drives systems
- Stability and control of power electronics embedded networks, both in Energy and automotive/aerospace systems
- Reliability and diagnostic in power electronics and drives

## Fellowships and Awards

- **Elevated to IEEE Fellow class 2019**
- **Best poster award at the international conference IEEE ECCE Europe 2025** for the paper: A. Darjazi Dolaby, S. Bifaretti, A. Lampasi, S. Pipolo, C. Terlizzi, P. Zanchetta “DESIGN OF A HIGH-CURRENT ELECTRONIC LOAD EMULATOR FOR FREQUENCY-DEPENDENT IMPEDANCES”.
- Tarisciotti L., Chen L., Shao S., Dragicevic T., Wheeler P., Zanchetta P. “Finite Control Set Model Predictive Control for Dual Active Bridge Converter”, **IEEE Transactions on Industry Applications**, Year 2022, Volume: 58, Issue: 2.  
**Best paper IEEE-Transactions on Industry Applications 2022 for the IAS Industrial Power Converters Committee**
- Mi Tang, Stefano Bifaretti, Sabino Pipolo, Andrea Formentini, Shafiq Odhano and Pericle Zanchetta, “Disturbance rejection ability enhancement using repetitive observer in phase-locked loop for more electric aircraft”, 2020 IEEE Energy Conversion Congress and Exposition (ECCE).  
**Third prize IEEE-IAS Industrial Power Converters Committee Paper Award 2021**
- R Leuzzi, VG Monopoli, L Rovere, F Cupertino, P Zanchetta, “Effects of Electrical Ageing on Winding Insulation in High-Speed Motors: Analysis and Modelling”, 2018 IEEE Energy Conversion Congress and Exposition (ECCE).  
**Second prize IEEE-IAS Industrial Power Converters Committee Paper Award 2019**
- Tarisciotti, Luca; Lei, Jiaxing; Formentini, Andrea; Trentin, Andrew; Zanchetta, Pericle; Wheeler, Patrick; Rivera, Marco “Fixed Frequency Finite-State Model Predictive Control for Indirect Matrix Converters with Optimal Switching Pattern” 2016 IEEE Energy Conversion Congress and Exposition (ECCE).  
**Third prize IEEE-IAS Industrial Power Converters Committee Paper Award 2017**
- Vazquez, S. ; Leon, J.I. ; Franquelo, L.G. ; Rodriguez, J. ; Young, H.A. ; Marquez, A. ; Zanchetta, P. “Model Predictive Control: A Review of Its Applications in Power Electronics” IEEE Industrial Electronics Magazine Volume 8, Issue 1, 2014, Page(s) 16-31.  
**Best IEEE Industrial Electronics Magazine paper award 2014**
- Trentin, A. ; Zanchetta, P. ; Wheeler, P. ; Clare, J.; “ Performance evaluation of 3-phase buck-type PWM rectifiers with integrated and symmetrical Boost converter using SiC MOSFETS for aircraft application”, 2013 IEEE Energy Conversion Congress and Exposition (ECCE 2013).  
**Second prize US Hybrid Transportation Paper Award 2013**
- November 2025  
Visiting professor at the Universidad de Chile, Santiago, Chile.
- September/October 2024  
Visiting professor at the Universidad Andres Bello, Santiago, Chile.
- November 2023  
Visiting professor at CY Cergy Paris University France
- February 2020  
Visiting professor at the University of Tampere Finland
- June 2019

