

Curriculum Vitae

Professor Vassilios Georgios AGELIDIS

B.Eng. (Electrical Eng.), M.Appl.Sci. (Electrical Eng.), Ph.D. (Electrical Eng.)

Grad. Dipl. (Business Administration), Grad. Dipl. (Teaching & Learning)

Fellow of the IEEE

(Institute of Electrical and Electronics Engineers), Class of 2016, (USA)

Fellow of the IET

(Institute of Engineering and Technology), 2016, (United Kingdom)



January 2022

1 PERSONAL DETAILS

Date of Birth: 17 October 1965.

Place of Birth: Serres, Greece.

Citizenship: Dual: Australian and Greek (European Union).

2 CONTACT DETAILS

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3 EDUCATION AND QUALIFICATIONS

3.1 Degrees

- **Bachelor of Electrical Engineering (BEng):** Democritus University of Thrace, Xanthi, Greece, 1988 (with equivalent English first class honours - five years of study - overall average: 8,49 out of 10). Dissertation title: “*Analysis of dynamic stresses of short-circuit duration on high-voltage DC cables using equivalent functions*”.
- **Master of Applied Science:** Concordia University, Montreal, Quebec, Canada, 1992 (overall coursework average: 4 out of 4). Dissertation title: “*Zero voltage switching pulse-width modulated inverter topologies*”.
- **PhD in Electrical Engineering:** Curtin University, Perth, Australia, August 1997. Thesis title: “*Optimum pulse-width modulation techniques for three-phase inverters*”.

3.2 Graduate Diplomas

- **Graduate Diploma in Business:** First Class, Curtin Graduate School of Business, Perth, Western Australia, 2000.
- **Graduate Diploma of reflective teaching practice in higher education:** Curtin University, Perth, Western Australia, 1994 (a six-month full-time graduate training program for teaching in Universities and Higher Education sector).

4 EMPLOYMENT

4.1 Full-Time Appointments

- **Concordia University, Montreal, Quebec, Canada**
 - May 1989 – Aug 1993, Laboratory demonstrator, teaching and research assistant.
- **Curtin University, Perth, Western Australia**

Aug 1993 – Dec 1999, School of Electrical and Computer Engineering.

 - Associate Lecturer, fixed-term, full-time: Aug 1993 – Dec 1994.
 - Lecturer, fixed-term, full-time: Jan 1995 – Feb 1998.
 - Lecturer, continuing, full-time: Mar – Dec 1998.
 - Senior Lecturer, continuing, full-time (Promotion): Jan – Dec 1999.

1996–1999, Research Associate, Centre for Renewable Energy & Sustainable Technologies (CRESTA), Australia, (CRESTA was a node of the Cooperative Research Centre (CRC) for Renewable Energy).
- **University of Glasgow, Scotland, UK**
 - Jan 2000 – Jan 2005, Department of Electronics and Electrical Engineering, Senior Lecturer.

- Jan 2000 – May 2004, Inter-University Glasgow-Strathclyde Centre for Economic Renewable Power Delivery (CERPD), Research & Centre Manager.
- **Murdoch University, Perth, Western Australia**
 - Jan 2005 – Dec 2006, School of Engineering Science, Professor and Chair of Power Engineering.
- **The University of Sydney, NSW, Australia**
 - Dec 2006 – Jun 2010, Professor and *EnergyAustralia* Chair of Power Engineering.
 - Jul 2007 - Mar 2010, Director: Electrical and Information Engineering Foundation.
 - Jul 2008 - Jun 2010, Research Associate: Institute for Sustainable Solutions, participation under the energy theme.
 - Apr 2009 - Mar 2010, Director: Centre of Excellence in Power Engineering.
- **The University of New South Wales, UNSW (Australia) Sydney, NSW, Australia**
 - Jul 2010 – Jul 2016, Professor of Power Engineering.
 - July 2010 - May 2011, Director, Centre for Energy Research and Policy Analysis.
 - May 2011 – Jul 2016, Director, Australian Energy Research Institute (AERI).
- **Technical University of Denmark**
 - Oct 2016 – Nov 2020, Professor, Centre for Electrical Power and Energy (CEE).
 - Apr 2017 – Nov 2020, Group Leader (management responsibilities).
- **Freelance Consultant Self-employed**
 - Dec 2020 – to date

4.2 Part-Time Research and Professorial Appointments

- **ABB Corporate Research Centre, Vasteras, Sweden**
 - Jan 2015 – Jul 2015, Temporary full-time position (on a sabbatical leave from UNSW).
 - Sep 2017 – Feb 2018, partial appointment position.
- **Beijing Jiaotong University, Beijing, China.**
 - Oct 2012 – Oct 2017, Partial appointment as a visiting Research Professor.
- **University Tenaga Nasional, Kuala Lumpur, Malaysia**
 - Mar 2018 – Feb 2021, Partial appointment as a visiting Research Professor.
- **Norwegian Institute of Science and Technology (NTNU), Trondheim, Norway.**
 - Nov 2019 – Dec 2023 - Mentor to the Outstanding Academic Fellows Programme.
- **The American College of Greece, Athens, Greece**
 - Nov 2021 - Aug 2022 - Visiting Fellow.

5 MEMBERSHIP OF PROFESSIONAL INSTITUTES AND SOCIETIES

- **Institute of Engineering and Technology, UK:** Member (since 2006); Fellow (Since 2016).
- **Institute of Electrical and Electronic Engineers (IEEE) Inc., (USA).**
Student Member 1989–1993; member 1993–1999; senior member 2000-2015; Fellow from 1 Jan 2016; Member of Power Electronics Society, Power and Energy Society, Industrial Electronics Society and Industry Applications Society.

6 AWARDS, SCHOLARSHIPS AND FELLOWSHIPS

- **Hellenic State Scholarships Foundation (IKY), Athens, Greece:** Meritorious Award – highest class-average in the first year of studies achieving 8,488 out of 10 (1984) and highest class-average in the fourth year of studies achieving 8,833 out of 10 (1988).

- **Hellenic Chamber of Engineers, Athens, Greece:** Award of Excellence – highest class overall average achieving 8,495 out of 10 (1988).
- **Concordia University, Montreal, Quebec, Canada:** Graduate Fellowship for doctoral studies, 1991, 1992, 1993 (C\$15,000 p.a.).
- **Concordia University, Montreal, Quebec, Canada:** International student fee remission, 1990, 1991, 1992, 1993 (C\$12,000 p.a.).
- **Hellenic Scholarships Foundation, Montreal, Canada:** Award of excellence, 1993 (C\$1,000).
- **Curtin University, Australia:** Incentive scheme for staff undertaking doctoral studies, 1996 (A\$50,000).
- **Curtin University, Australia:** Innovative Teaching Practice Award, 1999.
- **Institute of Engineers, Australia:** Co-recipient with Professor J.L. Hullett, Associate Professor W.B. Lawrance and Dr J. Goodell of the High Commendation Certificate, given to a team leading cultural change in an Engineering School in Australasia, 1999.
- **Curtin University, Western Australia:** Adjunct Senior Research Fellow: 2000–2001.
- **Engineering and Physical Sciences Research Council (EPSRC) Advanced Research Fellowship, UK:** a research fellowship to work on fuel cell power conditioning systems and their electricity grid interconnection (2004, £317,422).
- **Department of Education, Science and Technology, Australia:** Endeavour Executive Award 2007, A\$25k to visit Seoul National University of Technology, South Korea for three months.
- **Best Paper Award** at IEEE PEDS 2009, Taiwan, ROC for the work entitled: “Equalizing DC capacitor voltages in multimodule high voltage direct current using selective harmonic elimination pulse width modulation” (with N. Flourentzou).
- **Electrica Awards First Prize Winner:** by AREVA Transmission & Distribution, Paris, France, May 2010, €50,000. Electrica Awards was an international innovation contest organized by AREVA Transmission & Distribution.
- **IBM Smarter Planet Innovation Faculty Award 2012** (US\$10,000).
- **Best Paper Award** at IEEE International Conference on Power and Energy (PECON 2012) in Malaysia for the paper: “Application of particle swarm optimisation in the design of large permanent magnet synchronous generators for wind turbines”, (with S. Alibashani and R. Dutta).
- **ARC UNSW Student Council, PGC Supervisor Award 2013** awarded by the students’ council of UNSW for outstanding service supervising postgraduate students.
- **Best Paper Award** at the 2015 IEEE 11th International Conference on Power Electronics and Drive Systems, Sydney, Australia for the paper entitled: “Comparison and evaluation of sub-module configurations in modular multilevel converters”, (with G. Konstantinou, J. Zhang, S. Ceballos and J. Pou).
- **IEEE Fellow (Class of 2016):** citation: *for contributions to power electronics, renewable energy conversion and integration with electricity grid.*
- **IET Fellow 2016.**
- **IEEE Power Electronics Society Distinguished Lecturer**, initial term: 2017-2018, renewed for a second term 2019-2020.
- **Stanford University World’s Top 2% Scientists, 2021**, for data taken across 1960-2020
 - **Electrical Engineering** ranking place **72** out of total 105,029 entries.
 - **Electrical Engineering and Energy** ranking place **31** out of total 105,029 entries.

7 TEACHING

7.1 Student supervision - summary

- Undergraduate students as supervisor: 45 (completed).
- Undergraduate students as associate supervisor: 15 (completed).
- Master level students as supervisor: 11 (completed).
- Master level students as associate supervisor: 7 (completed).
- Master of engineering students (industrial placement) as internal supervisor: 3 (completed).
- PhD level students as supervisor: 23 completed, 6 Female (F), 17 Male (M).

Dr M. Calais (F), Dr C. Feng (F), Dr M. Dahidah (M), Dr N. Flourentzou (M), Dr R. Pulikanti (M), Dr H. Dalvand (M), Dr I. Sadinezhad (M), Dr G. Konstantinou (M), Dr M. Jang (M), Dr A.M.Y.M. Ghias (M), Dr M.S. Reza (M), Dr S. Alshibani (M), Dr M. Mirhosseini (F), Dr A. Wang (M), Dr R. Darus (F), Dr M. Hasheminamin (F), Dr A. Heidari (M), Dr V. Lystianingrum (F), Dr T. Kim (M), Dr H. Choi (M), G. Farivar (M), Dr Y. Yu (M), Dr T. Morstyn (M).

7.2 Lecturing/teaching responsibilities

7.2.1 Concordia University, Canada

Electronics I – Tutoring and laboratory demonstration; Electronics II – Tutoring and laboratory demonstration; Control of electric power conversion systems – Lecturing, tutoring and laboratory demonstration.

7.2.2 Curtin University, Australia

Electrical laboratory 313; Electrical engineering 203; Electronic design 301; Electronic design 302; Engineering analysis 201; Electrical laboratory 104; Electrical engineering 105; Power electronics 304; Power electronics 403.

7.2.3 The University of Glasgow, UK

Individual project design and management 4; Electric drives and power electronics 4; Renewable energy systems and power electronics control 5; Engineering mathematics EE1X; Power electronics systems 2: service unit for Aerospace and Mechanical engineers.

7.2.4 Murdoch University, Australia

Industrial instrumentation and data communications; Renewable energy engineering systems; Circuits and systems I; Engineering studio: power generation and distribution (ENG315); Engineering studio: power network analysis and design (ENG316); Engineering studio: power systems modelling and control (ENG423).

7.2.5 The University of Sydney, Australia

- ENGG1803 Professional engineering 1 (2007), three two-hour lectures on ethics, project management and environmental sustainability.
- ENGG1805 Fundamentals of engineering and IT (2008-10), one two-hour lecture on electrical engineering as a discipline and future prospects.
- ELEC5204 Power systems analysis and protection (2007-09), unit co-ordinator.
- ELEC5203 Topics in power engineering (2008-10), unit co-ordinator and lecturer.
- ELEC3204 Power electronics and applications, unit co-ordinator and lecturer (2009-10).
- ELEC5205 High voltage engineering, unit co-ordinator (2008-10).

7.2.6 The University of New South Wales

- GSOE 9141 Smart grid and intelligent distribution networks (postgraduate) unit coordinator and lecturer, 2012, 2013.
- ELEC 1112 Electrical circuits (year 1) – lecturer for two-week material, 2012.
- ELEC 4614 Power electronics (year 4) – lecturer of five 1-hour lectures, 2014.
- ELEC 1111 Introduction to electrical engineering (year 1) – (3-hour lectures per week) with over 500 students from across the Faculty of Engineering, 2015.

7.2.7 Technical University of Denmark

Introduced a new course for a Masters level entitled: *Emerging and Disruptive Technologies for Electricity Grids*. It was taught as a full-time intensive three-week course in January 2018 and 2019.

8 KEY MANAGERIAL AND ADMINISTRATIVE RESPONSIBILITIES

8.1 The University of Glasgow

- Master of engineering management committee, 2000-2003.
- On-line technologies for teaching, working group leader, 2000-2003.
- Member of the student recruitment committee, 2003-2004.
- Member of the undergraduate and Master of Science admissions committee, 2002-2004.
- Member of the staff-student committee, 2002-2004.
- Allocating demonstrators and tutors for all Department's courses and laboratories and budget controller, 2003-2004.
- 3rd Year laboratory coordinator, 2003-2004.
- Research Assessment Exercise coordinator, 2001.

8.2 Murdoch University, Australia

- Research co-ordinator, 2005.
- Curriculum re-structuring committee member, 2005-2006.

8.3 The University of Sydney, Australia

- Director: Power engineering undergraduate and post-graduate degree.
- Member of the Engineering Sydney Board (Faculty level Board).
- Member, EIE school professorial committee.
- Member, Head of EIE school advisory committee.
- Member, EIE school academic policy and advisory committee.
- Responsible for professional management and development review of five academic staff within the EIE School (one lecturer, three senior lecturers and one associate professor).
- Introduced a new Master degree in Power Engineering (2007).
- Restructured the electrical engineering curriculum.
- Introduced a new unit in power engineering: Sustainable energy systems (2007).
- Planned, designed and led the refurbishment of the old contaminated power engineering laboratory which was unused for over 12 years and was replaced by the new state-of-the-art power engineering integrated facility named "*The Sir William Tyree Power Engineering Laboratory*" to acknowledge the generous funding received by Sir William Tyree for its establishment.
- Planned, designed and led the development of the *ABB Technology Centre*, a system-based new state-of-the-art laboratory with equipment and services donated to the University of Sydney by

ABB Australia Pty Ltd. The equipment itself was valued approximately \$0.6m and the related services, commissioning and project management about \$0.4m.

- Planned and led the second power engineering internal (May-June 2009) and industry/external (July 2009) curriculum review.
- Member of the Engineers Australia accreditation team 2009.

8.4 The University of New South Wales, Australia

- Reviewer of the Centre for Climate Change Research, UNSW, November 2011.
- Attracted funding and established the Solar Flagships Research Infrastructure (worth about A\$17 million, equipment only). Major infrastructure components included:
 - Vanadium Redox Battery Storage system, 120kWh.
 - Real Time Digital Simulator (18 racks system commissioned in March 2015, the most powerful one in a university or research organisation, other than industry, world-wide worth about A\$6 million).
 - Electric vehicles (three, one Tesla S Model and two i3 BMW).
 - Opal-RT Real Time Control System.
 - Battery characterisation hardware (Arbin).
 - Smart grid components, fuel cell, batteries, solar PV module emulators.
 - Power electronics controllers, DSPACE platforms and other support equipment such as oscilloscopes, harmonic spectrum analysers, electricity grid emulators etc.

8.5 Centre for Electric Power and Energy (CEE), Technical University of Denmark

- Member of the Centre's Management Committee.

9 SCHOLARLY ACTIVITIES

9.1 Publications

9.1.1 Book

- [1] E. Acha, **V.G. Agelidis**, O. Anaya-Lara, T.J.E. Miller, “Power electronic control in electric systems”, Butterworth-Heinemann, ISBN 0750651261, January 2002.

9.1.2 Book Chapter

- [1] C. Sekar S., A.K. Singh, S.N. Singh, **V.G. Agelidis**, “Front-End Power Converter Topologies for Plug-In Electric Vehicles” Book Chapter, CRC Press, Emerging Power Converters for Renewable Energy and Electric Vehicles, 2021, eBook ISBN 9781003058472.

9.1.3 Invited International Conference Keynote Papers/Addresses

- [1] **V.G. Agelidis**, “The future of power electronics/power engineering education: challenges and opportunities”, keynote paper presented at the 1st *IEEE Power Electronics Education Workshop (PEEW) 2005*, Recife, Brazil, 16 June 2005, p. 1-8.
- [2] **V.G. Agelidis**, G.D. Demetriades and N. Flourentzou, “Recent advances in high-voltage direct-current power transmission systems”, keynote paper presented at the *Chinese Power Electronics Conference*, 24 September 2006.
- [3] **Invited Lecture contribution title**: “Enabling increased integration of renewable energy generation in the electricity network with hybrid energy storage technologies”, *International Symposium on the Future of Renewable Energy*, Celebrating the 120th Anniversary of Beijing Jiaotong University (BJTU) and organised by the HANERGY School of Renewable Energy (HASRE) at BJTU, Beijing 6-8 April 2016.
- [4] **Invited keynote speech**: Power Electronics for the Digital Utility: PMU Enabled Inverters”, Third International conference on “Innovative Applications of Computational Intelligence on Power, Energy and Controls with their impact on Humanity (CIPECH-18), Krishna Institute of Engineering & Technology, Uttar Pradesh, India, 1 November 2018.
- [6] **Invited keynote speech**: “Utility power electronics: from energy converters to utility sensors”, *2019 International Symposium on Smart Energy and Sustainable Energy*, Fuzhou, Fujian Province, P.R. China, June 2019.
- [7] **Invited keynote speech**: *8th International Conference on Renewable Power Generation (RPG)*, one of the IET's most successful international events, 24-25 October 2019 in Shanghai Jiaotong University, Shanghai, P.R. China.

9.1.4 Invited International Conference Papers

- [1] L. Xu, O. Anaya-Lara, **V.G. Agelidis**, E. Acha, “Development of prototype custom power devices for power quality enhancement”, in *Proc. of IEEE 9th International Conference on Harmonics and Quality of Power (ICHQP)*, Orlando, Florida, USA, Oct 2000, p. 775-783.
- [2] C. Feng, **V.G. Agelidis**, “Analysis of PWM control methods for a five-level flying capacitor multilevel converter”, in *Proc. of the 7th International Conference on Modelling and Simulation of Electric Machines, Converters and Systems (Electrimacs 2002)*, Montreal.

9.1.5 Refereed Journal Papers

- [1] **V.G. Agelidis**, P.D. Ziogas, G. Joos, "An optimum modulation strategy for a novel notch commutated 3-Phase PWM inverter", in *IEEE Transactions on Industry Applications*, Vol. 30, No. 1, Jan./Feb. 1994, p. 52-61.

- [2] R.E. Katan, **V.G. Agelidis**, C.V. Nayar, "PSPICE modelling of photovoltaic arrays", in *International Journal of Electrical Eng. Education*, Vol. 32, 4, October 1995, p. 319-332.
- [3] **V.G. Agelidis**, P.D. Ziogas, G. Joos, "Dead-band PWM switching patterns", in *IEEE Transactions on Power Electronics*, Vol. 11, No. 4, July 1996, p. 522-531.
- [4] **V.G. Agelidis**, "Incorporating instructional feedback in electrical engineering laboratory experiments – An example", in *IEEE Transactions on Education*, Vol. 40, No. 1, February 1997, p. 111-114.
- [5] **V.G. Agelidis**, H.C. Goh, "Low-distortion variable-level PWM technique", in *IEE Proceedings-Electric Power Applications*, Vol. 145, No. 2, March 1998, p. 73-78.
- [6] M. Calais, **V.G. Agelidis**, M. Meinhardt, "Multilevel converters for single-phase grid connected PV systems – An overview", in *Solar Energy*, Vol. 66, No. 5, 1999 p. 325-335.
- [7] D.M. Baker, **V.G. Agelidis**, C.W. Meng, C.V. Nayar, "On integrating the digital time control algorithm with a DC-bus "notching" circuit for soft-switched inverters", in *IEE Proceedings – Electric Power Applications*, Vol. 146, No. 5, September 1999, p. 524-529.
- [8] D.M. Baker, **V.G. Agelidis**, C.V. Nayar, "A new digital zero-average-current-error control algorithm for inverters", in *International Journal of Electronics*, Vol. 87, No. 4, April 2000, p. 481-496.
- [9] M. Calais, **V.G. Agelidis**, M.S. Dymond, "A cascaded inverter for transformer-less single-phase grid-connected photovoltaic systems", in *Renewable Energy*, Vol. 22, 2000, p. 255-262.
- [10] M. Calais, L.J. Borle, **V.G. Agelidis**, M.S. Dymond, "Control aspects of a transformer-less five level cascaded inverter based single phase photovoltaic system", in *Transactions of IEE Japan*, Vol. 121-D, No. 4, April 2001, p. 437-444.
- [11] L. Xu, **V.G. Agelidis**, E. Acha, "Development considerations of a DSP-controlled PWM VSC-based STATCOM", in *IEE Proceedings – Electric Power Applications*, Vol. 148, No. 5, September 2001, p. 449-455.
- [12] C. Mademlis, **V.G. Agelidis**, "On considering magnetic saturation with maximum torque to current control in interior permanent magnet synchronous motor drives", in *IEEE Transactions on Energy Conversion*, Vol. 16, No. 3, September 2001, p. 246-252.
- [13] L. Xu, **V.G. Agelidis**, "Flying capacitor multilevel PWM converter based UPFC", in *IEE Proceedings, Electric Power Applications*, Vol. 149, No. 4, July 2002, p. 304-310.
- [14] **V.G. Agelidis**, C. Mademlis, "Technology of offshore wind turbines and farms and novel multilevel converter-based HVDC systems for their grid connections", *Wind Engineering*, Vol. 26, No. 6, 2002, p. 383-395.
- [15] M. Calais, L.J. Borle, L. Meek, **V.G. Agelidis**, "Dual ramp-time non-linear current control applied to a single-phase five-level cascaded inverter", in *International Journal of Electronics, Special Issue: Power Electronics in Power Systems*, Vol. 90, No. 11-12, Nov./Dec. 2003, p. 721-735.
- [16] L. Xu, **V.G. Agelidis**, "An active capacitor voltage control of flying capacitor multilevel converters", in *IEE Proceedings–Electric Power Applications*, Vol. 151, No. 3, May 2004, p. 313-320.
- [17] **V.G. Agelidis**, A. Balouktsis, I. Balouktsis, "On applying a minimization technique to the harmonic elimination PWM control: the bipolar waveform", in *IEEE Power Electronics Letters*, Vol. 2, June 2004, p. 41-44.
- [18] **V.G. Agelidis**, "A laboratory-supported power electronics and related technologies undergraduate curriculum for aerospace engineering students", in *International Journal of Engineering Education*, 2005, Vol. 21, No 6, Part II, p. 1177-1188.
- [19] **V.G. Agelidis**, A. Balouktsis, I. Balouktsis, C. Cossar, "Multiple sets of solutions for harmonic elimination PWM bipolar waveforms: analysis and experimental verification", in *IEEE Transactions on Power Electronics*, Vol. 21, No. 2, March 2006, p. 415-421.