- Visiting professor at the University of Talca, Chile
- May-June 2018  
Visiting professor at the University of Roma Tor Vergata, Rome Italy.
- May-July 2017  
Visiting professor at the University of Roma Tre, Rome Italy.
- April 2017  
Visiting professor at the University of Pavia, Italy
- December 2016  
Visiting professor at the University of Roma Tor Vergata, Rome Italy
- July 2016  
Visiting professor at the summer school of University of Roma Tre, Rome Italy
- May 2016  
Visiting professor at the University of Talca, Chile
- April 2016  
Visiting professor at the University of Pavia, Italy
- March 2016  
Visiting professor at the University of Talca, Chile
- December 2015  
Visiting professor at the University of Roma Tre, Rome Italy
- September 2015  
Visiting professor at NTNU, Trondheim, Norway
- July 2015  
Visiting professor at the summer school of University of Roma Tre, Rome Italy
- July 2014  
Visiting professor at the Technical University Federico Santa Maria, Valparaiso, Chile, University of Talca, Chile and University of Chile, Santiago – Chile
- May 2014  
Visiting professor at the University of Pavia, Italy
- April 2014  
Visiting professor at CPES, Virginia Tech, VA, USA
- March 2014  
Visiting professor at the University of Nottingham – Ningbo Campus China
- May-July 2013  
Visiting professor at the University of Roma Tre, Rome Italy. Period funded by the University of Roma Tre.
- April 2012  
Visiting professor at CPES, Virginia Tech, VA, USA
- May 2011  
Visiting professor at the Technical University Federico Santa Maria, Valparaiso, Chile.
- November - December 2010:  
Visiting professor at the Technical University Federico Santa Maria, Valparaiso, Chile.
- 2007-2010  
Invited lecturer every January for a 10 hours module “Control of Power Electronics Systems”, University of Rome Tor Vergata – Italy
- June – October 2000:  
Visiting Fellow at the “School of Electrical and Electronic Engineering” in the University of Nottingham, UK.
- December 1999 – March 2000:  
Visiting Fellow at the “School of Electrical and Electronic Engineering” in the University of Nottingham, UK, financed by a “Short Term Mobility” grant for researchers from the Italian CNR (National Research Council).
- July 1999:  
Research Fellow at “ANSALDO Trasporti” Naples (Italy) funded within the program “EU TRAIN”.

### **IEEE Career and Activities**

- IEEE-IAS Vice-President 2025-2026
- IEEE Industry Application Society (IAS) Annual Meeting 2025 and 2026 general Co-Chair
- Head of the Technical Program Committee of the IEEE ECCE 2024 conference
- IEEE-IAS Education Department Chair 2022-2024
- Editor in Chief of the IEEE Open Journal of Industry Applications from January 2020.

- Member of the IEEE-IAS board of directors from January 2020
- IEEE IAS IPCSD chair 2020-2021
- IEEE Fellow class 2019
- IEEE –IAS IPCC Transactions chair 2018-2022
- IEEE IAS IPCSD vice-chair 2018-2019
- Technical Program Chair of the IEEE-ECCE 2018 conference, Portland USA.
- 2016-2017 Chair of the IAS Industrial Power Converter Committee (IPCC)
- 2014-2015 Vice-Chair of the IAS Industrial Power Converter Committee (IPCC)
- 2012-2013 Secretary of the IAS Industrial Power Converter Committee (IPCC)
- 2010-2011 European Liaison of the IAS Industrial Power Converter Committee (IPCC)
- Vice Chair of IEEE ECCE Conferences from 2012 to 2017
- Associate Editor for IEEE transactions on Industry Applications from 2009
- Associate Editor for IEEE transactions on Industrial Informatics from 2011
- Member of the Technical Program Committee and Track Chair for IEEE ISIE 2010
- Member of the Technical Program Committee and Track Chair for IEEE IECON 2016
- Member of the Technical Program Committee and Track Chair for “Control Systems and Applications” IEEE ISIE 2010 International Conference. Member of the organizing committee for the same conference.
- Invited speaker at the predictive control workshop, IEEE ICIT conference, Vina del Mar, Chile (March 2010)
- Session organizer and chairman at many IEEE international conferences.
- Organizer and lecturer of the Tutorial “Automated Intelligent Control design for Power Electronic Systems and Drives” IEEE IECON 2006 International Conference, Paris, France, 2006, IEEE ISIE 2007 International Conference, Vigo, Spain, 2007.
- IEEE member since 2000. IEEE Senior Member since 2015: Industrial Electronics Society, Power Electronic Society, Industry Application Society
- Member of the IAS Industrial Power Converter Committee, IAS Industrial Drives Committee and IAS Electrical machines Committee.
- Guest editor of the IEEE transactions on Industrial Electronics. Special Section on “Optimization in Power Electronics, Electrical Machines and Drives” (2010-2011).
- Guest editor of the IEEE transactions on Industrial Informatics / Industrial Electronics. Special Section on “Digital Control in Power Electronics and Drives” (2011-2012-2013).
- Topic Chair at ECCE conferences and IAS annual meetings from 2006 to 2011

### Other International Involvement

- Invited talk “” University of Chile, Santiago Chile November 2025
- Invited talk “” University Andres Bello, Santiago Chile October 2025
- Invited talk “” CY Cergy Paris University France November 2023
- Member of the Executive committee (Voting member) of EPE (European Power Electronics) Association 2016-2024
- Member of the International Scientific Committee of EPE (European Power Electronics) Association 2016- now
- Invited talk “Co-ordinated control of power converters in power electronics embedded grids” University of Talca, Chile May 2019
- 12 hours course on Control of Power Electronics Systems, University of Pavia, Italy, April 2017
- Invited talk “Power Electronics for smart grids”, University of Talca, Chile May 2016
- 12 hours course on Control of Power Electronics Systems, University of Pavia, Italy, April 2016
- 12 hours course on Control of Power Electronics Systems, University of Talca, Chile, March 2016
- Invited talk “the importance of Power Electronics for future smart grids”, NTNU Trondheim, 9<sup>th</sup> September 2015
- Lectures at the summer school of University of Roma Tre, Italy on 1) Power Electronics in Aerospace systems and 2) Control of Power Electronics Systems. July 2016 and 2016.
- Part of the British Council funded delegation to Texas A&M University, Doha Qatar, March 2015.
- Invited talk “Power Electronics for smart grids”, University of Trento, Italy, 26<sup>th</sup> January 2015
- Invited talk “The importance of Power Electronics in future electrical networks”, University of Pavia, Italy, 16<sup>th</sup> May 2014
- Keynote speaker at the Third IASTED Asian Conference (*AsiaMIC 2013* ) on Modelling, Identification and Control, April 10 – 12, 2013, Phuket, Thailand
- Member of the Technical Program Committee of the Energycon 2012 conference, Florence, Italy, September 2012
- Invited talk on “repetitive control systems”, University of Santiago, Chile, December 2010 and May 2011.
- Session organizer and chairman at many IET and EPE international conferences.

- Research collaboration (joint publications and/or research grants) with Technical University of Turin (Italy), University of Harbin (China), Technical University of Bari (Italy), University of Zilina (Slovakia), University of Cork (Ireland), University of Malta, University and CNR of Palermo (Italy), University of Padova, (Italy), University of Rome “Tor Vergata” (Italy), University of Roma Tre, Rome Italy, University of Zagreb (Croatia), University of Pisa, Italy, Technical University Federico Santa Maria, Valparaiso, Chile, Virginia Tech, USA, Norwegian University of Science and Technology, Thronheim, Norway, University of Talca Chile, University of Chile, Santiago- Chile, University of Genova, Italy, University of Grenoble, France, University of Southampton UK, University of Exeter UK, Texas A&M University, Doha Qatar, University of Newcastle (Australia), University of Tampere, Finland.