- [20] L. Xu, **V.G. Agelidis**, “A VSC transmission system using flying capacitor multilevel converters and selective harmonic elimination PWM control”, in *International Journal of Emerging Electrical Power Systems*, 3 April 2006, Vol. 5, No. 2, Article 4.
- [21] M.S.A. Dahidah, **V.G. Agelidis**, M.V. Rao, “On abolishing symmetry requirements in the formulation of a five-level selective harmonic elimination pulse width modulation technique”, in *IEEE Transactions on Power Electronics*, Vol. 21, No. 6, November 2006, p. 1833-1837.
- [22] C. Feng, J. Liang, **V.G. Agelidis**, “Modified phase-shifted PWM control for flying capacitor multilevel converters”, in *IEEE Transactions on Power Electronics*, Vol. 22, No. 1, January 2007, p. 178-185.
- [23] L. Xu, **V.G. Agelidis**, “VSC transmission system using flying capacitor multilevel converters and hybrid PWM control”, in *IEEE Transactions on Power Delivery*, Vol. 22, No. 1, January 2007, p. 693-702.
- [24] **V.G. Agelidis**, A. Balouktsis, M.S.A. Dahidah, “A five-level symmetrically defined selective harmonic elimination PWM strategy: analysis and experimental validation”, in *IEEE Transactions on Power Electronics*, Vol. 23, No. 1, January 2008, p. 19-26.
- [25] **V.G. Agelidis**, A. Balouktsis, C. Cossar, “On attaining the multiple solutions of selective harmonic elimination PWM three-level waveforms through function minimisation”, in *IEEE Transactions on Industrial Electronics*, Vol. 55, No. 3, March 2008, p. 996-1004.
- [26] M.S.A. Dahidah, **V.G. Agelidis**, M.V. Rao, “Hybrid genetic algorithm approach for selective harmonic control”, in *Energy Conversion & Management*, 49, 2008, p. 131-142.
- [27] M.S.A. Dahidah, **V.G. Agelidis**, “Selective harmonic elimination PWM control for cascaded multilevel voltage source converters: a generalized formula”, in *IEEE Transactions on Power Electronics*, Vol. 23, No. 4, July 2008, p. 1620-30.
- [28] M.S.A. Dahidah, **V.G. Agelidis**, “Optimal SHE-PWM technique for three-level voltage source converter control”, in *International Review of Electrical Engineering*, Vol. 3, No. 5, October 2008, p. 874-880.
- [29] M.S.A. Dahidah, **V.G. Agelidis**, “Single-carrier sinusoidal PWM-equivalent selective harmonic elimination for a five-level voltage source converter”, in *Electric Power Systems Research*, 78, 2008, p. 1826–1836.
- [30] N. Flourentzou, **V.G. Agelidis**, G.D. Demetriades, “VSC-based HVDC power transmission systems: an overview”, in *IEEE Transactions on Power Electronics*, Vol. 24, No. 3, March 2009, p. 592-602.
- [31] D.D.-C. Lu, **V.G. Agelidis**, “Photovoltaic-battery powered DC bus system for common portable electronic devices”, in *IEEE Transactions on Power Electronics*, Vol. 24, No. 3, March 2009, p. 849-855.
- [32] Y. Shrivastava, S. Sathiakumar, **V.G. Agelidis**, “Analysis and verification of 2-level random aperiodic PWM schemes for DC-DC converters”, in *IEEE Transactions on Power Electronics*, Vol. 24, No 9, September 2009, p. 2138-2147.
- [33] N. Flourentzou, **V.G. Agelidis**, “Optimized modulation for AC-DC harmonic immunity in VSC HVDC transmission”, in *IEEE Transactions Power Delivery*, Vol. 25, No. 3, 2010, p. 1713-1720.
- [34] M. Ciobotaru, **V.G. Agelidis**, R. Teodorescu, F. Blaabjerg, “Accurate and less-disturbing active anti-islanding method based on PLL for grid-connected converters”, in *IEEE Transactions on Power Electronics*, Vol. 25, No. 6, 2010, p. 1576-1584.
- [35] I. Laird, D.C.C. Lu, **V.G. Agelidis**, “High-gain, switched-coupled-inductor boost converter”, in *International Journal of Power Electronics*, Vol. 2, No. 4, 2010, p. 345-362.
- [36] M.S. Dahidah, G. Konstantinou, N. Flourentzou, **V.G. Agelidis**, “On comparing the symmetrical and non-symmetrical SHEPWM technique for two-level three-phase voltage source converters”, in *IET Power Electronics*, Vol. 3, Issue 6, 2010, p. 829-842.

- [37] S.J. Shao, **V.G. Agelidis**, "Review of DC system technologies for large scale integration of wind energy systems with electricity grids", *invited contribution* to the open journal: *Energies*, 2010, 3(6), p. 1303-1319.
- [38] S.R. Pulikanti, M.S.A. Dahidah, **V.G. Agelidis**, "Voltage balancing control of three-level active NPC converter using SHE-PWM", in *IEEE Transactions on Power Delivery*, Vol. 26, No 1, 2011, p. 258-267.
- [39] S. Choi, **V.G. Agelidis**, J. Yang, D. Coutellier, P. Marabeas, "Analysis, design and experimental results of a floating-output interleaved-input boost derived DC-DC high-gain transformer-less converter", in *IET Power Electronics*, Vol. 4, No. 1, 2011, p. 168-180.
- [40] M. Jang, **V.G. Agelidis**, "A minimum power-processing stage fuel cell energy system based on a boost-inverter with a bi-directional back-up battery storage", in *IEEE Transactions on Power Electronics*, Vol. 26, No 5, 2011, p. 1568-1577.
- [41] S.R. Pulikanti, **V.G. Agelidis**, "Hybrid flying capacitor based active-neutral-point-clamped five-level converter operated with SHE-PWM", in *IEEE Transactions on Industrial Electronics*, Vol. 58, No 10, 2011, p. 4643-4653.
- [42] I. Sadinezhad, **V.G. Agelidis**, "Slow sampling on-line optimization approach to estimate power system frequency", *IEEE Transactions on Smart Grid*, Vol. 2, No 2, 2011, p. 265-277.
- [43] W. Zhao, D.D.C. Lu, **V.G. Agelidis**, "Current control of grid-connected boost-inverter with zero steady-state error", in *IEEE Transactions on Power Electronics*, Vol. 26, No 10, 2011, p. 2825-2834.
- [44] I. Sadinezhad, **V.G. Agelidis**, "Slow sampling on-line harmonics/interharmonics estimation technique for smart meters", in *Electric Power Systems Research*, Vol. 81 No. 8, 2011, p. 1643-1653.
- [45] R. Zolfaghari, Y. Shrivastava, **V.G. Agelidis**, "A comparison between different windows in spectral and cross spectral analysis techniques with Kalman filtering for estimating power quality indices", in *Electric Power Systems Research*, Vol. 84, No. 1, 2011, p. 128-134.
- [46] G. Konstantinou, M.S. Dahidah, **V.G. Agelidis**, "Solution trajectories for selective harmonic elimination PWM for seven- level waveforms: analysis and implementation", in *IET Power Electronics*, Vol. 5, No. 6, 2012, p. 22-30.
- [47] R. Zolfaghari, Y. Shrivastava, **V.G. Agelidis**, "Evaluation of windowed ESPRIT virtual instrument for estimating power quality indices", in *Electric Power Systems Research*, Vol. 83, No. 1, February 2012, p. 58-65.
- [48] N. Flourentzou, **V.G. Agelidis**, "Multimodule HVDC system using SHE-PWM with DC capacitor voltage equalization", in *IEEE Transactions on Power Delivery*, Vol. 27, No 1, 2012, p. 79-86.
- [49] S.R. Pulikanti, G. Konstantinou, **V.G. Agelidis**, "Generalization of flying-capacitor based active-neutral-point-clamped multilevel converter using voltage-level modulation" in *IET Power Electronics*, Vol. 5, No. 4, 2012, p. 456-466.
- [50] I. Sadinezhad, **V.G. Agelidis**, "Frequency adaptive least-squares-Kalman technique for real-time voltage envelope and flicker estimation", in *IEEE Transactions on Industrial Electronics*, Vol. 59, No 8, 2012, p. 3330-3341.
- [51] G.M.L. Chu, D.D.C. Lu, **V.G. Agelidis**, "Flyback-based high step-up converter with reduced power processing stages", in *IET Power Electronics*, Vol. 5, No. 3, 2012, p. 349-357.
- [52] G.M.L. Chu, D.D.C. Lu, **V.G. Agelidis**, "Practical application of valley current mode control in flyback converter with large duty cycle", in *IET Power Electronics*, Vol. 5, No. 5, 2012, p. 552-560.
- [53] M. Jang, M. Ciobotaru, **V.G. Agelidis**, "A single-stage fuel cell energy system based on a buck-boost inverter with a back-up energy storage unit", in *IEEE Transactions on Power Electronics*, Vol. 27, No 6, 2012, p. 2825-2834.

- [54] M.S. Dahidah, G. Konstantinou, **V.G. Agelidis**, "SHE-PWM seven-level cascaded H-bridge converter with optimized DC voltage levels", in *IET Power Electronics*, Vol. 5, No. 6, 2012, p. 852-862.
- [55] S.R. Pulikanti, G. Konstantinou, **V.G. Agelidis**, "DC-link voltage ripple compensation for multilevel active-neutral-point-clamped converters under SHE-PWM", in *IEEE Transactions on Power Delivery*, Vol. 27, No. 4, 2012, p. 2176-2184.
- [56] G. Konstantinou, M. Ciobotaru, **V.G. Agelidis**, "Selective harmonic elimination pulse-width modulation of modular multilevel converters", in *IET Power Electronics*, Vol.6, No. 1, p. 96-107, January 2013.
- [57] M. Jang, M. Ciobotaru, **V.G. Agelidis**, "A single-phase grid-connected fuel cell system based on a boost-inverter", in *IEEE Transactions on Power Electronics*, Vol. 28, No 1, 2013, p. 279-288.
- [58] S. Burusteta, J. Pou, S. Ceballos, I. Marino, J.Á. Alzola, **V.G. Agelidis**, "Capacitor voltage balancing in a three-level-converter-based energy storage system," in *European Power Electronics Journal (EPE Journal)*, Vol. 23, Issue 4, 2013, pp. 14-22.
- [59] M. Jang, M. Ciobotaru, **V.G. Agelidis**, "Design and implementation of digital control in a fuel cell system", *IEEE Transactions on Industrial Informatics*, Vol. 9, No 2, 2013, p. 1158-1166.
- [60] I. Sadinezhad, **V.G. Agelidis**, "Real-time power system phasors and harmonics estimation using a new decoupled recursive-least-squares technique for DSP implementation", in *IEEE Transactions on Industrial Electronics*, Vol. 60, No 6, 2013, p. 2295–2308.
- [61] A. Khatamianfar, M. Khalid, A.V. Savkin, **V.G. Agelidis**, "Improving wind farm dispatch in the Australian electricity market with battery energy storage using model predictive control", in *IEEE Transactions on Sustainable Energy*, Vol.4, No. 3, July 2013, p. 745-755.
- [62] G. Konstantinou, J. Pou, **V.G. Agelidis**, "Active redundant sub-module configuration in modular multilevel converters", in *IEEE Transactions on Power Delivery*, Vol. 28, No. 4, October 2013, p. 2333-234.
- [63] S.R. Pulikanti, G. Konstantinou, **V.G. Agelidis**, "Hybrid seven-level cascaded active-neutral-point-clamped based multilevel converter under SHE-PWM", in *IEEE Transactions on Industrial Electronics*, Vol. 60, No. 11, November 2013, p. 4794-4804.
- [64] I. Sadinezhad, **V.G. Agelidis**, "Decoupled recursive-least-squares technique for extraction of power system synchronized phasors under fault conditions", in *IET Generation, Transmission & Distribution*, Vol. 7, No. 11, November 2013.
- [65] S. Alshibani, **V.G. Agelidis**, R. Dutta, "Lifetime cost assessment of permanent magnet synchronous generators for MW level wind turbines", in *IEEE Transactions on Sustainable Energy*, Vol. 5, No. 1, January 2014, p. 10-17.
- [66] G. Konstantinou, **V.G. Agelidis**, "On re-examining symmetry of two-level selective harmonic elimination PWM: novel formulations, solutions and performance evaluation", in *Electric Power Systems Research*, Vol. 108, January 2014, p. 185-197.
- [67] B. Hredzak, **V.G. Agelidis**, M. Jang, "A model predictive control system for a hybrid battery-ultracapacitor power source", in *IEEE Transactions on Power Electronics*, Vol. 29, No. 3, March 2014, p. 1469-1479.
- [68] H. Wang, M. Wu, **V.G. Agelidis**, K. Song, "Steady-state harmonic domain matrix-based modeling of four-quadrant EMU line converter", in *Journal of Power Electronics*, Vol. 14, No. 3, May 2014.
- [69] B. Hredzak, **V.G. Agelidis**, G.D. Demetriades "A low complexity control system for a hybrid DC power source based on ultracapacitor-lead acid battery configuration", in *IEEE Transactions on Power Electronics*, Vol. 29, Issue 6, June 2014, p. 2882-2891.
- [70] A.M.Y.M. Ghias, J. Pou, M. Ciobotaru, **V.G. Agelidis**, "Voltage balancing method using phase-shifted PWM for the flying capacitor multilevel converter", in *IEEE Transactions on Power Electronics*, Vol. 29, Issue 9, September 2014, p. 4521-4531.

- [71] M.S. Reza, M. Ciobotaru, **V.G. Agelidis**, "A differentiation filter based technique for robust estimation of single-phase grid voltage frequency under distorted conditions", in *IET Generation, Transmission & Distribution*, Vol. 8, issue 5, 2014, p. 907-915.
- [72] G.J. Capella, I. Gabiola, J. Pou, J. Zaragoza, S. Ceballos, **V.G. Agelidis**, "Minimum signal modulation scheme based on a single carrier for interleaved operation of parallel phase legs in voltage source converters", in *IET Power Electronics*, Vol. 7, Issue 5, 2014, p. 1305-1312.
- [73] A.M.Y.M. Ghias, J. Pou, M. Ciobotaru, **V.G. Agelidis**, "Initial capacitor charging in grid-connected flying capacitor multilevel converters", in *IEEE Transactions on Power Electronics*, Vol. 29, Issue 7, July 2014, p. 3245-3249.
- [74] B. Karanayil, **V.G. Agelidis**, J. Pou, "Performance evaluation of three-phase grid-connected photovoltaic inverters using electrolytic or polypropylene film capacitors", in *IEEE Transactions on Sustainable Energy*, vol. 5, no. 4, October 2014, p. 1297-1306.
- [75] K. Song, M. Wu, **V.G. Agelidis**, H. Wang "Line current harmonics of three-level NPC EMU rectifiers: analysis, simulation and testing", in *IET Power Electronics*, vol. 7, no. 7, p. 1850-1858, 2014.
- [76] M. Jang, **V.G. Agelidis**, "A boost-inverter based battery-supported fuel-cell sourced three-phase stand-alone power supply", in *IEEE Transactions on Power Electronics*, vol. 29, no. 12, December 2014, p. 6472-6480.
- [77] G. Wang, M. Ciobotaru, **V.G. Agelidis**, "Power smoothing of large solar photovoltaic plant using hybrid energy storage", in *IEEE Transactions on Sustainable Energy*, vol. 5, no. 3, July 2014, p. 834-842.
- [78] G. Konstantinou, **V.G. Agelidis**, J. Pou "Theoretical considerations for single-phase interleaved converters operated with SHE-PWM", in *IEEE Transactions on Power Electronics*, vol. 29, no. 10, October 2014, p. 5124-5128.
- [79] A.M.Y.M. Ghias, J. Pou, **V.G. Agelidis**, M. Ciobotaru, "Voltage balancing method for a flying capacitor multilevel converter using phase disposition PWM", in *IEEE Transactions on Industrial Electronics*, vol. 61, no. 12, December 2014, p. 6538-6546.
- [80] M. Mirhosseini, J. Pou, **V.G. Agelidis**, E. Robles, S. Ceballos, "A three-phase frequency adaptive phase-locked loop for independent single-phase operation", in *IEEE Transactions on Power Electronics*, vol. 29, no. 12, December 2014, p. 6255-6259.
- [81] M.S. Reza, M. Ciobotaru, **V.G. Agelidis**, "A robust frequency estimation technique based on three consecutive samples for single-phase systems", in *IEEE Journal of Emerging and Selected Topics in Power Electronics*, vol. 2, no. 4, December 2014, p. 1049-1058.
- [82] V. Lystianingrum, B. Hredzak, **V.G. Agelidis**, "Multiple model estimator based detection of abnormal cell overheating in a Li-Ion battery string with minimum number of temperature sensors", in *Journal of Power Sources*, Vol. 273, January 2015, p. 1171-1181.
- [83] J. Pou, S. Ceballos, G. Konstantinou, **V.G. Agelidis**, R. Picas, J. Zaragoza, "Circulating current injection methods based on instantaneous information for the modular multilevel converter", *IEEE Transactions on Industrial Electronics*, vol. 62, 2, Feb 2015, p. 777-788.
- [84] G.J. Capella, J. Pou, S. Ceballos, G. Konstantinou, J. Zaragoza, **V.G. Agelidis**, "Enhanced phase-shifted PWM carrier disposition for interleaved voltage source inverters", in *IEEE Transactions on Power Electronics*, vol. 30, no. 3, March 2015, p. 1121-1125.
- [85] M.S. Reza, M. Ciobotaru, **V.G. Agelidis**, "Power system frequency estimation using a newton-type technique for smart meters", in *IEEE Transactions on Instrumentation & Measurement*, Vol. 64, Issue 3, March 2015, p. 615-624.
- [86] B. Hredzak, **V.G. Agelidis**, G.D. Demetriades, "Application of explicit model predictive control to a hybrid battery-ultracapacitor power source", in *Journal of Power Sources*, Vol. 277, March 2015, p. 84-94.
- [87] T. Kim, M. Jang, **V.G. Agelidis**, "Practical implementation of a SiC based 300 kHz, 1.2 kW hard-switching boost-converter and comparative thermal performance evaluation", in *IET Power Electronics*, Vol. 8, Issue 3, March 2015, p. 333-341.

- [88] H. Choi, M. Ciobotaru, M. Jang, **V.G. Agelidis**, "Performance of medium voltage DC bus PV system architecture utilizing high-gain DC-DC converter", in *IEEE Transactions on Sustainable Energy*, Vol. 6, Issue 2, April 2015, p. 464-473.
- [89] A.M.Y.M. Ghias, J. Pou, M. Ciobotaru, **V.G. Agelidis**, "Optimal switching transitions based voltage balancing method for flying capacitor multilevel converters", in *IEEE Transactions on Power Electronics*, vol. 30, no. 4, April 2015, p. 1804-1817.
- [90] M.S. Reza, M. Ciobotaru, **V.G. Agelidis**, "A modified demodulation technique for single-phase grid voltage fundamental parameters estimation", in *IEEE Transactions on Industrial Electronics*, Vol. 62, Issue 6, June 2015, p. 3705-3713.
- [91] A. Heidari, **V.G. Agelidis**, M. Kia, "Considerations of sectionalizing switches in distribution networks with distributed generation", in *IEEE Transactions on Power Delivery*, Vol. 30, Issue 3, June 2015, p. 1401-1409.
- [92] A. Ahmadi, A.E. Nezhad, A. Heidari, **V.G. Agelidis**, "Comment on "a hybrid multi-objective cultural algorithm for short-term environmental/economic hydrothermal scheduling" by Lu *et al.* [Energy Conversion Management 52 (2011) 2121-2134]", in *Energy Conversion and Management*, Vol. 99, June 2015, p. 414-417.
- [93] M. Mirhosseini, J. Pou, **V.G. Agelidis**, "Single- and two-stage inverter-based grid-connected photovoltaic power plants with ride-through capability under grid faults", in *IEEE Transactions on Sustainable Energy*, Vol. 6, Issue 3, July 2015, p. 1150-1159.
- [94] P. Acuña, L. Morán, M. Rivera, R. Aguilera, R. Burgos, **V.G. Agelidis**, "A single-objective predictive control method for a multi-variable single-phase three-level NPC converter-based active power filter", in *IEEE Transactions on Industrial Electronics*, Vol. 62, Issue 7, July 2015, p. 4598-4607.
- [95] B. Khorramdel, H. Khorramdel, J. Aghaei, A. Heidari, **V.G. Agelidis**, "Voltage security considerations in optimal operation of BEVs/PHEVs integrated microgrids", in *IEEE Transactions on Smart Grid*, Vol. 6, Issue 4, July 2015 p. 1575-1587.
- [96] A.M.Y.M. Ghias, J. Pou, **V.G. Agelidis**, "Voltage balancing method for stacked multicell converters using phase-disposition PWM", in *IEEE Transactions on Industrial Electronics*, Vol. 62, Issue 7, July 2015, p. 4001-4010.
- [97] I. Koprinska, M. Rana, **V.G. Agelidis**, "Correlation and instance based feature selection for electricity load forecasting", in *Knowledge-Based Systems*, Vol. 82, July 2015, p. 29-40.
- [98] M. Hasheminamin, **V.G. Agelidis**, V. Salehi, R. Teodorescu, B. Hredzak "Index-based assessment of voltage rise and reverse power flow phenomena in a distribution feeder under high PV penetration", *IEEE Journal of Photovoltaics*, Vol. 5, 4, July 2015, p. 1158-1168.
- [99] M.S. Dahidah, G. Konstantinou, **V.G. Agelidis**, "A review of multilevel selective harmonic elimination PWM: Formulations, solving algorithms, implementation and applications", in *IEEE Transactions on Power Electronics*, Vol. 30, Issue 8, August 2015, p. 4091-4106.
- [100] A. Ahmadi, H. Moghimi, A.E. Nezhad, **V.G. Agelidis**, A.M. Sharaf, "Multi-objective economic emission dispatch considering combined heat and power by normal boundary intersection method", in *Electric Power Systems Research*, Vol. 129, August 2015, p. 32-43.
- [101] R. Darus, J. Pou, G. Konstantinou, S. Ceballos, **V.G. Agelidis**, "A modified voltage balancing algorithm for the modular multilevel converter: evaluation for staircase and phase-disposition PWM", *IEEE Transactions on Power Electronics*, Vol. 30, 8, August 2015, p. 4119-4127.
- [102] A.M.Y.M. Ghias, J. Pou, **V.G. Agelidis**, "On reducing power losses in stack multicell converters with optimal voltage balancing method", in *IEEE Transactions on Power Electronics*, Vol. 30, Issue 9, September 2015, p. 4682-4695.
- [103] T. Morstyn, B. Hredzak, **V.G. Agelidis**, "Distributed cooperative control of microgrid storage", *IEEE Transactions on Power Systems*, Vol. 30, Issue 5, Sep 2015, p. 2780-2789.
- [104] R. Picas, S. Ceballos, J. Pou, J. Zaragoza, G. Konstantinou, **V.G. Agelidis**, "Closed loop discontinuous modulation technique for capacitor voltage ripples and switching losses