## Teaching and Supervision

- ❖ *More than 60 Ph.D. research students supervised in control, power electronics and drives (12 on-going), more than 30 Visiting Scholars, Line manager of 20 Research fellows, currently 3 research fellows.*
  - ❖ *Tutor of several BEng, MEng and MSc project students each year in control, power electronics and drives.*
  - ❖ *Personal tutor to first and second year BEng and MEng students in Electrical and Electronic Engineering, University of Nottingham UK (2001-2024).*
  - ✓ *“Teaching Excellence Award 2015” from the Faculty of Engineering University of Nottingham*
- COURSES
- *Currently:*
    - Lecturer – 6 credit 3<sup>rd</sup> year module “Conversione statica dell’energia” for BEng students in industrial Engineering, University of Pavia, Italy (since 2019)
    - Lecturer – 6 credit 1<sup>st</sup> year module “Power Electronics” for MSc students in electrical, electronic and industrial automation engineering, University of Pavia, Italy since 2020.
    - Lecturer – 3 credit 2<sup>nd</sup> year module “Advanced Power Electronics” for MSc students in electrical engineering, University of Pavia, Italy since 2020.
  - 2019 – 2024
    - Lecturer - 20 credit level 3 module “Power Electronics and Control” for MSc and BEng students in electrical and electronic engineering subjects, University of Nottingham –UK
  - 2001 – 2024
    - Lecturer - 20 credit level 4 module “Advanced Control Systems Design” for MSc and MEng students in electrical and electronic engineering subjects, University of Nottingham –UK
  - 2003 – 2018
    - Lecturer - 10 credit course “Control systems” for Beng, MEng and MSc students in electrical and electronic engineering subjects, University of Nottingham - UK.
    - Lecturer - 15 credits level 4 module “Control design” for MSc students in electrical and electronic engineering subjects, University of Nottingham - UK.
  - 2001-2003:
    - Joint lecturer - 10 credit module “Electronic Drives” for BEng and MEng students in electrical and electronic engineering, University of Nottingham (UK).
    - Laboratory supervisor - “Microprocessor Design laboratory” for first year BEng and MEng students of electrical and electronic engineering, University of Nottingham (UK).
  - 1998 – 2003:
    - Lecturer – 10 credits module in Power Electronics for both the Electrical Engineering and the Electronic Engineering Diploma degrees at the Technical University of Bari (Italy).
    - Lecturer – 10 credits module “Industrial Electronics” Electrical Engineering degree at the Technical University of Bari (Italy).
  - 1998 – 2001:
    - Joint lecturer – 20 credits modules in Power Electronics and Electrical Drives for the Laurea degrees in Electrical and Electronic Engineering at the Technical University of Bari (Italy).
    - Supervisor of several Ph.D. students in Power Electronics and Power Quality at the Technical University of Bari (Italy).
    - Supervisor of 12 projects (per year) for final year students in Power Electronics, Power Quality and Electrical Drives at the Technical University of Bari (Italy).
  - 1994-1998
    - Teaching assistant on the courses in Power Electronics and Electrical drives for Diploma and Laurea degrees in Electrical and Electronic engineering at the Technical University of Bari (Italy).
  - Internal PhD examiner for more than 30 candidates at the University of Nottingham and University of Pavia
  - External PhD examiner for more than 30 candidates in UK, Italy, Spain and Norway