- reduction in modular multilevel converters", in *IEEE Transactions on Power Electronics*, Vol. 30, Issue 9, September 2015, p. 4714-4725.
- [105] D.B.W. Abeywardana, B. Hredzak, **V.G. Agelidis**, "Single-phase grid-connected LiFePO₄ battery-supercapacitor hybrid energy storage system with interleaved boost inverter", in *IEEE Transactions on Power Electronics*, Vol. 30, Issue 10, October 2015, p. 5591-5604.
- [106] M. Mirhosseini, J. Pou, and **V.G. Agelidis**, "Individual phase current control with the capability to avoid overvoltage in grid-connected photovoltaic power plants under unbalanced voltage sags", *IEEE Transactions on Power Electronics*, Vol. 30, 10, Oct 2015, p. 5346-5351.
- [107] A.M.Y.M. Ghias, J. Pou, G.J. Capella, **V.G. Agelidis**, R.P. Aguilera, T. Meynard, "Single-carrier phase-disposition PWM implementation for multilevel flying capacitor converters", in *IEEE Transactions on Power Electronics*, Vol. 30, Issue 10, October 2015, p. 5376-5380.
- [108] M.S. Reza, M. Ciobotaru, **V.G. Agelidis**, "A robust technique for accurate estimation of single-phase grid voltage fundamental frequency and amplitude", in *IET Journal of Generation, Transmission & Distribution*, Vol. 9, Issue 2, 2015, p. 183-192.
- [109] G.J. Capella, J. Pou, S. Ceballos, J. Zaragoza, **V.G. Agelidis**, "Current balancing technique for interleaved voltage source inverters with magnetically-coupled legs connected in parallel", in *IEEE Transactions on Industrial Electronics*, Vol. 62, Issue 3, 2015, p. 1335-1344.
- [110] M.S. Reza, M. Ciobotaru, **V.G. Agelidis**, "Grid synchronization technique without using trigonometric functions for accurate estimation of fundamental voltage parameters", in *IET Generation, Transmission & Distribution*, Vol. 9, Issue 12, 2015, p. 1402-1408.
- [111] M.S. Reza, M. Ciobotaru, **V.G. Agelidis**, "Single-phase grid voltage frequency estimation using Teager energy operator based technique", in *IEEE Journal of Emerging and Selected Topics in Power Electronics*, Vol. 3, Issue 4, 2015, p. 1218-1227.
- [112] G. Farivar, **V.G. Agelidis**, B. Hredzak, "Reduced capacitance thin-film H-bridge multilevel STATCOM control utilizing an analytic filtering scheme", in *IEEE Transactions on Industrial Electronics*, Vol. 62, Issue 10, 2015, p. 6457-6468.
- [113] Y. Yu, G. Konstantinou, B. Hredzak, **V.G. Agelidis**, "Operation of cascaded H-Bridge multilevel converters for large-scale photovoltaic power plants under bridge failures", in *IEEE Transactions on Industrial Electronics*, Vol. 62, Issue 11, 2015, p. 7228-7236.
- [114] V. Lystianingrum, B. Hredzak, **V.G. Agelidis**, V.S. Djanali, "On estimating instantaneous temperature of a supercapacitor string using an observer based on experimentally validated lumped thermal model", in *IEEE Transactions on Energy Conversion*, Vol. 30, Issue 4, 2015, p. 1438-1448.
- [115] S. Su, X. Jiang, W. Wang, J. Jiang, **V.G. Agelidis**, J. Geng, "Optimal energy management for microgrids considering electric vehicles and photovoltaic energy storage", in *Dianli Xitong Zidonghua/Automation of Electric Power Systems*, 39 (9), pp. 164-171, May 2015.
- [116] M.S. Reza, **V.G. Agelidis**, "A robust technique for single-phase grid voltage fundamental and harmonics parameters estimation", in *IEEE Transactions on Instrumentation & Measurement*, 2015, Vol. 64, Issue 12, 2015, p. 3262-3273.
- [117] A. Ahmadi, A. Kaymanesh, A. Heidari, **V.G. Agelidis**, "Comment on 'Reliability constrained unit commitment with combined hydro and thermal generation embedded using self-learning group search optimizer' by J.H. Zheng, J.J. Chen, Q.H. Wu, and Z.X. Jing [Energy 81 (2015) 245-254]", in *Energy*, 2015.
- [118] I. Koprinska, M. Rana, **V.G. Agelidis**, "2D-interval forecasts for solar power production", in *Solar Energy*, Vol. 122, Dec. 2015, pp. 191-203.
- [119] G. Wang, M. Ciobotaru, **V.G. Agelidis**, "Optimal capacity design for hybrid energy storage system supporting dispatch of large-scale PV power plant", in *Journal of Energy Storage*, Vol. 3, Oct. 2015, pp. 25-35.
- [120] Y. Yu, G. Konstantinou, B. Hredzak, **V.G. Agelidis**, "Power balance of cascaded H-bridge multilevel converters for large-scale photovoltaic grid integration", in *IEEE Transactions on Power Electronics*, Vol. 31, Issue 1, 2016, p. 292-303.

- [121] T. Morstyn, B. Hredzak, G. D. Demetriades, **V.G. Agelidis**, "Unified distributed control for DC microgrid operating modes", in *IEEE Transactions on Power Systems*, Vol. 31, Issue 1, 2016, p. 802-812.
- [122] Y. Yu, G. Konstantinou, B. Hredzak, **V.G. Agelidis**, "Power balance optimization of cascaded H-bridge multilevel converters for large-scale photovoltaic integration", in *IEEE Transactions on Power Electronics*, Vol. 31, Issue 2, p. 1108-1120.
- [123] G. Konstantinou, J. Pou, R. Darus, S. Ceballos, **V.G. Agelidis**, "Switching frequency analysis of staircase modulated modular multilevel converters and equivalent PWM techniques", in *IEEE Transactions on Power Delivery*, Vol. 31, Issue 1, 2016, p. 28–36.
- [124] I. López, S. Ceballos, J. Pou, J. Zaragoza, J. Andreu, I. Kortabarria, **V.G. Agelidis**, "Modulation strategy for multiphase neutral-point-clamped converters", in *IEEE Transactions on Power Electronics*, Vol. 31, Issue 2, 2016, p. 928–941.
- [125] D.B.W. Abeywardana, B. Hredzak, **V.G. Agelidis**, "A rule-based controller to mitigate DC-side 2nd-order harmonic current in a single-phase boost inverter", in the *IEEE Transactions on Power Electronics*, Vol. 31, Issue 2, 2016, p. 1665-1679.
- [126] A.M.Y.M. Ghias, J. Pou, **V.G. Agelidis**, "An active voltage-balancing method based on phase-shifted PWM for stacked multicell converters", in *IEEE Transactions on Power Electronics*, Vol. 31, Issue 3, 2016, p. 1921-1930.
- [127] R. Darus, J. Pou, G. Konstantinou, S. Ceballos, **V. G. Agelidis**, "Controllers for eliminating the AC components in the circulating current of modular multilevel converters", in *IET Power Electronics*, Vol. 9, Issue 1, 2016, p. 1-8.
- [128] M. Momayyezani, B. Hredzak, **V.G. Agelidis**, "An integrated reconfigurable converter topology for high voltage battery systems", in *IEEE Transactions on Power Electronics*, Vol. 31, Issue 3, 2016, p. 1968-1979.
- [129] G. Farivar, B. Hredzak, **V.G. Agelidis**, "Decoupled control system for cascaded H-bridge multilevel converter based STATCOM", in *IEEE Transactions on Industrial Electronics*, Vol. 63, Issue 1, 2016, p. 322-331.
- [130] D.B.W. Abeywardana, B. Hredzak, **V.G. Agelidis**, "An input current feedback method to mitigate the DC-side low frequency ripple current in a single-phase boost inverter", in *IEEE Transactions on Power Electronics*, Vol. 31, Issue 6, 2016, p. 4594-4603.
- [131] J. Aghaei, M. Zarei, M. Asban, S. Ghavidel, A. Heidari, **V. G. Agelidis**, "Determining potential stability enhancements of flexible AC transmission system devices using corrected transient energy function", in *IET Generation, Transmission & Distribution*, 2016, Vol. 10, Issue 2, p. 470-476.
- [132] G. Konstantinou, J. Pou, S. Ceballos, R. Picas, J. Zaragoza, **V.G. Agelidis**, "Control of circulating currents in modular multilevel converters through redundant voltage levels", in *IEEE Transactions on Power Electronics*, Vol. 31, Issue 11, 2016, p. 7761-7769.
- [133] M. Khalid, A. Heidari, A.V. Savkin, **V.G. Agelidis**, "Minimizing the energy cost for microgrids integrated with renewable energy resources and conventional generation using controlled battery energy storage", in *Renewable Energy*, Vol. 97, 2016, p. 646-655.
- [134] G. Wang, G. Konstantinou, C.D. Townsend, J. Pou, S. Vazquez, G.D. Demetriades, **V.G. Agelidis**, "A review of power electronics for grid connection of utility-scale battery energy storage systems", in *IEEE Transactions on Sustainable Energy*, Vol. 7, Issue 4, 2016, p. 1778-1790.
- [135] G.A. Papafotiou, G.D. Demetriades, **V.G. Agelidis**, "Technology readiness assessment of model predictive control in medium- and high-voltage power electronics", in *IEEE Transactions on Industrial Electronics*, Vol. 63, Issue 9, 2016, p. 5807-5815.
- [136] A. Heidari, **V. G. Agelidis**, H. Zayandehroodi, J. Pou, J. Aghaei, "On exploring potential reliability gains under islanding operation of distributed generation", in *IEEE Transactions on Smart Grid*, Vol. 7, Issue 5, 2016, p. 2166-2174.

- [137] T. Kim, M. Jang, **V.G. Agelidis**, "Ultra-fast MHz range driving circuit for SiC MOSFET using frequency multiplier with eGaN FET", in *IET Power Electronics*, Vol. 9, Issue 10, 2016, p. 2085-2094.
- [138] C. Townsend, Y. Yu, G. Konstantinou, **V.G. Agelidis**, "Cascaded H-bridge multi-level PV topology for alleviation of per-phase power imbalances & reduction of second harmonic voltage ripple", *IEEE Transactions on Power Electronics*, Vol. 31, 8, 2016, p. 5574-5586.
- [139] M. Rana, I. Koprinska, **V.G. Agelidis**, "Univariate and multivariate methods for very short-term solar photovoltaic power forecasting", in *Energy Conversion and Management*, Vol. 121, 2016, p. 380-390.
- [140] A.M.Y.M. Ghias, J. Pou, G.J. Capella, P. Acuna Rios, **V.G. Agelidis**, "On improving phase-shifted PWM for flying capacitor multilevel converters", in *IEEE Transactions on Power Electronics*, Vol. 31, Issue 8, 2016, p. 5384-5388.
- [141] C.D. Townsend, R.A. Baraciarte, Y. Yu, D. Tormo, H. Zelaya de La Parra, G.D. Demetriades, **V.G. Agelidis**, "Heuristic model predictive modulation for high-power cascaded multi-level converters", in *IEEE Transactions on Industrial Electronics*, Vol. 63, 8, 2016, p. 5263-5275.
- [142] H. Choi, M. Jang, M. Ciobotaru, **V.G. Agelidis**, "Performance evaluation of interleaved high-gain converters", in *IET Power Electronics*, Volume 9, Issue 9, 2016, p. 1852-1861.
- [143] M. Momayyezani, D.B.W. Abeywardana, B. Hredzak, **V.G. Agelidis**, "Integrated reconfigurable configuration for battery/ultracapacitor hybrid energy storage systems", in *IEEE Transactions on Energy Conversion*, 31 (4), art. no. 7508894, pp. 1583-1590, 2016.
- [144] V. Lystianingrum, B. Hredzak, **V.G. Agelidis**, "Multiple-model-based overheating detection in a supercapacitors string", in *IEEE Transactions on Energy Conversion*, 31 (4), art. no. 7490339, pp. 1413-1422, 2016.
- [145] S. Vazquez, R.P. Aguilera, P. Acuna, J. Pou, J.I. Leon, L.G. Franquelo, **V.G. Agelidis**, "Model predictive control for single-phase NPC converters based on optimal switching sequences", in *IEEE Transactions on Industrial Electronics*, 63 (12), art. no. 7523419, pp. 7533-7541, 2016.
- [146] M. Khalid, A. Ahmadi, A.V. Savkin, **V.G. Agelidis**, "Minimizing the energy cost for microgrids integrated with renewable energy resources and conventional generation using controlled battery energy storage", in *Renewable Energy*, 97, pp. 646-655, 2016.
- [147] T. Morstyn, M. Momayyezani, B. Hredzak, **V.G. Agelidis**, "Distributed control for state-of-charge balancing between the modules of a reconfigurable battery energy storage system", in *IEEE Transactions on Power Electronics*, 31 (11), art. no. 7369967, pp. 7986-7995, 2016.
- [148] G. Farivar, B. Hredzak, **V.G. Agelidis**, "A DC-side sensorless cascaded H-bridge multilevel converter-based photovoltaic system", in *IEEE Transactions on Industrial Electronics*, 63 (7), art. no. 7437452, pp. 4233-4241, 2016.
- [149] A.V. Savkin, M. Khalid, **V.G. Agelidis**, "A constrained monotonic charging/discharging strategy for optimal capacity of battery energy storage supporting wind farms", in *IEEE Transactions on Sustainable Energy*, 7 (3), art. no. 7437467, pp. 1224-1231, 2016.
- [150] M. Mirhosseini, J. Pou, B. Karanayil, **V. G. Agelidis**, "Resonant vs. conventional controllers in grid-connected photovoltaic power plants under unbalanced grid voltages," in *IEEE Transactions on Sustainable Energy*, Vol. 7, Issue 3, July 2016, pp. 1124-1132.
- [151] H. Choi, M. Ciobotaru, M. Jang, **V.G. Agelidis**, "Performance evaluation of interleaved high-gain converter configurations", in *IET Power Electronics*, Vol. 9, Issue 9, 2016, pp. 1852-1861.
- [152] T. Morstyn, B. Hredzak, **V.G. Agelidis**, "Cooperative multi-agent control of heterogeneous storage devices distributed in a DC microgrid", in *IEEE Transactions on Power Systems*, 31 (4), art. no. 7254203, pp. 2974-2986, 2016.
- [153] G. Konstantinou, J. Pou, G.J. Capella, K. Song, S. Ceballos, **V.G. Agelidis**, "Interleaved operation of three-level neutral point clamped converter legs and reduction of circulating

- currents under SHE-PWM”, *IEEE Transactions on Industrial Electronics*, 63 (6), pp. 3323-3332, 2016.
- [154] G. Wang, M. Ciobotaru, **V.G. Agelidis**, “Power management for improved dispatch of utility-scale PV plants”, in *IEEE Transactions on Power Systems*, 31 (3), art. no. 7192748, pp. 2297-2306, 2016.
- [155] H. Choi, M. Jang, **V.G. Agelidis**, “Zero-current-switching bidirectional interleaved switched-capacitor DC-DC converter: Analysis, design and implementation”, in *IET Power Electronics*, 9 (5), pp. 1074-1082, 2016.
- [156] H. Kamankesh, **V.G. Agelidis**, A. Kavousi-Fard, “Optimal scheduling of renewable micro-grids considering plug-in hybrid electric vehicle charging demand”, *Energy*, 100, pp. 285-297.
- [157] B. Karanayil, M. Ciobotaru, **V.G. Agelidis**, “Power flow management of isolated multiport converter for more electric aircraft”, in *IEEE Transactions on Power Electronics*, 32 (7), art. no. 7577868, pp. 5850-5861, 2017.
- [158] M. Momayyezani, B. Hredzak, **V.G. Agelidis**, “A load-sharing strategy for the state of charge balancing between the battery modules of integrated reconfigurable converter”, in *IEEE Transactions on Power Electronics*, 32 (5), art. no. 7506345, pp. 4056-4063, 2017.
- [159] T. Kim, D. Feng, M. Jang, **V.G. Agelidis**, “Common mode noise analysis for cascaded boost converter with silicon carbide devices”, in *IEEE Transactions on Power Electronics*, 32 (3), art. no. 7473875, pp. 1917-1926, 2017.
- [160] H. Li, Z. Yang, B. Wang, **V.G. Agelidis**, B. Zhang, “On thermal impact of chaotic frequency modulation SPWM techniques”, in *IEEE Transactions on Industrial Electronics*, 64 (3), art. no. 7736981, pp. 2032-2043, 2017.
- [161] G. Farivar, C.D. Townsend, B. Hredzak, J. Pou, **V.G. Agelidis**, “Low-capacitance cascaded H-bridge multilevel STATCOM” in *IEEE Transactions on Power Electronics*, 32 (3), art. no. 7457679, pp. 1744-1754, 2017.
- [162] R.P. Aguilera, P. Acuña, P. Lezana, G. Konstantinou, B. Wu, S. Bernet, **V.G. Agelidis**, “Selective harmonic elimination model predictive control for multilevel power converters”, in *IEEE Transactions on Power Electronics*, 32 (3), art. no. 7469797, pp. 2416-2426, 2017.
- [163] J. Yang, X. Jin, X. Wu, P. Acuna, R.P. Aguilera, T. Morstyn, **V.G. Agelidis**, “Decentralised control method for DC microgrids with improved current sharing accuracy”, in *IET Generation, Transmission and Distribution*, 11 (3), pp. 696-706, 2017.
- [164] D.B.W. Abeywardana, B. Hredzak, **V.G. Agelidis**, G.D. Demetriades, “Supercapacitor sizing method for energy-controlled filter-based hybrid energy storage systems”, in *IEEE Transactions on Power Electronics*, 32 (2), art. no. 7450153, pp. 1626-1637, 2017.
- [165] H. Kamankesh, **V.G. Agelidis**, “A sufficient stochastic framework for optimal operation of micro-grids considering high penetration of renewable energy sources and electric vehicles”, in *Journal of Intelligent and Fuzzy Systems*, 32 (1), pp. 373-387, 2017.
- [166] D.B.W. Abeywardana, B. Hredzak, **V.G. Agelidis**, “A fixed frequency sliding mode controller for a boost-inverter-based battery-supercapacitor hybrid energy storage system”, in *IEEE Transactions on Power Electronics*, Vol. 32, Issue 1, pp. 668-680, 2017.
- [167] P. Acuna, R.P. Aguilera, A.M.Y.M. Ghias, M. Rivera, C.R. Baier, **V.G. Agelidis**, “Cascade-free model predictive control for single-phase grid-connected power converters”, in *IEEE Transactions on Industrial Electronics*, 64 (1), art. no. 7539532, pp. 285-294, 2017.
- [168] A.M.Y.M. Ghias, J. Pou, P. Acuna Rios, S. Ceballos, A. Heidari, **V.G. Agelidis**, “Elimination of low-frequency ripples and regulation of neutral point voltage in stacked multicell converters”, in *IEEE Transactions on Power Electronics*, Vol. 32, Issue 1, pp. 164-175, 2017.
- [169] K. Song, G. Konstantinou, W. Mingli, P. Acuna, R.P. Aguilera, **V.G. Agelidis**, “Windowed SHE-PWM of interleaved four-quadrant converters for resonance suppression in traction power supply systems”, in *IEEE Transactions on Power Electronics*, Vol. 32, 10, October 2017, pp. 7870-7881.

- [170] G. Farivar, A.M.Y.M. Ghias, B. Hredzak, J. Pou, **V.G. Agelidis**, “Capacitor voltages measurement and balancing in flying capacitor multilevel converters utilizing a single voltage sensor”, *IEEE Transactions on Power Electronics*, Vol. 32, 10, October 2017, pp. 8115-8123.
- [171] Y. Yu, G. Konstantinou, C.D. Townsend, **V.G. Agelidis**, “Comparison of zero-sequence injection methods in cascaded H-bridge multilevel converters for large-scale photovoltaic integration”, in *IET Renewable Power Generation*, Vol. 11, Issue 5, 2017, pp. 603-613.
- [172] G. Farivar, C.D. Townsend, B. Hredzak, J. Pou, **V.G. Agelidis**, “Passive reactor compensated cascaded H-bridge multilevel LC-STATCOM”, in *IEEE Transactions on Power Electronics*, Vol. 32, Issue 11, November 2017, Article number 7786824, pp. 8338-8348.
- [173] Y. Yu, G. Konstantinou, C.D. Townsend, R.P. Aguilera, **V.G. Agelidis**, “Delta-connected cascaded H-bridge multilevel converters for large-scale photovoltaic grid integration”, in *IEEE Transactions on Industrial Electronics*, Vol. 64, Issue 11, November 2017, Article number 7801007, pp. 8877-8886.
- [174] J. Aghaei, **V.G. Agelidis**, M. Charwand, F. Raeisi, A. Ahmadi, A.E. Nezhad, A. Heidari, “Optimal robust unit commitment of CHP plants in electricity markets using information gap decision theory”, in *IEEE Transactions on Smart Grid*, Vol. 8, Issue 5, Sept. 2017, Article number 7401127, pp. 2296-2304.
- [175] S. Kejian, G. Konstantinou, L. Jing, W. Mingli, **V.G. Agelidis**, “High performance control strategy for single-phase three-level neutral-point-clamped traction four-quadrant converters”, in *IET Power Electronics*, Volume 10, Issue 8, 30 June 2017, pp. 884-893.
- [176] J. Yang, X. Jin, X. Wu, M. Chen, **V.G. Agelidis**, “A wireless power sharing control strategy for hybrid energy storage systems in DC microgrids”, in *Diangong Jishu Xuebao/Transactions of China Electrotechnical Society*, Volume 32, Issue 10, 25 May 2017, pp. 135-144.
- [177] M.S. Reza, **V.G. Agelidis**, “A demodulation-based technique for robust estimation of single-phase grid voltage fundamental parameters”, in *IEEE Transactions on Industrial Informatics*, Volume 13, Issue 1, February 2017, pp. 166-175.
- [178] R.P. Aguilera, P. Acuna, Y. Yu, G. Konstantinou, C.D. Townsend, B. Wu, **V.G. Agelidis**, “Predictive control of cascaded H-bridge converters under unbalanced power generation”, in *IEEE Transactions on Industrial Electronics*, Volume 64, Issue 1, January 2017, pp. 4-13.
- [179] A. Heidari, **V.G. Agelidis**, M. Kia, J. Pou, J. Aghaei, M. Shafie-Khah, J.P.S. Catalao, “Reliability optimization of automated distribution networks with probability customer interruption cost model in the presence of DG units”, in *IEEE Transactions on Smart Grid*, Volume 8, Issue 1, January 2017, pp. 305-315.
- [180] F.H. Gandoman, A. Ahmadi, A.M. Sharaf, P. Siano, J. Pou, B. Hredzak, **V.G. Agelidis**, “Review of FACTS technologies and applications for power quality in smart grids with renewable energy systems”, *Renewable and Sustainable Energy Reviews*, Vol. 82, 2018, pp. 502-514.
- [181] M. Hasheminamin, **V.G. Agelidis**, A. Ahmadi, P. Siano, R. Teodorescu, “Single-point reactive power control method on voltage rise mitigation in residential networks with high PV penetration”, in *Renewable Energy*, 119, 2018, pp. 504-512.
- [182] T. Morstyn, A.V. Savkin, B. Hredzak, **V.G. Agelidis**, “Multi-agent sliding mode control for state of charge balancing between battery energy storage systems distributed in a DC Microgrid”, in *IEEE Transactions on Smart Grid*, 2018, 9 (5), art. no. 7852468, pp. 4735-4743.
- [183] T. Morstyn, B. Hredzak, **V.G. Agelidis**, “Network topology independent multi-agent dynamic optimal power flow for microgrids with distributed energy storage systems”, in *IEEE Transactions on Smart Grid*, 9 (4), 2018, pp. 3419-3429.
- [184] T. Morstyn, B. Hredzak, **V.G. Agelidis**, “Control strategies for microgrids with distributed energy storage systems: An overview”, in *IEEE Transactions on Smart Grid*, 9 (4), 2018, pp. 3652-3666.