## Bibliography

Professor Pericle Zanchetta

### Papers published in Scientific Journals (148)

- [1] Hussein T. Kadhum;Alan J. Watson;Marco Rivera;Pericle Zanchetta;Patrick Wheeler “Optimised Model Predictive Control for MMCs: Enhancing Performance and Reducing Computational Burden” **IEEE Transactions on Industry Applications**, Year: 2025
- [2] Hamed Moradmand Jazi;Ramin Rahimzadeh Khorasani;Rezvan Fani;Ehsan Adib;Pericle Zanchetta;Patrick Wheeler;Jose Marcos Alonso;Guillermo Velasco-Quesada;Herminio Martínez-García, “A Soft Switched Three Level Quasi Z-Source Converter with Coupled Inductor Based High Converter Ratio and Continuous Input Current for Renewable Energy Application”, **IEEE Transactions on Power Electronics**, Year: 2025
- [3] Volpini, A., Rokocakau, S., Tresca, G., Gemma, F., Zanchetta, P. “ANN-Enhanced Modulated Model Predictive Control for AC-DC Converters in Grid-Connected Battery Systems”, **Energies**, 2025, 18(15), 3996
- [4] Asad, M., Faizan, M., Zanchetta, P., Sánchez-Fernández, J.Á. “FACTS Controllers’ Contribution for Load Frequency Control, Voltage Stability and Congestion Management in Deregulated Power Systems over Time: A Comprehensive Review”, **Applied Sciences Switzerland**, 2025, 15(14), 8039
- [5] Asad, M., Tresca, G., Zanchetta, P., Sanchez-Fernandez, J.A. “Battery Energy Storage System Contribution to Primary Frequency Control in Isolated Power Systems” **IEEE Access**, 2025, 13, pp. 110030–110049
- [6] Huang, Z., Zhu, R., Zhang, Y., Zanchetta, P. “Discrete Current Controller for SPMSMs at Low Sampling-to-Fundamental Frequency Ratios Using Critical Damping Feedback”, **IEEE Transactions on Power Electronics**, 2025, 40(8), pp. 11787–11798
- [7] Volpini, A., Salvo, S.R.D., Tresca, G., Leuzzi, R., Zanchetta, P. “A Unified Modulated Model Predictive Control for a Two-Stage AC-DC Converter Interfacing a Vanadium Redox Flow Battery”, **IEEE Transactions on Industry Applications**, 2025, 61(4), pp. 6556–6566
- [8] Salman, M., Riccio, J., Khil, S.K.E., Zanchetta, P., Boccaletti, C. “Unified Diagnosis and Localization Method of Open Switch Faults in Voltage Source Inverters-Fed Synchronous Reluctance Motors”, **IEEE Transactions on Industry Applications**, 2025, 61(6), pp. 9517–9528
- [9] Riccio, J., Karamanakos, P., Tarisciotti, L., Degano, M., Zanchetta, P., Gerada, C. “Reduction of Computational Complexity in Modulated Model-Predictive Control for Synchronous Reluctance Motor Drives”, **IEEE Transactions on Industry Applications**, 2025
- [10] Moradmand Jazi, H., Mohammadzadeh, B., Rahimzadeh Khorasani, R., Zanchetta, P., Adib, E., Velasco-Quesada, G., Martínez-García, H. “High Voltage Gain DC-DC Converter With Wide Range of Soft Switching and Continues Input Current for Renewable Energy Applications” **IEEE Access**, 2025, 13, pp. 94878–94892
- [11] Zheng, B., Liu, B., Yan, J., Tang, M., Zanchetta, P., Yu, H., Gao, Y. “Interpretable Harmonic-Aware Dual-Branch Neural Network for Trustworthy Diagnosis of OCFs in DTP-PMSMs with Enhanced Disturbance Robustness”, **IEEE Transactions on Power Electronics**, 2025
- [12] Riccio, J., Gemma, F., Rovere, L., Tresca, G., Di Nardo, M., Odhano, S., Degano, M., Zanchetta, P., “Effects of the Floating Capacitor Voltage on the Torque-Speed Characteristic of an Open-End Winding Synchronous Reluctance Motor Drive”, **IEEE Transactions on Industry Applications**, 2025, 61(2), pp. 3269–3278
- [13] Finotti, C., Granata, S., Borghetti, G., ... Fregonese, A., Zanchetta, P. “132-Mvar 35-kV STATCOM Equipped With a Novel Power Oscillation Damping Control Strategy”, **IEEE Journal of Emerging and Selected Topics in Power Electronics**, 2025, 13(3), pp. 3463–3479
- [14] Ioannis Kougioulis;Pericle Zanchetta;Pat Wheeler;Md Rishad Ahmed “On Optimized Modulation Strategies for Electric Vehicle Integrated On-board Chargers”, **IEEE Transactions on Industry Applications**, Year: 2025, 61(1), pp. 714–725
- [15] Kadhum, H., Watson, A.J., Rivera, M., Zanchetta, P., Wheeler, P. “Model Predictive Control of a Modular Multilevel Converter with Reduced Computational Burden”, **Energies**, 2024, 17(11), 2519
- [16] Tresca, G., Zanchetta, P. “AC Direct Charging for Electric Vehicles via a Reconfigurable Cascaded Multilevel Converter” **Energies**, 2024, 17(10), 2428
- [17] Su, L., Wang, G., Gao, Y., Zanchetta, P., Zhang, H. “Multi-Objective Optimization of Yokeless and Segmented Armature Machine for In-Wheel Traction Applications Based on the Taguchi Method” **Machines**, 2024, 12(4), 221
- [18] Zheng, B., Zou, J., Xu, Y., ... Wang, L., Zanchetta, P., “High-Frequency Current Harmonic Analysis and Suppression in Dual Three-Phase PMSMs With Advanced Carrier Phase-Shift PWM”, **IEEE Transactions on Power Electronics**, 2024, 39(2), pp. 2569–2581
- [19] Boyuan Zheng;Xinyuan Wang;Yongxiang Xu;Jibin Zou;Guodong Yu;Pericle Zanchetta “Postfault Strategy for Dual three-phase PMSM with reduced current loops considering leakage inductance”, **IEEE Transactions on Power Electronics**, Year: 2024 39(12), pp. 15994–16005
- [20] Zhen Huang;Rui Zhu;Shuhao Zhang;Mi Tang;Yonghong Xia;Pericle Zanchetta “Enhanced Anti-disturbance Capability of Digital Controller for the SPMSM at Low Switching to Fundamental Frequency Ratios”, **IEEE Journal of Emerging and Selected Topics in Power Electronics**, Year: 2024 12(5), pp. 4916–4925
- [21] Samuela Rokocakau;Jacopo Riccio;Giulia Tresca;Rahul R. Kumar;Giansalvo Cirrincione;Pericle Zanchetta;Maurizio Cirrincione “Fault Diagnosis Using Shallow Neural Networks for Voltage Source Inverters in Motor Drives”, **IEEE Transactions on Industry Applications**, Year: 2024, Volume: 60, Issue: 5.
- [22] Hamed Moradmand Jazi;Ramin Rahimzadeh Khorasani;Ehsan Adib;Pericle Zanchetta;Guillermo Velasco-Quesada;Herminio Martínez-García, “A High-Efficient Single-Switch, Soft-Switching High Step-Up DC–DC Converter With a Simple Structure

- and Continuous Input Current for Renewable Energy Integration”, **IEEE Transactions on Power Electronics**, Year: 2024, Volume: 39, Issue: 8.
- [23] Giulia Tresca;Andrea Formentini;Jacopo Riccio;Norma Anglani;Pericle Zanchetta “A Reconfigurable Cascaded Multilevel Converter for EV Powertrain”, **IEEE Transactions on Industry Applications**, Year: 2024, Volume: 60, Issue: 2
  - [24] Zhenyu Chen;Yang Liu;Pericle Zanchetta;Xuewei Fu;Jiubin Tan “A Novel Dynamic Decoupling Approach Based on Command Shaping for Overactuated Motion Systems”, **IEEE Transactions on Industrial Electronics**, Year: 2024, Volume: 71, Issue: 8
  - [25] Yuan Gao;Songda Wang;Tomislav Dragicevic;Patrick Wheeler;Pericle Zanchetta “Artificial Intelligence Techniques for Enhancing the Performance of Controllers in Power Converter-Based Systems—An Overview”, **IEEE Open Journal of Industry Applications**, Year: 2023, Volume: 4
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