- [185] T. Morstyn, B. Hredzak, R.P. Aguilera, **V.G. Agelidis**, “Model predictive control for distributed microgrid battery energy storage systems”, in *IEEE Transactions on Control Systems Technology*, 26 (3), 2018, pp. 1107-1114.
- [186] M. Khalid, R.P. Aguilera, A.V. Savkin, **V.G. Agelidis**, “A market-oriented wind power dispatch strategy using adaptive price thresholds and battery energy storage”, in *Wind Energy*, 21 (4), 2018, pp. 242-254.
- [187] D.B.W. Abeywardana, P. Acuna, B. Hredzak, R.P. Aguilera, **V.G. Agelidis**, “Single-phase boost inverter-based electric vehicle charger with integrated vehicle to grid reactive power compensation”, in *IEEE Transactions on Power Electronics*, 33 (4), 2018, art. no. 7918621, pp. 3462-3471.
- [188] M. Khalid, R.P. Aguilera, A.V. Savkin, **V.G. Agelidis**, “On maximizing profit of wind-battery supported power station based on wind power and energy price forecasting”, in *Applied Energy*, 211, 2018, pp. 764-773.
- [189] H.R. Wickramasinghe, G. Konstantinou, J. Pou, **V.G. Agelidis**, “Interactions between indirect DC-voltage estimation and circulating current controllers of MMC-based HVDC transmission systems”, in *IEEE Transactions on Power Systems*, 33 (1), pp. 829-838.
- [190] A. Heidari, **V.G. Agelidis**, J. Pou, J. Aghaei, A.M.Y.M. Ghias, “Reliability worth analysis of distribution systems using cascade correlation neural networks”, in *IEEE Transactions on Power Systems*, 33 (1), 2018, pp. 412-420.
- [191] G. Misyris, D. Doukas, T.A. Papadopoulos, D.P. Labridis, **V.G. Agelidis**, “State-of-charge estimation for Li-ion batteries: A more accurate hybrid approach”, in *IEEE Transactions on Energy Conversion*, 2019, 34(1), 8424040, pp. 109-119.
- [192] M.S. Reza, F. Sadeque, M.M. Hossain, A.M.Y.M. Ghias, **V.G. Agelidis**, “Three-phase PLL for grid-connected power converters under both amplitude and phase unbalanced conditions”, in *IEEE Transactions on Industrial Electronics*, 66 (11), November 2019, 8624618, pp. 8881-8891.
- [193] M. Iqbalridwan, M.T.N. Lin, and **V.G. Agelidis**, “Design and simulation of multi-function virtual grid-edge intelligent electronic device with standardized semantics based on IEC 61850 standard”, in *International Journal of Engineering and Advanced Technology*, Vol. 9, Issue 1, October 2019, pp. 2282-2287.
- [194] M.A. Hannan, M.S.H. Lipu, P.J. Ker, R.A. Begum, R.A. **V.G. Agelidis**, F. Blaabjerg, “Power electronics contribution to renewable energy conversion addressing emission reduction: Applications, issues, and recommendations”, *Applied Energy*, 2019, 251, 113404.
- [195] M.S. Reza, M. Ciobotaru, M.M. Hossain, **V.G. Agelidis**, “Robust estimation of voltage harmonics in a single-phase system”, *IET Science, Measurement and Technology*, 2019, 13 (5), pp. 662-670.
- [196] M.S. Reza, M.M. Hossain, **V.G. Agelidis**, “Fast and accurate frequency estimation in distorted grids using a three-sample based algorithm”, in *IET Generation, Transmission and Distribution*, Vol. 13, Issue 18, 17 September 2019, pp. 4242-4248.
- [197] M. Al-Soeidat, T. Cheng, D.D.-C. Lu and **V.G. Agelidis**, “Experimental study of static and dynamic behaviours of cracked PV panels” in *IET Renewable Power Generation*, Vol. 13, Issue 16, December 2019, pp. 3002-2008.
- [198] K. Song, W. Mingli, S. Yang, Q. Liu, **V.G. Agelidis**, G. Konstantinou, “High-order harmonic resonances in traction power supplies: A review based on railway operational data, measurements, and experience”, in *IEEE Transactions on Power Electronics*, Vol 35, Issue 3, March 2020, pp. 2501-2518.
- [199] M.S. Reza, M.M. Hossain, A.O. Nasif, **V.G. Agelidis**, “Fast Estimation of Phase Angle for Three-Phase Voltage Systems under Distorted Conditions”, *IEEE Journal of Emerging and Selected Topics in Power Electronics*, 2020.

- [200] F. Noman, F., A.A. Alkahtani, **V.G. Agelidis**, G. Alkaws, J. Ekanayake, “Wind-energy-powered electric vehicle charging stations: Resource availability data analysis”, *Applied Sciences (Switzerland)*, 2020, 10(16), 5654.
- [201] A. Alammari, A.A. Alkahtani, M.R. Ahmad, Z. Kawasaki, **V.G. Agelidis**, “Kalman filter and wavelet cross-correlation for VHF broadband interferometer lightning mapping”, *Applied Sciences (Switzerland)*, 2020, 10(12), 4238.
- [202] A. Alkahtani, S.T.Y. Alfalahi, A.A. Athamneh, M.A. Hannan, **V.G. Agelidis**, “Power Quality in Microgrids including Supraharmonics: Issues, Standards, and Mitigations”, *IEEE Access*, 2020, 8, pp. 127104-127122, 9136692.
- [203] M. Mirhosseini, J. Pou, **V.G. Agelidis**, “Grid-Connected Photovoltaic Power Plant without Phase Angle Synchronization Able to Address Fault-Ride-Through Capability”, *IEEE Journal of Emerging and Selected Topics in Power Electronics*, 2020, 8(4), pp. 3467–3476, 8832213.
- [204] O. Abedinia, M. Bagheri, **V.G. Agelidis**, “Application of an adaptive Bayesian-based model for probabilistic and deterministic PV forecasting”, *IET Renewable Power Generation*, 2021, 15(12), pp. 2699–2714.
- [205] A. Aljanad, N.M.L. Tan, **V.G. Agelidis**, H. Shareef, H. “Neural network approach for global solar irradiance prediction at extremely short-time-intervals using particle swarm optimization algorithm”, *Energies*, 2021, 14(4), 1213.
- [206] M. S. Reza, M. M. Hossain and **V. G. Agelidis**, "A Method without Stability Issue for Robust Estimation of Three-Phase Grid Frequency," in *IEEE Journal of Emerging and Selected Topics in Industrial Electronics*, doi: 10.1109/JESTIE.2021.3074886.

9.1.6 Refereed international conference papers

- [1] **V.G. Agelidis**, P.D. Ziogas, G. Joos, “An efficient high frequency high power off-line DC-DC converter topology”, in *Proc. of IEEE Power Electronics Specialists Conference 1990*, San Antonio, Texas, USA, p. 173-180.
- [2] **V.G. Agelidis**, P.D. Ziogas, G. Joos, “An efficient full-bridge PWM DC-DC converter topology using lossless snubber and simple energy recovery network”, in *Proc. of IEEE Applied Power Electronics Conference and Exposition 1991*, Dallas, Texas, USA, p. 146-157.
- [3] **V.G. Agelidis**, P.D. Ziogas, G. Joos, “Optimum use of DC-side commutation in PWM inverters”, in *Proc. of IEEE Power Electronics Specialists Conference 1991*, Cambridge, Massachusetts, USA, p. 276-282.
- [4] **V.G. Agelidis**, P.D. Ziogas, G. Joos, “An optimum modulation strategy for a novel "notch" commutated 3-Phase PWM inverter”, in *Proc. of IEEE Industry Applications Society Annual Meeting 1991*, Dearborn, Michigan, USA, p. 809-818.
- [5] **V.G. Agelidis**, P.D. Ziogas, G. Joos, “Dead-Band PWM switching patterns”, in *Proc. of IEEE Power Electronics Specialists Conference 1992*, Toledo, Spain, p. 427-434.
- [6] **V.G. Agelidis**, G. Joos, “On applying graph theory toward a unified analysis of three-phase PWM inverter topologies”, in *Proc. of IEEE Power Electronics Specialists Conference 1993*, Seattle, Washington, USA, p. 408-415.
- [7] **V.G. Agelidis**, G. Joos, P.D. Ziogas, “A low-loss full-bridge PWM DC-DC converter topology”, in *Proc. of IEEE Power Electronics Specialists Conference 1993*, Seattle, Washington, USA, p. 531-537.
- [8] **V.G. Agelidis** and D. Vincenti, “Optimum non-deterministic pulse-width modulation for three-phase inverters”, in *Proc. of IEEE International Conference on Industrial Electronics, Control and Instrumentation 1993*, Maui, Hawaii, USA, p. 1234-1239.
- [9] **V.G. Agelidis**, D. Vincenti, “A "smart" switch based three-phase ZVS PWM topology”, in *Proc. of IEEE Applied Power Electronics Conference and Exposition 1994*, Orlando, Florida, USA, p. 275-279.
- [10] **V.G. Agelidis**, “A soft-switching PWM DC-DC step-up converter topology”, in *Proc. of IEEE Symposium on Power Electronics Circuits*, Hong Kong, June 1994, p. 13-16.

- [11] **V.G. Agelidis**, "Incorporating software tools in electrical engineering laboratory Experiments - an example", in *Proc. of IEEE International Multi-Media Engineering Education Conference*, Melbourne, Australia, 1994, p. 319-328.
- [12] **V.G. Agelidis**, D. Vincenti, "Non-deterministic AM-PWM strategy for three-phase VSI", in *Proc. of IEEE International Conference on Industrial Electronics, Control and Instrumentation*, Bologna, Italy, November 1994, p. 73-78.
- [13] **V.G. Agelidis**, "Design considerations of a simple and efficient zero-voltage-switching PWM inverter topology", in *Proc. of Australasian Universities Power Engineering Conference (AUPEC)*, Adelaide, Australia, September 1994, p. 503-508.
- [14] **V.G. Agelidis**, T.F. Leong, "Minimising filter requirements in single-phase inverters for UPS applications", in *Proc. of Australasian Universities Power Engineering Conference (AUPEC)*, Adelaide, Australia, September 1994, p. 497-502.
- [15] **V.G. Agelidis**, W.B. Lawrance, "Input current wave-shaping based-on a low-loss converter topology", in *Proc. of Australasian Universities Power Engineering Conference (AUPEC)*, Adelaide, Australia, September 1994, p. 524-529.
- [16] **V.G. Agelidis**, C.V. Nayar, "A novel soft-switching boost-type PWM converter topology", in *Proc. of Australasian Universities Power Engineering Conference (AUPEC)*, Adelaide, Australia, September 1994, pp. 296-301.
- [17] R.E. Katan, C.V. Nayar, **V.G. Agelidis**, "Performance analysis of a solar water pumping system using PSPICE", in *Proc. of Australasian Universities Power Engineering Conference (AUPEC)*, Adelaide, Australia, September 1994, p. 651-657
- [18] **V.G. Agelidis**, "A low distortion multilevel pulse-width modulated inverter topology", in *Proc. of IEEE International Symposium on Industrial Electronics*, Athens, Greece, July 1995, p. 243-247.
- [19] **V.G. Agelidis**, P. O'Sullivan, "Multi-carrier PWM techniques: a critical evaluation", in *Proc. of Australasian Universities Power Engineering Conference (AUPEC)*, Perth, Australia, September 1995, p. 331-338.
- [20] R.E. Katan, **V.G. Agelidis**, C.V. Nayar, "Performance analysis of a solar water pumping system", in *Proc. of IEEE International Conference on Power Electronics, Drives & Energy Systems for Industrial Growth*, New Delhi, India, January 1996, p. 81-87.
- [21] **V.G. Agelidis**, H.C. Goh, "A low-distortion variable-level PWM technique", in *Proc. of IEEE International Conference on Industrial Technology*, Shanghai, China, Dec 1996, p. 247-251.
- [22] **V.G. Agelidis**, "Three-phase PWM inverter analysis for UPS applications", in *Proc. of Australasian Universities Power Engineering Conference (AUPEC)*, Melbourne, Australia, September 1996, p. 341-345.
- [23] **V.G. Agelidis**, D. Baker, W.B. Lawrance, C.V. Nayar, "A multilevel PWM inverter topology for photovoltaic applications", in *Proc. of IEEE International Symposium on Industrial Electronics*, Guimaraes, Portugal, July 1997, p. 589-594.
- [24] D. Baker, **V.G. Agelidis**, C.V. Nayar, "A comparison of tri-level and bi-level current controlled grid-connected single-phase full-bridge inverters", in *Proc. of IEEE International Symposium on Industrial Electronics*, Guimaraes, Portugal, July 1997, p. 463-468.
- [25] W. Lawrance, **V.G. Agelidis**, W. Mielczarski, "Reduction of harmonic currents in fluorescent lighting systems: design and realisation", in *Proc. of IEEE International Symposium on Industrial Electronics*, Guimaraes, Portugal, July 1997, p. 308-311.
- [26] D. Baker, **V.G. Agelidis**, C.V. Nayar, "A new zero average current error control algorithm for inverters", in *Proc. of Australasian Universities Power Engineering Conference (AUPEC)*, Sydney, Australia, September 1997, p. 67-72.
- [27] L. Steber, **V.G. Agelidis**, C.V. Nayar, "Inverter technology: current available product analysis", in *Proc. of Australasian Universities Power Engineering Conference (AUPEC)*, Sydney, Australia, September 1997, p. 97-102.

- [28] **V.G. Agelidis**, M. Calais, "Application specific harmonic performance evaluation of multicarrier PWM techniques", in *Proc. of IEEE Power Electronics Specialists Conference*, Fukuoka, Japan, May 1998, p. 172-178.
- [29] M. Calais, **V.G. Agelidis**, "Multilevel converters for single-phase grid connected photovoltaic systems: an overview", in *Proc. of IEEE International Symposium on Industrial Electronics*, Pretoria, South Africa, July 1998, p. 224-229.
- [30] D. Baker, C.W. Meng, **V.G. Agelidis**, C.V. Nayar, "Quasi-resonant circuit DC-link inverter using a zero-average current error control algorithm", in *Proc. of IEEE International Symposium on Industrial Electronics*, Pretoria, South Africa, July 1998, p. 456-461.
- [31] D. Baker, **V.G. Agelidis**, C.V. Nayar, "Implementation of a zero-average current error control algorithm for inverters using a digital signal processor", in *Proc. of IEEE International Symposium on Industrial Electronics*, Pretoria, South Africa, July 1998, p. 450-455.
- [32] **V.G. Agelidis**, W. Keerthipala, W.B. Lawrance, "Multimodular multilevel PWM converter systems", in *Proc. of IEEE Nordic Workshop on Power and Industrial Electronics*, Espoo, Finland, August 1998, p. 56-60.
- [33] D. Baker, **V.G. Agelidis**, "Phase-locked loop for microprocessor with reduced complexity voltage controlled oscillator suitable for inverters", in *Proc. of IEEE 2nd International Conference on Power Electronics, Drives and Energy Systems for Industrial Growth*, Perth, Western Australia, December 1998, p. 464-469.
- [34] D. Baker, **V.G. Agelidis**, J.Y. Chen, "A five-level zero average current error controlled single-phase grid-interactive inverter", in *Proc. of IEEE 2nd International Conference on Power Electronics, Drives and Energy Systems for Industrial Growth*, Perth, Western Australia, December 1998, p. 50-55.
- [35] W.W.L. Keerthipala, B.R. Duggal, M.H. Chun, **V.G. Agelidis**, "A neural network based optimised observer for field oriented control of induction motor", in *Proc. of International Conference on Optimization Techniques and Applications*, Perth, Western Australia, 1998, p. 956-961.
- [36] M. Calais, **V.G. Agelidis**, M.S. Dymond, "A cascaded inverter for transformer-less single-phase grid-connected photovoltaic systems", in *Proc. of World Renewable Energy Congress, February 1999*, Perth, Australia.
- [37] M. Calais, **V.G. Agelidis**, M.S. Dymond, "When to switch which switch in a five-level single-phase cascaded inverter" in *Proc. of Australasian Universities Power Engineering Conference (AUPEC)*, Darwin, Australia, September 1999.
- [38] M. Calais, **V.G. Agelidis**, M.S. Dymond, "A cascaded inverter for transformer-less single-phase photovoltaic systems", in *Proc. of 37th Annual Conference of the Australian and New Zealand Solar Energy Society (ANZSES)*, Geelong, Australia, December 1999.
- [39] **V.G. Agelidis**, M. Calais, B. Graham, W.B. Lawrance, "Technical and financial analysis of residential grid-connected photovoltaic systems: The Western Australian scene", in *Proc. of 37th Annual Conference of the Australian and New Zealand Solar Energy Society (ANZSES)*, Geelong, Australia, December 1999.
- [40] M. Calais, **V.G. Agelidis**, L. Borle, M.S. Dymond, "A transformer-less five level cascaded inverter based single-phase photovoltaic system", in *Proc. of IEEE Power Electronics Specialists Conference 2000*, Galway, Ireland, p. 1173-1178.
- [41] J.E. Goodell, **V.G. Agelidis**, "Transforming the first-year experience in engineering using WebCT and invitational teaching", in *Proc. of Annual Meeting of the American Educational Research Association*, New Orleans, LA, USA, April 24-28, 2000.
- [42] L. Xu, E. Acha, **V.G. Agelidis**, "A new synchronous frame-based control strategy for a series voltage and harmonic compensator", in *Proc. of IEEE Applied Power Electronics Conference 2001*, Anaheim, CA, USA, p. 1274-1280.

- [43] L. Xu, **V.G. Agelidis**, “A flying capacitor multilevel PWM converter based UPFC”, in *Proc. of IEEE 32nd Power Electronics Specialists Conference*, Vancouver, Canada, June 2001, p. 1905-1910.
- [44] M. Calais, L.J. Borle, **V.G. Agelidis**, “Analysis of multicarrier PWM methods for a single-phase five level inverter”, in *Proc. of Annual IEEE 32nd Power Electronics Specialists Conference*, Vancouver, Canada, June 2001, p. 1351-1356.
- [45] C. Mademlis, **V.G. Agelidis**, “A high-performance vector controlled interior PM synchronous motor drive with extended speed range capability”, in *Proc. of IEEE 27th Annual Conference of the Industrial Electronics Society IECON 2001*, Denver, Colorado, USA, p. 1475- 1482.
- [46] B. Graham, M. Calais, **V.G. Agelidis**, W.B. Lawrance, “The introduction of the GST and its implications for the financial feasibility of grid-connected photovoltaic systems in Western Australia: new opportunities”, in *Proc. of Australian New Zealand Solar Energy Society Annual Conference (ANZSES)*, Adelaide, 2001.
- [47] M. Calais, J.M.A. Myrzik, **V.G. Agelidis**, “Inverters for single-phase grid photovoltaic systems – overview and prospects”, in *Proc. of the 17th European Photovoltaic Solar Energy Conference*, Munich, Germany 2001.
- [48] M. Calais, B. Graham, **V.G. Agelidis**, “New parameters affecting the financial feasibility of grid-connected photovoltaic systems in Western Australia: a discussion”, in *ISES 2001 Solar World Congress*, Perth, Western Australia.
- [49] L. Xu, **V.G. Agelidis**, E. Acha, “Steady-state operation of HVDC power transmission system with voltage-source converters and simultaneous VAR compensation”, in *Proc. of European Power Electronics Conference (EPE)*, Graz, Austria, August 2001.
- [50] **V.G. Agelidis**, L. Xu, “A novel HVDC system based on flying capacitor multilevel PWM converters”, in *Proc. of CIGRE International Conference on Power Systems (ICPS 2001)*, Wuhan, Hubei, China, September 2001, p. 380-385.
- [51] M. Calais, J. Myrzik, T. Spooner, **V.G. Agelidis**, “Inverters for single-phase grid connected photovoltaic systems – an overview”, in *Proc. of IEEE 33rd Power Electronics Specialists Conference 2002*, 23-27 June, Cairns, Australia, p. 1995-2000.
- [52] C. Feng, **V.G. Agelidis**, “On the comparison of fundamental and high frequency carrier-based PWM techniques for multilevel NPC inverters”, in *Proc. of IEEE 33rd Power Electronics Specialists Conference 2002*, 23-27 June, Cairns, Australia, p. 520-525.
- [53] **V.G. Agelidis**, C. Mademlis, “Technology of offshore wind turbines and farms and novel multilevel converter-based HVDC systems for their grid connections”, in *Proc. of IEE 3rd Conference and Exhibition on Power Generation, Transmission, Distribution and Energy Conversion, MedPower 2002*, Athens, Greece, November 2002.
- [54] C. Mademlis, **V.G. Agelidis**, “Wide speed operation of synchronous reluctance motor drives with a high-performance current regulation control scheme”, in *Proc. of IEE 3rd Conference and Exhibition on Power Generation, Transmission, Distribution and Energy Conversion, MedPower 2002*, Athens, Greece, November 2002.
- [55] C. Mademlis, **V.G. Agelidis**, “On considering magnetic saturation with maximum torque to current control in interior permanent magnet synchronous motor drives”, in *Proc. of the IEEE Power Engineering Society Transmission and Distribution Conference*, 2002.
- [56] C. Feng, J. Liang, **V.G. Agelidis**, “A novel voltage balancing control method for flying capacitor multilevel converters” in *Proc. of IEEE Annual Conference of the Industrial Electronics Society (IECON)*, Roanoke, Virginia, USA, Nov 2003, Vol. 2, p. 1179-1184.
- [57] C. Feng, and **V.G. Agelidis**, J. Liang, “Multimodular systems based on flying capacitor multilevel converters”, in *Proc. of IEEE 5th Power Electronics and Drives Systems*, Singapore, November 2003, p. 386-391.
- [58] M. Calais, L.J. Borle, L. Meek, **V.G. Agelidis**, “Adaptation of a non-linear current control algorithm for a single-phase five-level cascaded inverter” in *Proc. of PCIM International*

Exhibition and Conference on Power Electronics, Intelligent Motion, Power Quality, Nuremberg, Germany, May 2003.

- [59] C. Feng, **V.G. Agelidis**, “A DSP-based controller design for multilevel flying capacitor converters”, in *Proc. of the IEEE Applied Power Electronics Conference 2004*, February 22-26, Vol. 3, p. 1740-1744.
- [60] **V.G. Agelidis**, “Introducing power electronics technologies into the aerospace engineering undergraduate curriculum”, in *Proc. of IEEE 35th Power Electronics Specialists Conference PESC 2004*, Aachen, Germany, 20-25 June 2004, p. 2719-2724.
- [61] P.G. Marambeas, **V.G. Agelidis**, S.N. Manias, “A novel dual mode power conversion topology for regenerative fuel cell system”, in *Proc. of IEE MedPower 2004*, Cyprus, November 2004.
- [62] P. Stott, **V.G. Agelidis**, “Wind turbine matrix”, in *Proc. of 39th International Universities Power Engineering Conference (UPEC)*, University of the West of England, Bristol, UK, 6-8 September 2004.
- [63] **V.G. Agelidis**, A. Balouktsis, I. Balouktsis, C. Cossar, “Five-level selective harmonic elimination PWM strategies and multicarrier phase-shifted sinusoidal PWM: a comparison”, in *Proc. of IEEE 36th Power Electronics Specialists Conference (PESC) 2005*, Recife, Brazil, June 2005, p. 1685-1691.
- [64] M.S.A. Dahidah, **V.G. Agelidis**, “A hybrid genetic algorithm for selective harmonic elimination control of a multilevel inverter with non-equal dc sources”, in *Proc. of the IEEE 6th Power Electronics and Drives Systems 2005*, Kuala Lumpur, Malaysia, November 2005, p. 1205-1210.
- [65] L. Xu, **V.G. Agelidis**, “A VSC transmission system using flying capacitor multilevel converters and selective harmonic elimination PWM control”, in *Proc. of International Power Engineering Conference*, Singapore, November 2005.
- [66] **V.G. Agelidis**, A. Balouktsis, “Seven-level selective harmonic elimination PWM strategy”, in *Proc. of the IEEE 37th Power Electronics Specialists Conference 2006*, Jeju, South Korea, p. 1779-1785.
- [67] M. Dahidah, **V.G. Agelidis**, “A hybrid genetic algorithm for selective harmonic elimination multilevel PWM inverter with equal DC sources”, in *Proc. of the IEEE 37th Power Electronics Specialists Conference 2006*, Jeju Island, South Korea, p. 1472-1477.
- [68] **V.G. Agelidis**, G.D. Demetriades, N. Flourentzou, “Recent advances in high-voltage direct-current power transmission systems”, in *Proc. of IEEE International Conference on Industrial Technology*, 2006, Mumbai, India, 15-17 December 2006, p. 206 – 213.
- [69] C. Feng, L. Jun, **V.G. Agelidis**, T.C. Green, “A multi-modular system based on parallel-connected multilevel flying capacitor converters controlled with fundamental frequency SPWM”, in *Proc. of 32nd IEEE Industrial Electronics Conference, IECON 2006*, Paris, France, 7-10 November, p. 2360–2365.
- [70] M.S.A. Dahidah, **V.G. Agelidis**, “Non-symmetrical selective harmonic elimination PWM techniques: the unipolar waveform”, in *Proc. of IEEE 38th Power Electronics Specialists Conference (PESC) 2007*, Orlando, FL, USA, p. 1885-1891.
- [71] D.D.C. Lu, R.H. Chu, S. Sathiakumar, **V.G. Agelidis**, “A buck converter with simple maximum power point tracking for power electronics education on solar energy systems”, in *Proc. of Australasian Universities Power Engineering Conference (AUPEC)*, Perth, Australia, December 2007.
- [72] N. Flourentzou, **V.G. Agelidis**, “Analysis of harmonic performance of multiple sets of solutions of SHE-PWM for a 2-level VSC topology in STATCOM applications”, in *Proc. of Australasian Universities Power Engineering Conference (AUPEC)*, Perth, Australia, December 2007.

- [73] S. Pulikanti, **V.G. Agelidis**, “Five-level active neutral point clamped multilevel inverter topology: SHE-PWM control and operational principles”, in *Proc. of Australasian Universities Power Engineering Conference (AUPEC)*, Perth, Australia, December 2007.
- [74] M.S.A. Dahidah, **V.G. Agelidis**, “Comparative evaluation of symmetrical and non-symmetrical bipolar SHE-PWM techniques”, in *Proc. of Australasian Universities Power Engineering Conference (AUPEC)*, Perth, Australia, December 2007.
- [75] M. Ciobotaru, **V.G. Agelidis**, R. Teodorescu, “Offset rejection for PLL based synchronization in grid-connected converters”, in *Proc. of IEEE Applied Power Electronics Conference and Exhibition (APEC) 2008*, Austin, Texas, USA, February 2008, p. 1611-1617.
- [76] M. Dahidah, **V.G. Agelidis**, “Comparative evaluation of symmetrical and non-symmetrical bipolar SHE-PWM techniques”, in *Proc. of 39th IEEE Power Electronics Specialists Conference*, Rhodes, Greece, June 2008, p. 2594-2599.
- [77] N. Flourentzou, M.S.A. Dahidah, **V.G. Agelidis**, “On distributing multilevel SHE-PWM waveforms in HVDC systems built with conventional three-phase VSC modules”, *Proc. of 39th IEEE Power Electronics Specialists Conf.*, Rhodes, Greece, Jun 2008, p. 4124-4129.
- [78] D. Coutellier, **V.G. Agelidis**, S. Choi, “Experimental verification of floating-output interleaved-input DC-DC high-gain transformer-less converter topologies”, in *Proc. of 39th IEEE Power Electronics Specialists Conference*, Rhodes, Greece, June 2008, p. 562-568.
- [79] D.D.C. Lu, **V.G. Agelidis**, “Photovoltaic-battery powered DC bus system for common portable electronic devices”, in *Proc. of 39th IEEE Power Electronics Specialists Conference*, Rhodes, Greece, June 2008, p. 76-80.
- [80] Y. Shrivastava, S. Sathiakumar, **V.G. Agelidis**, “Analysis of random aperiodic PWM schemes for DC-DC converters”, in *Proc. of 39th IEEE Power Electronics Specialists Conference*, Rhodes, Greece, June 2008, p. 1196-1201.
- [81] M. Ciobotaru, **V.G. Agelidis**, R. Teodorescu, “Accurate and less-disturbing active anti-islanding method based on PLL for grid-connected PV inverters”, in *Proc. of 39th IEEE Power Electronics Specialists Conference*, Rhodes, Greece, June 2008, p. 4569-4576.
- [82] N. Flourentzou, M.S.A. Dahidah, **V.G. Agelidis**, “Optimal SHE-PWM switching patterns for an HVDC system built with eight conventional three-phase VSC modules”, in *Proc. of Australasian Universities Power Engineering Conference 2008*, Sydney, NSW, Australia, December 2008, p. 1-7.
- [83] S.R. Pulikanti, M.S.A. Dahidah, **V.G. Agelidis**, “SHE-PWM switching strategies for active neutral point clamped multilevel converters”, in *Proc. of Australasian Universities Power Engineering Conference 2008*, Sydney, NSW, Australia, December 2008, p. 1-7.
- [84] I. Laird, H. Lovatta, N. Savvides, D. Lu, **V.G. Agelidis**, “Comparative study of maximum power point tracking algorithms for thermoelectric generators”, in *Proc. of Australasian Universities Power Engineering Conf. 2008*, Sydney, NSW, Australia, Dec 2008, p. 1-6.
- [85] M.S.A. Dahidah, **V.G. Agelidis**, “SHE-PWM technique for single-phase AC-AC matrix converters”, in *Proc. of Australasian Universities Power Engineering Conference 2008*, Sydney, NSW, Australia, December 2008, p. 1-8.
- [86] M.S.A. Dahidah, **V.G. Agelidis**, “Non-symmetrical SHE-PWM technique for five-level cascaded converter with non-equal DC sources”, in *Proc. of 2nd IEEE International Conference on Power and Energy (PECon 08)*, December 1-3, 2008, Johor Baharu, Malaysia, p. 775-780.
- [87] G.S. Konstantinou, **V.G. Agelidis**, “Performance evaluation of half-bridge cascaded multilevel converters operated with multicarrier sinusoidal PWM techniques” in *Proc. of IEEE ICIEA 2009*, Xi'an, China, May 2009, p. 3399-3404.
- [88] S.R. Pulikanti, **V.G. Agelidis**, “Control of neutral point and flying capacitor voltages in five-level SHE-PWM controlled ANPC converter”, in *Proc. of IEEE ICIEA 2009*, Xi'an, China, May 2009, p. 172-177.

- [89] Y. Li, **V.G. Agelidis**, Y. Shrivastava, "Wind-solar resource complementarity and its combined correlation with electricity load demand", in *Proc. of IEEE ICIEA 2009*, Xi'an, China, May 2009, p. 3623-3628.
- [90] M.S.A. Dahidah, **V.G. Agelidis**, "Selective harmonic elimination multilevel converter control with variant DC sources", *Proc. of IEEE ICIEA 2009*, Xi'an, China, May 2009, p. 3351-3356.
- [91] I. Sadinezhad, **V.G. Agelidis**, "An adaptive precise one-end power transmission line fault locating algorithm based on multilayer complex adaptive artificial neural networks", in *Proc. of IEEE ICIT 2009*, Melbourne, Australia, p.1-6.
- [92] I. Sadinezhad, **V.G. Agelidis**, "A new hybrid complex ADALINE-LES filter for off nominal frequency symmetrical components measurement", in *Proc. of IEEE ICIT 2009*, Melbourne, Australia, p. 1-6.
- [93] A. Setiawan, I. Koprinska, **V.G. Agelidis**, "Very short-term electricity load demand forecasting using support vector regression", in *Proc. of IEEE International Joint Conference on Neural Networks 2009*, Atlanta, USA, 14-19 June 2009, p. 2888-2894.
- [94] N. Flourentzou, **V.G. Agelidis**, "Equalizing DC capacitor voltages in multimodule HVDC using SHE-PWM", in *Proc. of IEEE PEDS 2009*, Taiwan. **(Best Paper Award)**, p. 320-325.
- [95] M.G. Arregui, **V.G. Agelidis**, "Bi-directional isolated multi-port power converter for aircraft HVDC network power transfer", in *Proc. of 35th IEEE IECON 2009*, Portugal, p. 2551-2556.
- [96] M.G. Arregui, **V.G. Agelidis**, "A low computational intensive proton exchange membrane fuel cell dynamic model", in *Proc. of IEEE PEDS 2009*, Taiwan, p. 619-624.
- [97] I. Laird, D.C.C. Lu, **V.G. Agelidis**, "High-gain, switched-coupled-inductor boost converter", in *Proc. of IEEE PEDS 2009*, Taiwan, p. 423-428.
- [98] D.D.-C. Lu, W. Zhao, **V.G. Agelidis**, "Integrated photovoltaic-battery converter design for DC power system", in *Proc. of AUPEC 2009*, Adelaide, Australia, p. 1-5.
- [99] I. Sadinezhad, **V.G. Agelidis**, "Monitoring voltage disturbances based on LES algorithm, Wavelet Transform and Kalman filter", *Proc. of IEEE IECON 2009*, Portugal, p. 1961-1966.
- [100] M. Jang, **V.G. Agelidis**, "A minimum power-processing stage fuel cell energy system based on a boost-inverter with a bi-directional back-up battery storage", in *Proc. of IEEE APEC 2010*, USA, p. 295-302.
- [101] G.S. Konstantinou, **V.G. Agelidis**, "Bipolar switching waveform: novel solution sets to the selective harmonic elimination problem", in *Proc. of IEEE ICIT 2010*, Valparaiso, Chile, p. 696-701.
- [102] N. Flourentzou, G.S. Konstantinou, **V.G. Agelidis**, "DC-bus capacitor-less rectifier-inverter motor drive with online optimized harmonic controlled PWM", in *Proc. of IEEE ICIT 2010*, Valparaiso, Chile, p. 344-349.
- [103] I. Sadinezhad, **V.G. Agelidis**, "Slow sampling on-line optimization approach to estimate power system frequency", in *Proc. of IEEE Power Engineering Society General Meeting 2010*, July 26 - July 29, 2010, Minneapolis, Minnesota, USA, p. 1-7.
- [104] I. Sadinezhad, **V.G. Agelidis**, "Undersampled on-line ANN-EKF based estimation of harmonics/interharmonics in power systems", in *Proc. of IEEE Power Engineering Society General Meeting 2010*, July 26 - July 29, 2010, Minneapolis, Minnesota, USA, p. 1-8.
- [105] R. Sood, I. Koprinska, **V.G. Agelidis**, "Electricity load forecasting based on autocorrelation analysis", in *Proc. of 2010 IEEE International Joint Conference on Neural Networks*.
- [106] S. R. Pulikanti, G. Konstantinou, **V.G. Agelidis**, "An n-level flying capacitor based active neutral-point-clamped converter", in *Proc. of IEEE PEDG 2010*, China, p. 553-558.
- [107] G. Konstantinou, S.R. Pulikanti, **V.G. Agelidis**, "Harmonic elimination control of a five-level DC-AC cascaded H-bridge hybrid inverter", in *Proc. of IEEE PEDG 2010*, China, p. 352-357.
- [108] D.D.C. Lu, G.M. L. Chu, **V.G. Agelidis**, "A high step-up, non-isolated DC-DC converter with reduced repeated power processing", in *Proc. of IEEE-ECCE 2010*, Sapporo, Japan, June 2010, p. 2897-2904.

- [109] M. Jang, **V.G. Agelidis**, “Grid-interfaced fuel cell energy system based on a boost-inverter with a bi-directional back-up battery storage”, in *Proc. of IEEE Energy Conversion Congress and Exposition (ECCE)*, Atlanta, Georgia, USA, September 12-16, 2010, p. 4499-4506.
- [110] G. Konstantinou, **V.G. Agelidis**, “A novel bidirectional rectifier-three-level flying capacitor inverter topology without DC-link passive components”, in *Proc. of IEEE Energy Conversion Congress and Exposition (ECCE)*, Atlanta, Georgia, USA, Sep 12-16, 2010, p. 2578-2583.
- [111] S.R. Pulikanti, G. Konstantinou, **V.G. Agelidis**, “Seven-level cascaded ANPC-based multilevel converter”, in *Proc. of IEEE Energy Conversion Congress and Exposition (ECCE)*, Atlanta, Georgia, USA, September 12-16, 2010, p. 4575-4582.
- [112] H. Dalvand, **V.G. Agelidis**, “Real-time measurement of power quantities under sinusoidal and non-sinusoidal conditions for single-phase systems”, in *Proc. of IEEE Energy Conversion Congress and Exposition (ECCE)* Atlanta, Georgia, USA, Sep 12-16, 2010, p. 428-433.
- [113] H. Dalvand, **V.G. Agelidis**, “Real-time measurement of power quantities in fully distorted systems”, in *Proc. of 14th International Conference on Harmonics and Quality of Power 2010 (ICHQP)*, p. 1-6.
- [114] H. Dalvand, **V.G. Agelidis**, “Application of a variable inductor in single-phase hybrid harmonic filters”, in *Proc. of 14th International Conf. on Harmonics and Quality of Power 2010 (ICHQP)*, p. 1-6.
- [115] I. Sadinezhad, **V.G. Agelidis**, “A new optimization technique to measure frequency and harmonics in power systems”, in *Proc. of 14th International Conference on Harmonics and Quality of Power 2010 (ICHQP)*, p. 1-8.
- [116] I. Sadinezhad, **V.G. Agelidis**, “A new quasi Newton filtering technique for power system frequency estimation and harmonics/inter-harmonics rejection”, in *Proc. of 14th International Conf. on Harmonics and Quality of Power 2010 (ICHQP)*, p. 1-6.
- [117] R. Zolfaghari, Y. Shrivastava, **V.G. Agelidis**, “Spectral analysis techniques for estimating power quality indices”, in *Proc. of 14th International Conference on Harmonics and Quality of Power 2010 (ICHQP)*, p. 1-8.
- [118] R. Zolfaghari, Y. Shrivastava, **V.G. Agelidis**, G.M.L. Chu, “Using windowed ESPRIT spectral estimation for measuring power quality indices”, in *Proc. of 2010 IEEE PES Innovative Smart Grid Technologies Conference Europe*, p. 1-8.
- [119] R. Zolfaghari, Y. Shrivastava, **V.G. Agelidis**, G.M.L. Chu, “Spectral analysis techniques with Kalman filtering for estimating power quality indices”, in *Proc. of 2010 IEEE PES Innovative Smart Grid Technologies Conference Europe*, p. 1-8.
- [120] I. Koprinska, R. Sood, **V.G. Agelidis**, “Variable selection for five-minute ahead electricity load forecasting”, in *Proc. of 20th International Conference on Pattern Recognition (ICPR)*, 2010 p. 2901-2904.
- [121] W. Zhao, D.C.L. Lu, **V.G. Agelidis**, “Novel current control of grid-connected boost inverter with zero steady state error”, in *Proc. of 26th Annual IEEE Applied Power Electronics Conference & Exposition 2011*, Fort Worth, Texas, USA, March 6-10, 2011, p. 1267-1272.
- [122] G.S. Konstantinou, M. Ciobotaru, **V.G. Agelidis**, “Operation of a modular multilevel converter based on selective harmonic elimination PWM”, in *Proc. of IEEE ICPE- ECCE-Asia 2011*, Jeju, South Korea, June 2011, p. 999-1004.
- [123] M. Jang, M. Ciobotaru, **V.G. Agelidis**, “Grid-tied fuel cell system based on a boost-inverter with a battery back-up unit”, in *Proc. of IEEE ICPE- ECCE-Asia 2011*, Jeju, South Korea, June 2011, p. 1637-1644.
- [124] M. Jang, M. Ciobotaru, **V.G. Agelidis**, “A single-stage fuel cell energy system based on a buck-boost inverter with a bi-directional back-up battery storage”, in *Proc. of IEEE ICPE- ECCE-Asia 2011*, Jeju, South Korea, June 2011, p. 1894-1900.
- [125] S. Alshibani, **V.G. Agelidis**, “Issues regarding cost estimation of permanent magnet synchronous generators in mega-watt level wind turbines”, in *Proc. of International Electric*

- Machines and Drives Conference (IEMDC 2011)*, May 15-18, 2011, Niagara Falls, Canada, p. 1629-1634.
- [126] M. Ciobotaru, **V.G. Agelidis**, R. Teodorescu, "Line impedance estimation using model based identification", in *Proc. of 14th European Conference on Power Electronics and Applications, EPE 2011*, Birmingham, United Kingdom, 30 August-1 September 2011, p. 1-9.
 - [127] I. Koprinska, M. Rana, **V.G. Agelidis**, "Yearly and seasonal models for electricity load forecasting", *Proc. 2011 IEEE International Joint Conf. on Neural Networks*, p. 1474-1481.
 - [128] G. Konstantinou, M. Ciobotaru, **V.G. Agelidis**, "Analysis of multi-carrier PWM methods for back-to-back HVDC systems based on modular multilevel converters", in *Proc. of IEEE IECON 2011*, Melbourne, Australia, p. 4391-4396.
 - [129] I. Sadinezhad, **V.G. Agelidis**, "On optimizing DSP implementation of the recursive-least-squares technique for real-time power system applications, in *Proc. of IEEE IECON 2011*, Melbourne, Australia, p. 640-645.
 - [130] I. Sadinezhad, **V.G. Agelidis**, "Decoupled recursive-least-squares technique for extraction of instantaneous synchronized symmetrical components under fault conditions", in *Proc. of IEEE IECON 2011*, Melbourne, Australia, p. 4672-4678.
 - [131] S.R. Pulikanti, G.S. Konstantinou, **V.G. Agelidis**, "A DC-link voltage ripple compensation method for multilevel active-neutral-point-clamped converters operating with SHE-PWM", in *Proc. of IEEE IECON 2011*, Melbourne, Australia, p. 4354-4360.
 - [132] S. Ceballos, J. Pou, S. Choi, M. Saeedifard, **V.G. Agelidis**, "Analysis of voltage balancing limits in modular multilevel converters", in *Proc. of IEEE IECON 2011*, Melbourne, Australia, p. 4397-4402.
 - [133] M.S.A. Dahidah, G.S. Konstantinou, **V.G. Agelidis**, "SHE-PWM control for asymmetrical hybrid flying capacitor and H-bridge converter", in *Proc. of IEEE PEDS 2011*, Singapore.
 - [134] M.S.A. Dahidah, G. Konstantinou, **V.G. Agelidis**, "Single-phase nine-level SHE-PWM inverter with single DC source suitable for renewable energy systems", in *Proc. of IEEE VPPC 2011*, Chicago, USA, Sept. 2011, p. 1-6.
 - [135] **V.G. Agelidis**, C. Pavlovski, M. Ciobotaru, T. Tschirschwitz, R. Corke, T. Lampard, B. Kobal, "Unlocking the smart grid: An Australian industry-university collaborative effort to address skill gaps", in *Proc. of IEEE ISGT 2011*, Perth, Western Australia, p. 1-7.
 - [136] I. Sadinezhad, **V.G. Agelidis**, "Extended staggered under-sampling synchro-phasor estimation technique for wide-area measurement systems", in *Proc. of IEEE ISGT 2011*, Perth, Western Australia, p. 1-7.
 - [137] M. Jang, M. Ciobotaru, **V.G. Agelidis**, "A single-stage three-phase fuel cell energy system based on a boost inverter with a battery back-up unit", in *Proc. of IEEE APEC 2012*, p. 2032-2037.
 - [138] G. Wang, M. Ciobotaru, **V.G. Agelidis**, "Minimising output power fluctuation of large photovoltaic plant using vanadium redox battery storage", in *Proc. of IET International Conference on Power Electronics, Machines and Drives (PEMD) 2012*.
 - [139] G. Konstantinou, M. Ciobotaru, **V.G. Agelidis**, "Effect of redundant sub-module utilization on modular multilevel converters", in *Proc. of IEEE ICIT*, Athens, Greece, 19-21 March 2012, p. 815-820.
 - [140] M.S. Reza, M. Ciobotaru, **V.G. Agelidis**, "Power quality analysis using piecewise adaptive Prony's method", in *Proc. of IEEE ICIT*, Athens, Greece, 19-21 March 2012, p. 926-931
 - [141] G. Wang, M. Ciobotaru, **V.G. Agelidis**, "Integration of vanadium redox battery with PV systems: modeling and operational characteristics", in *Proc. of IEEE International Symposium on Industrial Electronics (ISIE 2012)*, Hangzhou, China, 28-31 May 2012, p. 1598-1603.
 - [142] H. Choi, M. Ciobotaru, **V.G. Agelidis**, "High gain DC/DC converter for the grid integration of large-scale PV systems", in *Proc. of IEEE International Symposium on Industrial Electronics (ISIE 2012)*, Hangzhou, China, 28-31 May 2012, p. 1011-1016.

- [143] M.S. Reza, M. Ciobotaru, **V.G. Agelidis**, "Instantaneous power quality analysis using frequency adaptive Kalman filter technique," in *Proc. of IEEE Int. Power Elect. Motion Cont. Conf. (IPEMC 2012)-ECCE Asia*, p. 81-87.
- [144] M. S. Reza, M. Ciobotaru, **V.G. Agelidis**, "Grid voltage offset and harmonics rejection using second order generalized integrator and Kalman filter technique," in *Proc. of IEEE Int. Power Elect. Motion Cont. Conf. (IPEMC 2012)-ECCE Asia*, p. 104-111.
- [145] B. Hredzak, **V.G. Agelidis**, "Model predictive control of a hybrid battery-ultracapacitor power source," in *Proc. of IEEE Int. Power Elect. Motion Cont. Conf. (IPEMC 2012)-ECCE Asia*, p. 2294-2299.
- [146] K.H. Law, M.S.A. Dahidah, G. Konstantinou, **V.G. Agelidis**, "SHE-PWM Cascaded multilevel converter with adjustable DC sources control for STATCOM applications," in *Proc. of IEEE Int. Power Elect. Motion Cont. Conf. (IPEMC 2012)-ECCE Asia*, p. 330-334.
- [147] A.M.Y.M. Ghias, M. Ciobotaru, **V.G. Agelidis**, J. Pou, "Dynamic behavior of a back-to-back five-level flying capacitor converter with reduced DC Bus capacitance," in *Proc. of IEEE Int. Power Elect. Motion Cont. Conf. (IPEMC 2012)-ECCE Asia*, p. 1741-1746.
- [148] G. Konstantinou, S.R. Pulikanti, **V.G. Agelidis**, "Generalized modulator for the seven-level flying capacitor based active neutral point clamped converter," in *Proc. of IEEE PEDG 2012*, Aalborg, Denmark, July 2012.
- [149] M.S. Reza, M. Ciobotaru, **V.G. Agelidis**, "Accurate estimation of grid voltage parameters using singular value decomposition technique," in *Proc. of IEEE PEDG 2012*, Aalborg, Denmark, July 2012.
- [150] A.M.Y.M. Ghias, M. Ciobotaru, J. Pou, **V.G. Agelidis**, "Performance evaluation of a five-level flying capacitor converter with reduced DC bus capacitance under two different modulation schemes" in *Proc. of IEEE PEDG 2012*, Aalborg, Denmark, July 2012.
- [151] W. Zhao, H. Choi, G. Konstantinou, M. Ciobotaru, **V.G. Agelidis**, "Cascaded H-bridge multilevel converter for large scale PV grid integration with isolated DC-DC stage" in *Proc. of IEEE PEDG 2012*, Aalborg, Denmark, July 2012.
- [152] M.S. Reza, M. Ciobotaru, **V.G. Agelidis**, "Frequency adaptive instantaneous power quality analysis using frequency locked loop based Kalman filter technique," in *Proc. of IEEE PEDG 2012*, Aalborg, Denmark, July 2012.
- [153] G. Konstantinou, S.R. Pulikanti M. Ciobotaru, **V.G. Agelidis**, K. Muttaqi, "The seven-level flying capacitor based ANPC converter for grid integration of utility scale PV systems", in *Proc. of IEEE PEDG 2012*, Aalborg, Denmark, July 2012.
- [154] H. Choi, W. Zhao, M. Ciobotaru and **V.G. Agelidis**, "Large-scale PV system based on multiphase isolated DC/DC converter," in *Proc. of IEEE PEDG 2012*, Aalborg, Denmark, July 2012.
- [155] G. Wang, M. Ciobotaru, **V.G. Agelidis**, "PV power plant using hybrid energy storage system with improved efficiency," in *Proc. of IEEE PEDG 2012*, Aalborg, Denmark, July 2012.
- [156] M. Mirhosseini, **V.G. Agelidis**, J. Ravishankar, "Modeling of large-scale grid-connected photovoltaic systems: static grid support by reactive power control," in *Proc. of IEEE Power Africa Conf. and Exposition*, Johannesburg, South Africa, July 2012.
- [157] A.M.Y.M. Ghias, M. Ciobotaru, **V.G. Agelidis**, J. Pou, "Solid-state transformer based on the flying capacitor multilevel converter for intelligent power management", in *Proc. of IEEE Power Africa Conf. and Exposition*, Johannesburg, South Africa, July 2012.
- [158] A. Khatamianfar, M. Khalid, A. Savkine, **V.G. Agelidis**, "Wind power generation dispatch improvement with battery energy storage using model predictive control", in *Proc. of IEEE Multi-conference on Systems and Control*, Dubrovnik, Croatia, 3-5 October, 2012.
- [159] S.M. Alshibani, R. Dutta, **V.G. Agelidis**, "Flux density analysis of using Halbach array in MW Level permanent magnet synchronous generators for wind turbines: a preliminary linear model," in *Proc. of IEEE ICEM 2012*, Lille, France, Sept. 2012.

- [160] A.M.Y.M. Ghias, J. Pou, M. Ciobotaru, **V.G. Agelidis**, "Voltage balancing strategy for a five-level flying capacitor converter using phase disposition PWM with sawtooth-shaped carriers", in *Proc. of 38th Annual Conference of the IEEE Industrial Electronics Society (IECON)*, Montreal, Canada, October 25-28, 2012.
- [161] A.M.Y.M. Ghias, J. Pou, M. Ciobotaru, **V.G. Agelidis**, "Voltage balancing of a five-level flying capacitor converter using optimum switching transitions", in *Proc. of 38th Annual Conference of the IEEE Industrial Electronics Society (IECON)*, Montreal, Canada, October 25-28, 2012.
- [162] B. Karanayil, M.G. Arregui, M. Ciobotaru, **V.G. Agelidis**, "Bi-directional isolated multi-port power converter for aircraft HVDC network power transfer", in *Proc. of 38th Annual Conference of the IEEE Industrial Electronics Society (IECON 2012)*, Montreal, Canada, October 25-28, 2012.
- [163] B. Hredzak, **V.G. Agelidis**, "Direct current control of a battery-ultracapacitor power supply", in *Proc. of 38th Annual Conference of the IEEE Industrial Electronics Society (IECON)*, Montreal, Canada, October 25-28, 2012.
- [164] R. Picas, J. Pou, S. Ceballos, **V.G. Agelidis**, M. Saeedifard, "Minimization of the capacitor voltage fluctuations of a modular multilevel converter by circulating current control," in *Proc. of 38th Annual Conference of the IEEE Industrial Electronics Society (IECON)*, Montreal, Canada, October 25-28, 2012, p. 4985 - 4991.
- [165] M. Rana, I. Koprinska, **V.G. Agelidis**, "Electricity load forecasting: A weekly based approach", in *Proc. of International Conference on Artificial Neural Networks 2012*.
- [166] I. Koprinska, M. Rana, **V.G. Agelidis**, "Feature selection for electricity load prediction", in *Proc. of ICONIP 2012*.
- [167] M. Jang, M. Ciobotaru, **V.G. Agelidis**, "A compact single-phase bidirectional buck-boost-inverter topology," in *Proc. of IEEE International Conference on Renewable Energy Research and Applications (ICRERA)*, Nov. 2012.
- [168] M. S. Reza, M. Ciobotaru, **V.G. Agelidis**, "Frequency adaptive linear Kalman filter for fast and accurate estimation of grid voltage parameters," in *Proc. of IEEE International Conference on Power System Technology (POWERCON) 2012*, p. 1-6.
- [169] M. S. Reza, M. Ciobotaru, **V.G. Agelidis**, "Tracking of time-varying grid voltage using DFT based second order generalized integrator technique", in *Proc. of IEEE International Conference on Power System Technology (POWERCON) 2012*, p. 1-6.
- [170] A. Khatamianfar, M. Khalid, A.V. Shavkin, **V.G. Agelidis**, "Wind power dispatch control with battery energy storage using model predictive control", in *Proc. of IEEE International Conference on Control Applications (CCA)*, 2012, p. 733 – 738.
- [171] A.M.Y.M. Ghias, J. Pou, M. Ciobotaru, **V.G. Agelidis**, "Voltage balancing method for the multilevel flying capacitor converter using phase-shifted PWM," in *Proc. of IEEE Power and Energy Conf.*, Kota Kinabalu, Malaysia, 2012, p. 274-279.
- [172] M. Mirhosseini, **V.G. Agelidis**, "Performance of large-scale grid-connected photovoltaic systems under various fault conditions," in *Proc. of IEEE International Conference on Industrial Technology (ICIT 2013)*, Cape Town, South Africa, February, p. 1775-1780.
- [173] M. Mirhosseini, **V.G. Agelidis**, "Interconnection of large-scale photovoltaic systems with the electrical grid: potential issues," in *Proc. of IEEE International Conference on Industrial Technology (ICIT 2013)*, Cape Town, South Africa, February, p. 728-733.
- [174] A. Heidari, **V.G. Agelidis**, M.S. Naderi, "Effects of automation on the reliability of power distribution system considering distributed generation: Worth analysis," in *Proc. of IEEE International Conf. on Industrial Technology (ICIT 2013)*, Cape Town, South Africa, February, p. 1733-1738.
- [175] A. Heidari, **V.G. Agelidis**, M.S. Naderi, "Effects of switch type and location on the reliability of power distribution system considering distributed generation," in *Proc. of IEEE*

- International Conference on Industrial Technology (ICIT 2013)*, Cape Town, South Africa, February, p. 710-715
- [176] J. Pou, S. Ceballos, G. Konstantinou, G.J. Capella, **V.G. Agelidis**, "Control strategy to balance operation of parallel connected legs of modular multilevel converters", in *Proc. of IEEE International Symposium on Industrial Electronics (ISIE)*, Taipei, Taiwan, May 2013.
 - [177] S. Al-Takroui, A. Savkin, **V.G. Agelidis**, "A decentralized control algorithm based on the DC power flow model for avoiding cascaded failures in power networks", in *Proc. of IEEE Asian Control Conference ASCC 2013*, June 23-26, Istanbul, Turkey, p. 1-6.
 - [178] M. Mirhosseini, J. Pou, **V.G. Agelidis**, "Current improvement of a grid-connected photovoltaic system under voltage unbalanced conditions", in *Proc. of IEEE ECCE Asia Downunder 2013*, p. 66-72.
 - [179] T. Kim, M. Jang, **V.G. Agelidis**, "Current status of silicon carbide power devices and converters for photovoltaic applications", in *Proc. of IEEE ECCE Asia Downunder 2013*, p. 555-559.
 - [180] R. Picas, S. Ceballos, J. Zaragoza, J. Pou, G. Konstantinou, **V.G. Agelidis**, "Optimal circulating current harmonics for minimization of the capacitor voltage ripple amplitudes of a modular multilevel converter", in *Proc. of IEEE ECCE Asia Downunder 2013*, p. 318-324.
 - [181] R. Darus, J. Pou, G. Konstantinou, S. Ceballos, **V.G. Agelidis**, "Circulating current control and evaluation of carrier disposition in modular multilevel converters", in *Proc. of IEEE ECCE Asia Downunder 2013*, p. 332-338.
 - [182] M. S. Reza, M. Ciobotaru, **V.G. Agelidis**, "Real-time estimation of single-phase grid voltage frequency using a modulating function based technique", in *Proc. of IEEE ECCE Asia Downunder 2013*, p. 664-669.
 - [183] M. S. Reza, M. Ciobotaru, **V.G. Agelidis**, "Robust estimation of real-time single-phase grid voltage frequency under distorted grid conditions", in *Proc. of IEEE ECCE Asia Downunder 2013*, p. 948-954.
 - [184] B. Hredzak, **V.G. Agelidis**, G.D. Demetriades, "A low complexity control system for a hybrid battery-ultracapacitor power source", in *Proc. of IEEE ECCE Asia Downunder 2013*, p. 770-775.
 - [185] M. Rana, I. Koprinska, A. Khosravi, **V. G. Agelidis**, "Prediction intervals for electricity load forecasting using neural networks", in *Proc. of IEEE IJCNN 2013*, p. 1-8.
 - [186] M. Hasheminamin, **V.G. Agelidis**, "Voltage performance of low- and medium-voltage networks under high penetration of photovoltaic generation", in *Proc. of IEEE 39th Photovoltaics Specialists Conference*, June 2013.
 - [187] M. S. Reza, M. Ciobotaru, **V.G. Agelidis**, "Estimation of single-phase grid voltage fundamental parameters using fixed frequency tuned second-order generalized integrator based technique," in *Proc. of IEEE Power Electronics for Distributed Generation Systems (PEDG)*, Arkansas, USA, July 2013.
 - [188] A. Heidari, **V.G. Agelidis**, H. Zayandehroodi, "Sub-islanding procedure to improve the reliability of power distribution systems considering renewable distributed generation" in *Proc. of IEEE Power Electronics for Distributed Generation Systems (PEDG)*, Arkansas, USA, July 2013.
 - [189] A. Heidari, **V.G. Agelidis**, "Switch designation and distributed generation impact on reliability of power distribution systems: Worth analysis," in *Proc. of IEEE TENCON Spring International Conference*, 2013, p. 352-357.
 - [190] M. Jang, **V.G. Agelidis**, "A digitally controlled single-phase buck-boost-inverter using a dual-DSP", in *Proc. of IEEE IECON 2013*, Vienna, Austria, November 2013, p. 187-192.
 - [191] B. Karanayil, **V.G. Agelidis**, J. Pou "Evaluation of DC-link decoupling using electrolytic or polypropylene film capacitors in three-phase grid-connected PV inverters", in *Proc. of IEEE IECON 2013*, Vienna, Austria, November 2013, p. 6980-6986.

- [192] A.M.Y.M. Ghias, J. Pou, **V.G. Agelidis**, M. Ciobotaru, "Voltage balancing method using phase-shifted PWM for stacked multi-cell converters", in *Proc. of IEEE IECON 2013*, Vienna, Austria, November 2013, p. 6334-6339.
- [193] A.M.Y.M. Ghias, J. Pou, **V.G. Agelidis**, M. Ciobotaru, "Optimum state voltage balancing method for stacked multi-cell converters", in *Proc. of IEEE IECON 2013*, Vienna, Austria, November 2013, p. 6293-6298.
- [194] A.M.Y.M. Ghias, J. Pou, **V.G. Agelidis**, M. Ciobotaru, "Voltage balancing method for a seven-level stacked multi-cell converter using minimum-switching transitions", in *Proc. of IEEE IECON 2013*, Vienna, Austria, November 2013, p. 6328-6333.
- [195] M. Mirhosseini, J. Pou, **V.G. Agelidis**, "Single-stage inverter-based grid-connected photovoltaic system with ride-through capability over different types of grid faults", in *Proc. of IEEE IECON 2013*, Vienna, Austria, November 2013, p. 8008-8013.
- [196] R. Picas, S. Ceballos, J. Pou, J. Zaragoza, G. Konstantinou, **V.G. Agelidis**, "Improving capacitor voltage ripples and power losses of modular multilevel converters through discontinuous modulation", in *Proc. of IEEE IECON 2013*, Vienna, Austria, November 2013, p. 6233-6238.
- [197] G. Konstantinou, **V.G. Agelidis**, J. Pou, "Interleaved selective harmonic elimination PWM for single-phase rectifiers in traction applications", in *Proc. of IEEE IECON 2013*, Vienna, Austria, November 2013, p. 930-935.
- [198] P. Dost, C. Sourkounis, **V.G. Agelidis**, "On influence of deterministic and non-deterministic modulation schemes in two-level filter-less inverter performance driving a permanent magnet synchronous motor", in *Proc. of IEEE IECON 2013*, Vienna, Austria, November 2013, p. 1086-1093.
- [199] M.S. Reza, M. Ciobotaru, **V.G. Agelidis**, "A demodulation based technique for accurate estimation of real-time single-phase grid voltage fundamental parameters", in *Proc. of IEEE IECON 2013*, Vienna, Austria, November 2013, p. 6402-6407.
- [200] M. S. Reza, M. Ciobotaru, **V.G. Agelidis**, "A frequency adaptive technique for accurate estimation of single-phase grid voltage fundamental parameters", in *Proc. of IEEE IECON 2013*, Vienna, Austria, November 2013, p. 6408-6413.
- [201] G. Wang, M. Ciobotaru, **V.G. Agelidis**, "Power management of hybrid energy storage system for a MW photovoltaic system", in *Proc. of IEEE IECON 2013*, Vienna, Austria, November 2013, p. 6777-6782.
- [202] M.S. Reza, M. Ciobotaru, **V.G. Agelidis**, "A recursive DFT based technique for accurate estimation of grid voltage frequency", in *Proc. of IEEE IECON 2013*, Vienna, Austria, November 2013, p. 6420-6425.
- [203] A. Heidari, **V.G. Agelidis**, M. Kia, M. Setayeshnazar, "Mixed-integer programming optimization-based method for switch device placement in distribution systems considering distributed generation", in *Proc. of AUPEC 2013*, Tasmania, Australia.
- [204] Y. Yu, G. Konstantinou, B. Hredzak, **V.G. Agelidis**, "On extending the energy balancing limit of multilevel cascaded H-bridge converters for large-scale photovoltaic farms", in *Proc. of AUPEC 2013*, Tasmania, Australia.
- [205] G. Farivar, **V.G. Agelidis**, B. Hredzak, "A simple perturb and observe MPPT scheme for cascaded H-bridge based photovoltaic system", in *Proc. of AUPEC 2013*, Tasmania, Australia.
- [206] D.B.W. Abeywardana, B. Hredzak, **V.G. Agelidis**, "An integration scheme for a direct AC line battery-supercapacitor hybrid energy storage system", in *Proc. of AUPEC 2013*, Tasmania, Australia.
- [207] M. Mirhosseini, J. Pou, B. Karanayil, **V.G. Agelidis**, "Positive- and negative-sequence control of grid-connected photovoltaic systems under unbalanced voltage conditions", in *Proc. of AUPEC 2013*, Tasmania, Australia.

- [208] V. Lystianingrum, **V.G. Agelidis**, B. Hredzak, "State of health and life estimation methods for supercapacitors", in *Proc. of AUPEC 2013*, Tasmania, Australia.
- [209] A.M.Y.M. Ghias, J. Pou, **V.G. Agelidis**, M. Ciobotaru, "Analysis of a voltage balancing technique with reduced switching transitions in a flying capacitor multilevel converter", in *Proc. of AUPEC 2013*, Tasmania, Australia.
- [210] M. Hasheminamin, **V. G. Agelidis**, A. Heidari, "Impact of high PV penetration in presence of residential and industrial load profile and sun insolation study in Sydney in low and medium-voltage network", in *Proc. of IEEE ICRERA*, October 2013.
- [211] M. Hasheminamin, **V.G. Agelidis**, "Evaluation of voltage regulation mitigation methods due to high penetration of PV generation in residential areas", *Proc. of IEEE ICRERA*, Oct 2013.
- [212] A. Heidari, **V.G. Agelidis**, H. Zayandehroodi, M. Hasheminamin, "Prevention of overcurrent relays mis-coordination in distribution system due to high penetration of distributed generation" in *Proc. of IEEE ICRERA*, October 2013.
- [213] A. Heidari, **V.G. Agelidis**, H. Zayandehroodi, "Reliability worth analysis of distributed generation enhanced distribution system considering the customer cost model based on optimal radial basis function neural network", in *Proc. of IEEE Power Engineering and Optimization Conference (PEOCO) 2013*, p. 641-646.
- [214] H. Choi, M. Ciobotaru, **V.G. Agelidis**, "Cascaded H-bridge converter with multiphase isolated DC/DC converter for large-scale PV system", in *Proc. of IEEE ICIT 2014*, Busan, Korea, p. 455-461, March 2014.
- [215] H. Choi, M. Ciobotaru, **V.G. Agelidis**, "Large-scale PV systems with energy storage utilizing high-gain DC/DC converters", *Proc. of IEEE ICIT 2014*, Busan, Korea, p.484-490, Mar 2014.
- [216] T. Kim, M. Jang, **V.G. Agelidis**, "Experimental performance evaluation of SiC BJT and Si MOSFET for 1.2 kW 300 kHz boost converter as a solar PV pre-regulator", in *Proc. of IEEE ICIT 2014*, Busan, Korea, p. 284-288, March 2014.
- [217] D.B.W. Abeywardana, B. Hredzak, **V.G. Agelidis**, "A single-phase grid integration scheme for battery-supercapacitor AC line hybrid storage system", in *Proc. of IEEE ICIT 2014*, Busan, Korea, March 2014, p. 235–240.
- [218] G. Konstantinou, R. Darus, J. Pou, S. Ceballos, **V.G. Agelidis**, "Varying and unequal carrier frequency PWM techniques for modular multilevel converters", in *Proc. of International Power Electronics Conference (IPEC-Hiroshima 2014 - ECCE-ASIA)*, p. 3758-3763.
- [219] R. Darus, G. Konstantinou, J. Pou, S. Ceballos, **V.G. Agelidis**, "Carrier interleaved PWM techniques in modular multilevel converters: A comparison based on same voltage level waveforms", in *Proc. of 2014 IEEE Energy Conversion Congress and Exposition (ECCE)*, p. 3725-3730.
- [220] T. Kim, M. Jang, **V.G. Agelidis**, "Comparative thermal performance evaluation of SiC MOSFETs and Si MOSFET for 1.2 kW 300 kHz DC-DC boost converter as a solar PV pre-regulator", in *Proc. of IEEE ECCE Asia 2014*, Hiroshima, Japan, p. 3933-3937, May 2014.
- [221] Y. Yu, G. Konstantinou, B. Hredzak, **V.G. Agelidis**, "Optimal zero sequence injection of multilevel cascaded H-bridge converter under unbalanced photovoltaic power generation", in *Proc. of IEEE ECCE Asia 2014*, Hiroshima, Japan, May 2014, p. 1458-1465.
- [222] M. Khalid, A. V. Savkine, **V.G. Agelidis**, "Optimal hybrid wind-solar system for matching renewable power generation with demand", in *Proc. of 11th IEEE International Conference on Control & Automation*, 18-20 June 2014, Taichung, Taiwan, p. 1322-1326.
- [223] B. Karanayil, **V.G. Agelidis**, J. Pou, M. Mirhosseini, "Low-voltage ride through capability of three-phase grid-connected photovoltaic inverters with slim film capacitors", in *IEEE Energy Conversion Congress and Exposition*, Pittsburgh, PA, USA in September 14-18, 2014.
- [224] T. Morstyn, B. Hredzak, **V.G. Agelidis**, G.D. Demetriades, "Cooperative control of DC microgrid storage for energy balancing and equal power sharing" in *Proc. of AUPEC 2014*, Perth, Western Australia.

- [225] G. Farivar, **V.G. Agelidis**, B. Hredzak, "Fuzzy logic based control system for cascaded H-bridge converter," in *Proc. of IEEE Applied Power Electronics Conference and Exposition (APEC)*, p. 3006-3010, 16-20 March 2014.
- [226] R. Darus, J. Pou, G. Konstantinou, S. Ceballos, **V.G. Agelidis**, "A modified voltage balancing algorithm for the modular multilevel converter: Evaluation of staircase and phase-disposition PWM" in *Proc. of IEEE Applied Power Electronics Conference (APEC 2014)*, p. 255-260.
- [227] G. Farivar, **V.G. Agelidis**, B. Hredzak, "A fast filtering scheme for capacitor voltages of a cascaded H-bridge multilevel converter based STATCOM," in *Proc. of 16th European Conference on Electronics and Applications (EPE-ECCE Europe)*, p. 1-5, 26-28 Aug. 2014.
- [228] G. Farivar, **V.G. Agelidis**, B. Hredzak, "A generalized capacitors voltage estimation scheme for multilevel converters," in *Proc. of 16th European Conference on Electronics and Applications (EPE-ECCE Europe)*, p. 1-5, 26-28 Aug. 2014.
- [229] R. Darus, G. Konstantinou J. Pou, S. Ceballos, **V.G. Agelidis**, "Comparison of phase-shifted and level shifted PWM in the modular multilevel converter," in *Proc. of International Power Electronics Conference IPEC 2014 - ECCE Asia*, May 2014, p. 3764-3770.
- [230] S. Kejian, W. Mingli, W. Hui, **V.G. Agelidis**, "A high performance control strategy for three-level NPC EMU converters," in *Proc. of International Power Electronics Conference (IPEC - ECCE-ASIA)*, May 2014, p. 640-646.
- [231] A.V. Savkin, M. Khalid, **V.G. Agelidis**, "Optimal size of battery energy storage and monotonic charging/discharging strategies for wind farms," in *Proc. of IEEE Conference on Control Applications (CCA)*, Antibes, France, October 2014, p. 1372-1376.
- [232] P. Acuña, **V.G. Agelidis**, L. Morán, M. Rivera, "Simple and robust multi-objective predictive control method for a single-phase three-level NPC converter based active power filter", in *Proc. of IEEE IECON 2014*, p. 4708-4714.
- [233] V. Lystianingrum, B. Hredzak, **V.G. Agelidis**, V.S. Djanali, "Observability degree criteria evaluation for temperature observability in a battery string towards optimal thermal sensors placement", in *Proc. of 2014 IEEE Ninth International Conference on Intelligent Sensors, Sensor Networks and Information Processing (ISSNIP)*, p. 1-6.
- [234] G. Konstantinou, J. Pou, S. Ceballos, G. J. Capella, **V.G. Agelidis**, "Reducing circulating currents in interleaved converter legs under selective harmonic elimination pulse-width modulation," in *Proc. of IEEE International Conference on Industrial Technology (ICIT)*, March 2015, Seville, Spain, p. 1136-1141.
- [235] G. Konstantinou, J. Pou, S. Ceballos, R. Darus, **V.G. Agelidis**, "Defining the exact number of submodule transitions in fundamental frequency modulated modular multilevel converters," in *Proc. of IEEE Int. Conf. on Ind. Tech. (ICIT)*, March 2015, Seville, Spain, p. 3052-3057.
- [236] L. Callegaro, M. Ciobotaru and **V.G. Agelidis**, "Analysis and comparison of electrical PV modelling techniques based on datasheet values", in *Proc. of 30th European Photovoltaic Solar Energy Conference*, Hamburg, Germany, 2015.
- [237] T. Kim, M. Jang, **V.G. Agelidis**, "1-MHz isolated bipolar half-bridge GaN gate driver for SiC MOSFETs," in *Proc. of IEEE International Conference on Power Electronics (ICPE) and ECCE Asia*, p. 575-580, 1-5 June 2015.
- [238] G. Konstantinou, J. Zhang, S. Ceballos, J. Pou, **V.G. Agelidis**, "Comparison and evaluation of sub-module configurations in modular multilevel converters," in *Proc. of IEEE PEDS 2015*, June, Sydney, Australia.
- [239] M. Khalid, A.V. Savkin, **V.G. Agelidis**, "Maximizing the income for wind power plant integrated with a battery energy storage system using dynamic programming," in *Proc. of the 10th Asian Control Conference (ASCC)*, Kota Kinabalu, Malaysia, June 2015.
- [240] M. Rana, I. Koprinska, **V.G. Agelidis**, "Forecasting solar power generated by grid connected PV systems using ensembles of neural networks", in *Proc. of IEEE International Joint Conference on Neural Networks (IJCNN)*, Killarney, Ireland, 12-15 July 2015.

- [241] M. Khalid, A.V. Savkin, **V.G. Agelidis**, "An adaptive control algorithm for wind power dispatch using a battery energy storage system," in *Proc. of IEEE Multi-Conference on Systems and Control (MSC)*, Sydney, Australia, September 2015.
- [242] T. Morstyn, B. Hredzak, **V.G. Agelidis**, "Communication delay robustness for multi-agent state of charge balancing between distributed AC microgrid storage systems," in *Proc. of Rec. of IEEE Conference on Control Applications (CCA)*, 2015, Sept. 2015.
- [243] M. Khalid, A.V. Savkin, **V.G. Agelidis**, "Optimization of a power system consisting of wind and solar power plants and battery energy storage for optimal matching of supply and demand," in *Proc. of IEEE Multi-Conference on Systems and Control (MSC)*, Sydney, Australia, September 2015.
- [244] H. Lim, M. Jang, **V.G. Agelidis**, "A phase shedding technique for PV system based on interleaved boost converter," in *Proc. of IEEE International Future Energy Electronics Conference (IFEEC)*, Nov. 2015.
- [245] M. Momayyezani, B. Hredzak, **V.G. Agelidis**, "A new multiple converter topology for battery/ultracapacitor hybrid energy system", in *Proc. of Annual Conference of the IEEE Industrial Electronics Society (IECON 2015)*, Yokohama, Japan, Nov. 2015.
- [246] G. Konstantinou, J. Pou, S. Ceballos, R. Picas, J. Zaragoza, **V.G. Agelidis**, "Utilising redundant voltage levels for circulating current control in modular multilevel converters" in *Proc. of Annual Conference of the IEEE Industrial Electronics Society (IECON)*, Yokohama, Japan, Nov. 2015.
- [247] Y. Yu, G. Konstantinou, C. D. Townsend, R. Aguilera, B. Hredzak, **V.G. Agelidis**, "Delta connected cascaded H-bridge multilevel photovoltaic converters", in *Proc. of Annual Conference of the IEEE Industrial Electronics Society (IECON)*, Yokohama, Japan, Nov. 2015.
- [248] R. Aguilera, Y. Yu, P. Acuna, G. Konstantinou, B. Wu, **V.G. Agelidis**, "Closed-loop SHE-PWM strategy for power converters by means of model predictive control", *Proc. of Annual Conf. of the IEEE Industrial Electronics Society (IECON)*, Yokohama, Japan, Nov. 2015.
- [249] C. D. Townsend, Y. Yu, G. Konstantinou, **V.G. Agelidis**, G.D. Demetriades, "Capacitance minimisation and alleviation of per-phase power imbalances in cascaded PV converters", in *Proc. of Annual Conference of the IEEE Industrial Electronics Society (IECON)*, Yokohama, Japan, Nov. 2015.
- [250] R. Picas, J. Pou, J. Zaragoza, S. Ceballos, G. Konstantinou, **V.G. Agelidis**, J. Balcells, "Discontinuous modulation of modular multilevel converters without the need for additional SMs", in *Proc. of Annual Conference of the IEEE Industrial Electronics Society (IECON)*, Yokohama, Japan, Nov. 2015.
- [251] C.D. Townsend, R. Alves, D. Tormo, H.Z. De La Parra, G.D. Demetriades, **V.G. Agelidis**, "Heuristic model predictive modulation in high power multi-level converters," in *Proc. of Annual Conference of the IEEE Industrial Electronics Society (IECON)*, Yokohama, Japan, Nov. 2015.
- [252] G. Wang, J. Pou, **V.G. Agelidis**, "Reconfigurable battery energy storage system for utility-scale applications" in *Proc. of Annual Conference of the IEEE Industrial Electronics Society (IECON)*, Yokohama, Japan, Nov. 2015.
- [253] G. Wang, M. Ciobotaru, **V.G. Agelidis**, "Dispatch performance analysis of PV power plants using various energy storage capacities", in *Proc. of Annual Conference of the IEEE Industrial Electronics Society (IECON)*, Yokohama, Japan, Nov. 2015.
- [254] M. Jang, T. Kim, **V.G. Agelidis**, "Design and implementation of a 200kHz single-phase boost-inverter using silicon carbide semiconductors," in *Proc. of Annual Conference of the IEEE Industrial Electronics Society (IECON)*, Yokohama, Japan, Nov. 2015.
- [255] G. Papafotiou, G.D. Demetriades, **V.G. Agelidis**, "Integration of model-predictive control in medium and high-voltage power electronics products: An industrial perspective on gaps and

- progress required”, in *Proc. of Annual Conference of the IEEE Industrial Electronics Society (IECON)*, Yokohama, Japan, Nov. 2015.
- [256] L. Bede, G. Gohil, M. Ciobotaru, T. Kerekes, R. Teodorescu, **V.G. Agelidis**, “Circulating current controller for parallel interleaved converters using PR controllers”, *Proc. of Annual Conf. of the IEEE Industrial Electronics Society (IECON)*, Yokohama, Japan, Nov. 2015.
- [257] R. Aguilera, Y. Yu, P. Acuna, G. Konstantinou, **V.G. Agelidis**, “Predictive control algorithm to achieve power balance of cascaded H-bridge converters”, in *Proc. of 3rd Symposium on Predictive Control of Electrical Drives and Power Electronics*, 2015.
- [258] L. Bede, G. Gohil, T. Kerekes, M. Ciobotaru, R. Teodorescu, **V.G. Agelidis**, “Comparison between grid side and inverter side current control for parallel interleaved grid connected converters”, in *Proc. of EPE Europe 2015*, Genève, Switzerland.
- [259] X. Hua, C. Yuxi W. Jian, **V.G. Agelidis**, “Design of energy dispatch strategy of active distribution network using chance-constrained programming” in *Proc. of 2015 IEEE PES Asia-Pacific Power and Energy Engineering Conference (APPEEC)*, p. 1-5.
- [260] A.M.Y.M. Ghias, J. Pou, S. Ceballos, **V.G. Agelidis**, “Low-frequency voltage ripples in the flying capacitors of the nested neutral-point-clamped converter”, in *Proc. of IEEE APEC 2016*, Long Beach, CA, USA, 20-24 March 2016.
- [261] L. Bede, G. Gohil, M. Ciobotaru, T. Kerekes, R. Teodorescu, **V.G. Agelidis**, “Fault ride-through performance evaluation of an interleaved grid-connected converter employing low switching frequency”, *Proc. of IEEE APEC 2016*, Long Beach, CA, USA, 20-24 March 2016.
- [262] H. Choi, M. Jang, M. Ciobotaru, **V.G. Agelidis**, “Hybrid energy storage for large PV systems using bidirectional high-gain converters”, in *Proc. of 2016 IEEE International Conference on Industrial Technology*, Taipei, Taiwan, 14-17 March 2016.
- [263] A. Kapidou, **V.G. Agelidis**, G. Demetriades, H. Parra Da La Zelaya, “An AC reactive power compensator based on a nine-switch converter”, in *Proc. of 18th European Conference on Power Electronics and Applications, EPE'16 ECCE Europe*, Karlsruhe, Germany, 5-9 September 2016.
- [264] M. Rana, I. Koprinska, **V.G. Agelidis**, “Solar power forecasting using weather type clustering and ensembles of neural networks” in *Proc. of IEEE International Joint Conference on Neural Networks (IJCNN) 2016*, Vancouver, Canada, July 2016.
- [265] M. Rana, R. Chandra, **V.G. Agelidis**, “Cooperative neuro-evolutionary recurrent neural networks for solar power prediction”, in *Proc. of IEEE Congress on Evolutionary Computation (CEC) 2016*, Vancouver, Canada, July 2016, 7744389, pp. 4691-4698.
- [266] M. Ciobotaru, A. Rosse, L. Bede, B. Karanayil, **V.G. Agelidis**, “Adaptive notch filter based active damping for power converters using LCL filters”, in *Proc. of IEEE PEDG 2016*, Vancouver, Canada.
- [267] S.M Alshibani, R. Dutta, **V.G. Agelidis**, “Optimisation of a MW Halbach PMSG for wind turbine applications”, in *Proc. of the International Conference on Electrical Machines (ICEM'2016)* Lausanne, Switzerland, September 4-7, 2016.
- [268] D.B.W. Abeywardana, B. Hredzak, **V.G. Agelidis**, “DC side ripple current reduction method for three-phase boost inverter with mismatched output capacitors”, in *Proc. of IEEE PES Innovative Smart Grid Technologies Conference Europe*, December 2016, Article number 7796387, pp. 208-213.
- [269] H.R. Wickramasinghe, G. Konstantinou, J. Pou, **V.G. Agelidis**, “Asymmetric overlap and hysteresis current control of zero-current switched alternate arm converter”, in *Rec. of 2016 IEEE IECON Proceedings (Industrial Electronics Conference)*, 7793990, pp. 2526-2531
- [270] L. Callegaro, M. Ciobotaru, **V.G. Agelidis**, E. Turano, “A solution for the gain discontinuity issue of the non-inverting buck-boost converter”, in *Rec. of 2016 IEEE IECON Proceedings (Industrial Electronics Conference)*, 7793335, pp. 1245-1250.
- [271] H.D. Tafti, A.I. Maswood, J. Pou, G. Konstantinou, **V.G. Agelidis**, “An algorithm for reduction of extracted power from photovoltaic strings in grid-tied photovoltaic power plants

- during voltage sags”, in *2016 IEEE IECON Proceedings (Industrial Electronics Conference)*, 7793187, pp. 3018-3023.
- [272] H.R. Wickramasinghe, G. Konstantinou, J. Pou, R. Picas, S. Ceballos, **V.G. Agelidis**, “Comparison of bipolar sub-modules for the alternate arm converter”, in *IEEE IECON Proceedings (Industrial Electronics Conference)*, December 2016, Article number 7793031, pp. 6482-6487.
 - [273] E. Karatsivos, **V.G. Agelidis**, G. Konstantinou, G.D. Demetriades, “Asynchronous AC systems interconnection with DC-bus capacitor-less VSC back-to-back topology”, *IEEE International Conference on Power System Technology, POWERCON 2016*, Article number 7753917.
 - [274] L. Callegaro, M. Ciobotaru, **V.G. Agelidis**, “Implementation of 3D lookup tables in PLECS for modelling photovoltaic modules”, *Proceedings of the Australasian Universities Power Engineering Conference, AUPEC*, November 2016, Article number 7749305.
 - [275] V. Lystianingrum, B. Hredzak, **V.G. Agelidis**, “Abnormal overheating detectability analysis based on cross Gramian for a supercapacitors string”, *IEEE Power and Energy Society General Meeting*, November 2016, Article number 7741824.
 - [276] G. Konstantinou, S. Ceballos, I. Gabiola, J. Pou, B. Karanayil, **V.G. Agelidis**, “Flexible prototype of modular multilevel converters for experimental verification of DC transmission and multiterminal systems”, in *Asian Conference on Energy, Power and Transportation Electrification, ACEPT 2017*, pp. 1-6.
 - [277] A. Drambrosio, E. Guest, N. Mijatovic, **V.G. Agelidis**, “Design of power peak shaving controller for single-phase AC railway systems”, in *Proc. of 53rd International Universities Power Engineering Conference, UPEC 2018*, art. no. 8542032.
 - [278] M.S.A. Dahidah, H. Liu, **V.G. Agelidis**, “Reconfigurable Converter with Multiple-Voltage Multiple-Power for E-Mobility Charging”, in *International Power Electronics Conference, IPEC-Niigata - ECCE Asia 2018*, art. no. 8507550, pp. 3215-3222.
 - [279] A. Dambrosio, N. Mijatovic, **V.G. Agelidis**, “Lumped parameter model of a 2x25 kV railway system based on Root-matching method”, in *Proc. of ITEC Asia-Pacific 2018 - 2018 IEEE Transportation Electrification Conference and Expo, Asia-Pacific: E-Mobility: A Journey from Now and Beyond*, art. no. 8433293.
 - [280] D.I. Doukas, **V.G. Agelidis**, G. Papafotiou, G. Town, “Considerations for integrating PMU capabilities into grid-connected power electronics converters” in *Proc. of 2018 IEEE Electronic Power Grid (eGrid)*, p.1-6.
 - [281] S. Gong, **V.G. Agelidis**, “Ripple manipulator towards REG-integrated EV charging infrastructure system”, in *Conf. Proc. of IEEE IECON Proceedings (Industrial Electronics Conference)*, 2020, pp. 5203–5209.

9.1.7 Publications on educational and teaching issues

- [1] **V.G. Agelidis**, J.E. Goodell, W.B. Lawrance, “Enhancing the micro-level first-year experience: practical strategies utilised in a large, diverse, engineering class at Curtin University, Western Australia”, in *Proc. of 11th International Conference on First Year Experience*, Dublin, Ireland, July 1998.
- [2] **V.G. Agelidis**, J.E. Goodell, W.B. Lawrance “Creating an inclusive learning environment in electrical engineering”, in *Proc. of 10th Australasian Association of Engineering Education (AAEE) Conference*, Gladstone, Australia, September 1998.
- [3] J.E. Goodell, **V.G. Agelidis**, “Analysis of first-year engineering students’ responses to invitational teaching”, in *Proc. of 2nd National First-Year Experience (FYE) Conference 1998*, Mandurah, Australia, November 1998.

- [4] **V.G. Agelidis**, A. Whiteley, "Critical rethinking of the invitational education model in the light of technological advances: the PATOP analysis", in *Proc. of 12th International Conference on First Year Experience*, Edinburgh, Scotland, July 1999.
- [5] **V.G. Agelidis**, W.B. Lawrance, "Improving the quality of engineering students seminar presentations", in *Proc. of 11th Annual Conference and Convention of the Australasian Association for Engineering Education (AAEE) 1999*, Adelaide, Australia, September 1999.

9.1.8 Other academic publications

- [1] "Electronic circuit simulation using ORCAD and SPICE", Concordia University, 1991.
- [2] "Industrial electronics laboratory manual", Concordia University, 1992.
- [3] "Fundamentals in electrical engineering laboratory manual", Curtin University, 1998.
- [4] "Power electronics laboratory manual", The University of Glasgow, 2002.

9.2 Citations

9.2.1 SCOPUS

Record as of 23 January 2022.

Total documents included in the database: 470

Citations including self-citations: 17129

h-index: 66

Number of co-authors: 255

9.2.2 Google Scholar Citations

<http://scholar.google.com.au/citations?user=p8d8--wAAAAJ&hl=en>

	All	Since 2017
Citations	23547	13306
h-index	77	61
i10-index	305	230

10 FUNDING

10.1 Research grants

- 1994** Curtin University New Researcher's Scheme: A\$5,100.
Project Title: "Dynamic analysis of a soft-switching boost converter".
- 1995** Curtin University New Researcher's Scheme: A\$4,100.
Project Title: "A low distortion multilevel pulse-width modulated inverter topology".
- 1996** Curtin University New Researcher's Scheme: A\$4,600.
Project Title: "An optimised multilevel pulse-width modulated single-phase inverter for photovoltaic applications".
- 1998** Australian Research Council (ARC) Small Grant: A\$15,000.
Project title: "Performance evaluation of various multilevel inverter topologies for single-phase photovoltaic applications".
- 1998** Alternative Energy Development Board, Western Australia: A\$24,000.
Project title: "Development and optimisation of a novel solar uninterruptible power supply", with C.V. Nayar and W. Keerthipala.
- 1999** Alternative Energy Development Board, Western Australia: A\$35,000.

- Project title: “Design and experimental verification of a cascaded inverter for single-phase transformer-less grid-connected photovoltaic systems” with M. Calais.
- 1999** Curtin University, Centre for Educational Advancement: A\$4,000.
Project title: “Web site development for the unit electrical engineering 105”.
- 1999** Curtin University, Centre for Educational Advancement: A\$10,000.
Project title: “New media technologies for teaching”.
- 2000** The University of Glasgow Research Grant: £6,500.
Project title: “Grid-connected photovoltaic systems”.
- 2001** Engineering and Physical Sciences Research Council (EPSRC), U.K.: £60,000.
Project title: “Switching frequency reduction in multilevel PWM converters and systems”.
- 2002** The University of Glasgow Research Grant: £5,000.
Project title: “WebCT feasibility for University of Glasgow- demonstration for power electronics 2”.
- 2003** The University of Glasgow Research Grant: £4,500.
Project title: “WebCT feasibility for University of Glasgow-demonstration for power electronics”.
- 2004** The Royal Society, UK: Travel Grant: £1020, to attend the IEEE APEC 2004, Anaheim, USA.
- 2004** The University of Glasgow Research Grant: £5,500.
Project title: “Fuel cell based power electronics conditioning converters”.
- 2004** Engineering and Physical Sciences Research Council (EPSRC), UK: £317,422.
Project title: “Design and optimisation of power electronic conditioners for fuel cells”.
- 2005** Technological Education Institute of Serres, Greece: €1031.
Project title: “DC-DC converter technology for photovoltaics”.
- 2005** Murdoch University Start-Up Research Grant: A\$20,000.
- 2006** Division of Science and Engineering, Murdoch University Research Grant: A\$19k.
Project title: “Optimal control of advanced FACTS controllers”.
- 2006** ABB AB Sweden Research Support, A\$100,000.
Project title: “Increasing bandwidth of voltage-source converters in HVDC applications”.
- 2006** R&D Board, Murdoch University Industry Funding Matching Scheme: A\$100,000.
Project title: “Novel topologies for STATCOM systems”.
- 2007** Research Bridging Support Funding 2008, the University of Sydney: A\$50,000.
Project Title: “Multi-terminal direct current distribution system based on proton exchange membrane fuel cells”.
- 2008** ABB AB Sweden Research Support, A\$100,000.
- 2008** ARC Discovery Project, 2009-2011, DP0985867, A\$175,000
Project title: Hot-swappable and high-efficient grid-connected power electronics system for photovoltaic modules with direct power transfer technique, with Dr D.D.C. Lu.
- 2009** ABB AB Sweden Research Support, A\$100,000.
- 2009** ARC Linkage Grant Project, 2009-2012, LP0991663, A\$660k with extra A\$300k cash contribution from the Collaborating organisation: Ausgrid (formerly EnergyAustralia).
Project title: An intelligent integrated energy communication system, with Professor B. Vucetic and Dr Y. Li.

- 2009** Ausgrid Centre of Excellence in Power Engineering: a five-year research program with a cash contribution of total A\$5m.
- 2010** Ministry of Science, Technology and Innovation, Malaysia, Project number: 03-02-12-SF0092, External Collaborator, RM122k. Project Title: Improved power electronic reactive power compensator for the future transmission lines, with M.S.A. Dahidah, The University of Nottingham, Malaysia Campus, Duration: 24 months (April 2010 till March 2012).
- 2012** AGL Energy Ltd., Solar Flagships Research Infrastructure, Department of Innovation, Industry, Science, Research and Tertiary Education (DIISRTE), A\$19m (total grant awarded to the research consortium between UNSW and the University of Queensland (UQ) \$40.7m) 2013-2015, sole investigator from UNSW with Professor Paul Meredith of UQ.
- 2013** US\$70k, ABB Research Grant Program: Project title: Advanced control methods and converter topologies for modular hybrid energy storage system”, with Dr B. Hredzak.
- 2014** US\$70k, ABB Research Grant Program: Project title: Advanced control methods and converter topologies for modular hybrid energy storage system”, with Dr B. Hredzak.
- 2015** US\$70k, ABB Research Grant Program: Project title: Advanced control methods and converter topologies for modular hybrid energy storage system”, with Dr B. Hredzak.
- 2015** ARC Discovery Project 2015-2017, “Control of distributed energy storage system using vanadium batteries”, A\$340.7k, with Prof J. Bao and Prof M. Skyllas-Kazacos from the School of Chemical Engineering, UNSW
- 2015** ARC Linkage Project 2015-2018, LP150100719, “Advanced modular reconfigurable energy storage and conversion systems”, A\$328k from the ARC in cash, plus A\$154k from ABB Cooperative Research Centre (CRC), Sweden in cash (Total cash component A\$482k), with Prof J. Pou (UNSW), Dr G. Demetriades (ABB CRC Sweden).
- 2016** ARC Linkage Project 2016-2019, LP160100342, “Compact reliable fault-tolerant modular high-power converters”, A\$280k from the ARC in cash, plus A\$179k from ABB Cooperative Research Centre (CRC), Sweden in cash (Total cash component A\$459k), with Prof J. Pou (UNSW), Dr A. Nami; Dr F. Dijkhuizen; Dr G. Demetriades (ABB CRC Sweden).
- 2019** Government of India, Scheme for Promotion of Academic and Research Collaboration, stream: Theme: Convergence, Transportation and Smart Infrastructure, 1542, 2-year project, E-Mobility: An Electricity Grid Perspective: A.K. Singh, Motilal Nehru National Institute of Technology and V.G. Agelidis, Technical University of Denmark, Denmark, Budget: 63,38,3555 INR.

10.2 CRC participation as a research associate

1997-1999 Australian Cooperative Research Centre (CRC) on Renewable Energy.

Power conditioning research program 4.1: Total funds for three years A\$943k, Project title: “Development of power conditioning and control systems for high penetration medium scale wind diesel systems”.

Power conditioning program 4.3: Total funds for three years A\$787k, Project title: “Development of high efficiency and low-cost power conditioning systems for stand-alone solar home systems and utility grade PV/diesel/battery hybrid power systems”.

10.3 Laboratory and infrastructure development funds

10.3.1 Murdoch University

- 2006** University Discretionary Funds, A\$300k for the development of an integrated and highly modularised electrical power-engineering laboratory

2006 University Discretionary Funds, A\$25k for upgrading the first-year circuits and systems laboratory

10.3.2 The University of Sydney

2007 Faculty of Engineering and Information Technologies, A\$50k start-up fund

2007 Australian Power Institute (API – www.api.edu.au), A\$50k

2007 University of Sydney, Major equipment scheme for research, A\$35k

2008 ABB Australia Pty Ltd, donation of equipment and technical services to set up a teaching laboratory worth of A\$1m.

2008 Australian Power Institute, A\$50k.

2008 The University of Sydney, A\$1,6m.

2009 Faculty of Engineering and Information Technologies, A\$200k.

2009 Major equipment scheme for research, A\$36k.

10.3.3 The University of New South Wales (UNSW)

2010 Deputy Vice-Chancellor Research, A\$2m start-up fund (strategic hire).

2010 School of Electrical Engineering & Telecommunications, A\$50k laboratory fund.

2011 Major Research Equipment Infrastructure Initiative (MREII) A\$150k.

10.4 Philanthropic Income

10.4.1 The University of Sydney

2007 Private donation from Mr John Rector, A\$30k

2007 Private donation from Sir William Tyree, A\$1m

2009 Private donation from Mr David Herrman, A\$4k

11 OTHER SCHOLARLY ACTIVITIES

11.1 External/internal thesis examination

11.1.1 Master Thesis by coursework/research

- 1998, Master thesis by research title: “Fuzzy logic control of a dq-domain vector mapped three-phase inverter”, by Mr Zhang Jianming, Queensland University of Tech., Australia.
- 2006, Master thesis by coursework title: “A general purpose development platform for hysteresis control strategies”, by Mr David Ronald Hodson, Monash University, Australia.

11.1.2 Ph.D. Thesis

- [1] 2003, thesis title: “Power quality improvement with battery supported voltage source converter”, by Mr A. Arulampalam, UMIST, Manchester, UK.
- [2] 2003, thesis title: “Parallel solutions of large-scale electric systems with FACTS and custom power controllers: harmonic and power quality-oriented analyses”, by Mr Norberto Garcia Barriga, The University of Glasgow.
- [3] 2004, thesis title: “Power electronics based applications for the increased penetration of wind power into electrical networks”, by Mr Philip Cartwright, UMIST, Manchester, UK.
- [4] 2005, thesis title: “Design and control of an inverter for photovoltaic applications”, by Mr Søren Bækthøj Kjær, Institute of Energy Technology, Ålborg University, Denmark.
- [5] 2005, thesis title: “High frequency transformer linked converters for photovoltaic applications”, by Mr Quan Li, Central Queensland University.

- [6] 2006, thesis title: “Single-phase transformerless unipolar switched inverters for utility-connected photovoltaic applications” by Mr R. Sharma, University of Southern Queensland.
- [7] 2007, thesis title: “Robust nonlinear stability control of electrical power systems”, by Mr Mark Gordon, The University of Sydney.
- [8] 2010, thesis title: “Power quality improvement using adaptive unified power quality conditioner”, by K. K. Hoong, Nanyang Technological University, Singapore.
- [9] 2014, thesis title: “Characterisation of the cascode gate drive of power MOSFETs in clamped inductive switching applications”, by M. Broadmeadow, Queensland University of Technology, Australia.
- [10] 2015, thesis title: “Stand-alone solar-PV hydrogen energy systems incorporating reverse osmosis”, by D Clarke, Edith Cowan University, Australia.
- [11] 2015, thesis title: “Modelling and analysis of new type of electrochemical components – Solid oxide fuel cell (SOFC) and Vanadium redox flow battery (VRB) for system level application”, by Zhang Yu, Nanyang Technological University, Singapore.
- [12] 2016, thesis title: “State-of-charge estimation of lithium-ion battery for a satellite power management system”, by Htet Aung, Nanyang Technological University, Singapore.
- [13] 2016, thesis title: “Performance studies and energy management of aggregated BESSs in frequency regulation”, by Zhang Tian, Nanyang Technological University, Singapore.
- [14] 2017, thesis title: “Advanced control and stability enhancement of grid-connected voltage-source inverter with LCL filter”, by Zhen Xin, Aalborg University, Denmark.
- [15] 2017 thesis title: “Control of superconducting DC transmission systems and solution of coupled electrothermal superconducting cable model”, by Dimitrios I. Doukas, Aristotle University of Thessaloniki, Greece.
- [16] 2017, thesis title: “Holistic approach to fault diagnosis and prognosis in wind turbines”, by Georgios Alexandros Skrimpas, Technical University of Denmark (DTU), Denmark.
- [17] 2017, thesis title: “Operation and control of cascaded H-bridge converter for STATCOM application”, by Ehsan Behrouzian, Chalmers University of Technology, Gothenburg, Sweden.
- [18] 2018, thesis title: “Control strategies for hybrid energy storage systems in DC grid”, by Ujjal Manandhar, Nanyang Technological University, Singapore.
- [19] 2019, thesis title: “Multi-functional power electronics tailored for energy conversion plants”, by Philip Karl-Heinz Dost, Ruhr-Universitat Bochum, Germany.

11.2 Research grant reviewer

- **Australian Research Council (ARC)**
 - Discovery research grants, 2005-2020 annually (approximately 5 per annum).
 - Future Fellows 2011, 2012, 2013, 2014, 2017, 2019
 - Linkage 2012, 2013, 2014, 2015, 2016, 2017
 - Discovery Early Career Research Award: 2012 (two grants), 2013 (three grants), 2014 (two grants), 2018 (1 grant)
- **New Zealand, 2018-2021:** Appointed assessor by the Ministry of Business, Innovation and Employment of the New Zealand Government.
- **Singapore:** Agency for Science, Technology and Research (A*STAR) research projects, 2007.
- **Canada:** Natural Sciences and Engineering Research Council of Canada, Discovery Projects: 2007 (one grant), 2010 (one grant) and Research Chairs Tier I and II Program: 2013 (one grant).

- **Hong Kong:** Hong-Kong Research Grants Council, 2011 (three grants), 2012 (eight grants), 2013 (10 grants), 2013 (two Centre of Excellence applications), 2014 (nine grants), 2014 (one Centre of Excellence application), 2016 (one grant), 2017 (10 grants), 2018 (five grants).
- **Chile:** National Commission for Scientific and Technological Development (CONICYT) and the Superior Council of the National Fund for Scientific & Technological Development (FONDECYT), 2012 (one grant); 2014 (two grants), 2015 (one grant), 2016 (one grant).
- **Belgium:** The Hercules Foundation, established by the Flemish authorities to manage a program to support the acquisition of large research infrastructure, 2012, Smart grid smart cities research infrastructure (one grant).
- **Belgium:** University of Leuven, 2015 (two grants).
- **New Zealand,** Ministry for Science and Innovation, 2012 (six grants), 2014 (one grant).
- **Singapore,** Energy Market Authority of Singapore, 2012 (three grants), 2014 (two grants), 2016 (one).
- **United Kingdom:** EPSRC Centre for doctoral training, 2013 (one grant); Regular research grant, 2014 (one grant).
- **Holland,** Dutch Technology Foundation STW, 2016 (one grant).
- **Norway,** Norwegian Research Council Infrastructure grants for energy, 2017 (four grants).
- **European Research Council,** Consolidator Grant, 2017, (one grant).
- **Republic of Kazakhstan,** National Centre of Science and Technology Evaluation, Ministry of Education and Science, 2018 (7 grants), 2019 (9 grants).

11.3 Membership in editorial boards

- **Associate Editor:** IEEE Power Electronics Letters, 2002-2005.
- **Associate Editor:** IEEE Transactions on Power Electronics 2010-2012.

11.4 Membership in international committees

- Technical committee member of energy and power systems of the International Association of Science and Technology for Development (IASTED), Calgary, Alberta, Canada 2001-2005.
- IEEE PELS elected administrative committee (Ad.Com.) member 2003-2008.
- IEEE PELS elected Vice-President Operations, 2005-2006.
- IEEE PELS appointed Chair of the Chapter Development Committee, 2003-2005.
- IEEE Power Electronics Specialists Conference Steering Committee member, 2003-2008.
- IEEE Industrial Applications Society, Fellow Evaluation Committee 2017.

11.5 Membership in national committees

- IEEE Western Australian Section:
 - Executive Committee Member, 1993-1998.
 - Student Activities Coordinator 1994-1995.
 - Power Engineering Chapter, Member 1997-1999.
- Member of the Executive of the UK and Republic of Ireland IEEE Power Electronics Society Chapter and a Regional Representative for Scotland 2003-2004.
- IEEE New South Wales Section, member 2007-2012

11.6 Reviewer for journals

IEEE Transactions on Power Electronics; IEEE Transactions on Industrial Electronics; IEEE Transactions on Industry Applications; IEEE Transactions on Energy Conversion; IEEE

Transactions on Power Delivery; EPE Power Electronics Journal; International Journal of Electronics; IEE Proceedings, Electrical Power Applications; IEE Electronics Letters; IET Power Electronics; IEEE Power Electronics Letters; IEEE Power Engineering Letters.

11.7 Member of the technical program committee/paper reviewer:

- IEEE Region 10 Conference, Digital Signal Processing and Applications 1996.
- IEEE Power Electronics Specialists Conference (PESC) 1997, 1998, 1999, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008.
- IEEE International Conference on Industrial Electronics 1997.
- IEEE International Conference on Power Electronics, Drives and Energy Systems for Industrial Growth 1998.
- International Power Electronics Conference, (IPEC) 2000, Tokyo, Japan.
- European Power Electronics Conference 2001, Graz, Austria.
- Australasian Universities Power Engineering Conference (AUPEC) 2001, Perth, Australia.
- 1st IASTED International Conference on Energy and Power Systems 2001 (EUROPES), Rhodes, Greece.
- 5th IASTED International Conf. on Intelligent Systems and Control 2002, Tsukuba, Japan.
- 2nd IASTED International Conference on Energy and Power Systems 2002 (EUROPES), June 25-28, Crete, Greece.
- 6th IASTED International Conference on Artificial Intelligence & Soft Computing, July 17-19, 2002, Banff, Canada.
- IASTED International Conference on Control and Applications 2002, Cancun, Mexico.
- IASTED International Conference on Modelling and Simulation 2002, Marina, USA.
- IASTED International Conference on Applied Modelling and Simulation 2002, Cambridge, MA, USA, November 4-6, 2002.
- IEEE Applied Power Electronics Conference (APEC) 2002, 2003, 2004, 2005, 2006, 2007.
- European Power Electronics Conference 2003, Toulouse, France.
- IEEE Power Electronics & Drives Systems (PEDS), Singapore, 17-20 November 2003.
- IASTED International Conference on Modelling and Simulation, Palm Springs, CA, USA, 24-26 February 2003.
- 3rd IASTED International Conference on Energy and Power Systems (EUROPES), 3-5 September 2003, Marbella, Spain.
- IASTED International Conference PowerCon 2003, Special Theme: Blackouts, 10-12 December 2003, New York, USA.
- IEEE 12th MELECON, 12-15 May 2004, Dubrovnik, Croatia.
- IEEE IECON, Busan, South Korea, 2-6 November 2004.
- 11th International Power Electronics and Motion Control Conference, EPE-PEMC, Riga, Latvia, 2-4 September 2004.
- 4th IASTED International Conference on Energy and Power Systems 2004 (EUROPES), Rhodes, Greece.
- 15th IASTED International Conference on Modelling and Simulation, 1-3 March 2004, Marina del Rey, CA, USA.
- IASTED International Conference on Circuits, Signals, and Systems, November 28 – December 1, 2004, Clearwater Beach, Florida, USA.

- 7th IASTED International Conference on Power and Energy Systems, (PES 2004), November 29-December 1 2004, Clearwater Beach, Florida, USA.
- IEEE IECON 2005, North Carolina, USA, November.
- IEEE Region 8 EUROCON 2005.
- 5th IASTED International Conf. on Power and Energy Systems, Benalmadena, Spain 15-17 June 2005.
- World Renewable Energy Congress, Aberdeen, UK, 22-27 May 2005.
- European Power Electronics Conference 2005, Dresden, Germany.
- 24th IASTED International Conference on Modelling, Identification and Control, 16-18 February 2005, Innsbruck, Austria.
- 15th Power Systems Computation Conference, 22-26 August 2005, Liège, Belgium.
- IEEE International Symposium on Industrial Electronics - ISIE, Dubrovnik, Croatia, 20-23 June 2005.
- 8th International Conf. AC and DC Power Transmission, Savoy Place, London, UK, 28-31 March 2006.
- European Power Electronics Association - 12th International Power Electronics and Motion Control Conference EPE-PEMC 2006, Portoroz, Slovenia, August 30 - September 1, 2006.
- IEEE 3rd Golf Countries Conference (GCC) 2006.
- IEEE International Symposium on Industrial Electronics (ISIE), Montreal, Canada, 9-13 July 2006.
- IEEE International Power Electronics Congress (CIEP), Cholula, Pue, México, 16-18 October 2006.
- 25th IASTED International Conference on Modelling, Identification, and Control, 6-8 February 2006, Lanzarote, Canary Islands, Spain.
- 6th IASTED International Conference on European Power and Energy Systems, 26-28 June 2006, Rhodes, Greece.
- IASTED International Conference on Power, Energy and Applications, 11-13 September 2006, Gaborone, Botswana.
- IEEE IECON, Paris, France, November 2006.
- IEEE MEPCON, El-Minia City, Egypt, 19-21 December 2006.
- IEEE Region 8 EUROCON, Warsaw, Poland, 9-12 September 2007.
- IPCC Nagoya Japan 2007.
- Australasian Universities Power Engineering Conference (AUPEC) 2007, Perth, Australia.
- Australasian Universities Power Engineering Conference (AUPEC) 2008, Sydney, Australia.
- IEEE IECON, Porto, Portugal, 2-6 November 2009.
- IEEE Energy Conversion Congress and Exhibition (ECCE) 2009.
- IEEE International Symposium on Circuits and Systems, Taipei, Taiwan, 24-27 May 2009.
- IEEE 6th International Power Electronics and Motion Control Conference - ECCE Asia, May 17-20, 2009, Wuhan, China.
- Australasian Universities Power Engineering Conference (AUPEC) 2009, Adelaide, Australia.
- 11th International Scientific Conference "Electric Power Engineering 2010" Brno, Czech Republic.
- 2010 IEEE International Symposium on Circuits and Systems (ISCAS 2010).

- IEEE ICIT Valparaiso, Chile 2010.
- IEEE PEDG 2010, 2nd International Symposium on Power Electronics for Distributed Generation Systems, 16-18 June 2010, Hefei, Anhui, China.
- 14th International Power Electronics and Motion Control Conference - EPE-PEMC 2010.
- IEEE ISIE 2010, Bari, Italy, 4-7 July 2010.
- Solar 2010, Canberra, ACT, Australia.
- IEEE ICPE-ECCE Asia 2011, Jeju, South Korea.
- IEEE IECON 2011, Melbourne, VIC, Australia.
- IEEE ECCE 2011, USA.
- Solar 2011, Sydney, NSW, Australia.
- IASTED International Conf. on Power and Energy Systems (AsiaPES), Phuket, Thailand 2-4 April 2012.
- 13th International Scientific Conference "Electric Power Engineering 2012" Brno, Czech Republic.
- IEEE ISIE 2012, Hangzhou, China.
- IEEE ECCE 2012.
- IEEE TENCON 2012.
- 2012 IEEE International Power and Energy Conference, Kota Kinabalu, City in East Malaysia.
- IASTED International Conference on Power and Energy Systems (AsiaPES 2013), Phuket, Thailand, April 10-12, 2013.
- 12th IEEE International Conf. on Environment and Electrical Engineering - Wroclaw, Poland, 5-8 May 2013.
- IEEE ISIE 2013, Taipei, Taiwan, 28-31 May 2013.
- 2013 IEEE PES General Meeting, 21 - 25 July 2012, Vancouver, BC, Canada.
- IEEEIC 2012, Poland.
- IEEE ECCE 2013, Denver, Colorado, USA, 15-19 September 2013.
- IEEE 9th Asian Control Conference (ASCC 2013), June 23-26, 2013 at Istanbul, Turkey.
- IEEE ECCE Asia Downunder 2013, Melbourne, VIC, Australia.
- IEEE IECON 2013, Vienna, Austria, 10-13 November 2013.
- AUPEC 2013 Hobart, Tasmania, Australia 29 September – 3 October 2013.
- International Power Electronics Conference -ECCE Asia- (IPEC-Hiroshima 2014), 18-21 May 2014.
- 15th Intern. Scientific Conf. "Electric Power Engineering 2014" Brno, Czech Republic, May 12-14, 2014.
- 2014 IEEE PES General Meeting July 27 - 31, 2014, National Harbor, MD (Washington, DC Metro Area).
- 18th International Conference on Electrical drives and power electronics (7th Joint Slovak-Croatian Conference), 21 – 23 September 2015, The High Tatras, Slovak Republic.
- IEEE ECCE 2019, Baltimore, Maryland, USA.

11.8 Topic chair for international conferences

- 35th IEEE International Power Electronics Specialists Conference 2004, Aachen, Germany, Topic Chair for Inverter Control (including Pulse-Width Modulation), Drives and Motion Control (managed the review of 75 papers).
- World Renewable Energy Congress 2005, University of Aberdeen, UK, Topic Chair for Fuel Cell Technology (managed the review of 20 papers).
- IEEE ECCE 2012 Topic Chair: Multilevel Converters (managed 67 papers for their review).
- IEEE ECCE 2012 Topic Chair: Fuel cells (managed 4 papers for the review).

11.9 International Conference Tutorials

I have organised tutorials in international conferences as follows:

- [1] “Power electronics control of de-regulated power systems”, IEEE Power Electronics Specialists Conference Tutorial, Acapulco, Mexico, 15 June 2003.
- [2] “State-of-the-art power electronics technologies for the de-regulated power systems”, IEEE Power Electronics and Drives Systems (PEDS), November 2005, Kuala Lumpur, Malaysia.
- [3] “Large-scale solar PV grid integration: technologies, system integration, issues and challenges”, IEEE PowerAfrica 2012, Johannesburg, South Africa, with Dr M. Ciobotaru.
- [4] “Multilevel and hybrid multilevel power converters: topologies, modulation, control and applications”, IEEE TENCON Spring 2013, Sydney, April 2013, with Professor J. Pou and Dr G. Konstantinou.
- [5] “Grid integration of large-scale photovoltaic power plants: challenges, research trends and grid codes”, IEEE ECCE-Asia Downunder 2013, Melbourne, Australia, with Dr. M. Ciobotaru.
- [6] “State-of-the-art in multilevel power electronic conversion”, AUPEC 2013, Hobart, Tasmania, September 2013, with Professor J. Pou and Dr G. Konstantinou.
- [7] “Grid-connected energy storage and conversion technologies”, AUPEC 2014 - Tutorial 2, Sunday 28 September 2014, with Dr G.D. Demetriades, Research and Development Manager, ABB Corporate Research, Vasteras, Sweden.

11.10 Lecturing in Overseas Universities

- **Seoul National University of Technology, South Korea:** “Power electronics converters and systems”, a series of 12 two-hour lectures to postgraduate students, September-October 2007.
- **Beijing Jiaotong University, Beijing, China:** “Electronic control of electrical power systems” a series of 7 two-hour lectures for postgraduate students (Electrical engineering), December 2012.
- **Beijing Jiaotong University, Beijing, China:** “Active electricity distribution networks - microgrids” a series of 12 four-hour lectures to postgraduate students (Electrical engineering), August 2013 (half) and December 2013 (second half); December 2014 (full course).

11.11 IEEE Distinguished Lectures

As a Distinguished Lecturer for the IEEE PELS, I have given the following lectures:

- 20 November 2017, NTNU, Trondheim, Norway.
- 22 November 2017, ABB, Vasteras, Sweden.
- 27 May 2018, UNITEN, Malaysia
- 27 August 2018, UNITEN, Malaysia.
- 1 November 2018, IIT, Delhi, India.
- 2 November 2018, KIET, India.
- 7 November 2018, The University of Toronto, ON, Canada.

- 27 February 2019, Vimal Jyothi Engineering College, Kannur, India.
- 28 February 2019, Government Engineering College, Thrissur, India.
- 1 March 2019, College of Engineering, Chengannur, India.
- 2 March 2019, TKM College of Engineering, Kollam, India.
- 2 March 2019, SCT College of Engineering, Trivandrum, India.
- 3 March 2019, College of Engineering, Trivandrum, India.
- 7 and 8 November 2019, Distributed Power Europe, Rimini Fiera, Expo Centre, Italy.
- 6 November 2019, The University of Padova, Italy.

11.12 Board Membership

- **Kwinana Industries Educational Partnership (KIEP)**
 - Board Member, 2005-2006.
 - Advisor for the Educational Program and motivational speaker to high school students.
- **Kwinana Automotive Technology Training Centre for Industry**
 - Board Member, 2006.
 - Advisor for strategies to prepare and deliver infrastructure and skills needs to support Electric Vehicles and Hybrid Electric Vehicles, 2006.
- **Business/Higher Education Round Table (B/HERT)**

The Business/Higher Education Round Table (www.bhert.com) is a not-for-profit organisation that was established in 1990 to strengthen the relationship between business and universities.

 - Director and Board Member 2011-2016.
 - Chair of the Finance Committee, 2013-2015, responsible for budgets, official auditing reports, finance decisions and related responsibilities including signing off auditor reports filed with the Australian Securities and Investments Commission.

11.13 National and State appointments by invitation

- **2009 CSIRO Energy Review Panel Member**, CSIRO 2009 Energy Review Panel.
- **2009 Australian Senate: Energy and Fuels Inquiry Committee**, Invited Expert Witness for HVDC Power Transmission Technologies and Transmission Grid Security.
- **2011 Australian Commonwealth Department of Innovation, Industry, Science and Research (DIISR): Strategic Roadmap for Australian Research Infrastructure: Expert Working Group Member: Environmentally Sustainable Australia.**
- **2012 Melbourne Energy Institute, The University of Melbourne**, external reviewer.
- **2014 NSW Government Task Force** to generate a report for the NSW Government Minister for Energy on *Energy Security* (the final report was confidential).

11.14 International appointments

- **Twente, Delft and Eindhoven Technical Universities, Holland:** invited to provide a short-term consultancy to the Vice-Chancellors of the three Technical Universities of Holland to advise on power engineering research trends and developments, visited Holland 1–2 July 2007
- **Universiti Tenaga Nasional (UNITEN), Kuala Lumpur, Malaysia**
 - Appointed by the Vice-Chancellor of Universiti Tenaga Nasional (private university in Malaysia owned by TENAGA Nasional, Malaysia's electricity utility company), Dato' Prof. Ir. Dr. Mashkuri Yaacob as an External Examiner/Advisor to the Electrical Power Engineering Department since 2008. Review visit: 13-19 April 2009; 12-16 April 2010; 4-8 June 2012; 31 March-4 April 2014; 11-15 April 2016.

- Appointed external examiner for the Masters and PhD Programs (Electrical Engineering) for a two-year period (2015-2016), introduced recently and offered by the same Department. Review visit: 11-15 April 2016.
- Invited in 2017 by UNITEN's Board of Directors to serve as a member of the UNITEN International Advisory Council (UIAC) for the term 2017-2020.
- **Aalborg University, Denmark:** I was invited to join the VESTAS power program for visiting Professors (Dec 2008-Feb 2009) to work on wind farm technologies and HVDC power transmission systems associated with their grid interconnection.
- **Hellenic Quality Assurance and Accreditation Agency for Higher Education**
 - Member and Chair of the External Evaluation Committee (EEC), which evaluated the Department of Electrical Engineering of the Technological Educational Institute of Western Macedonia, November 2011
 - Member of EEC, Department of Electrical Engineering of the Technological Educational Institute of Kavalla, March 2012
 - Member of EEC, Department of Electrical and Computer Engineering, National Technical University of Athens, October 2013
 - Member of EEC, Department of Electrical and Computer Science Engineering, Democritus University of Thrace, Xanthi, November 2013.
 - Member and Chair of the EEC that evaluated the Alexander Technological Educational Institute of Thessaloniki, Greece, November 2015 (Institutional Level).
- **Cyprus Agency for Quality Assurance and Accreditation in Higher Education**
 - Chair of the External Evaluation Committee (EEC) for the evaluation - accreditation process of higher education program of study in the field of: Master of Science in Intelligent Critical Infrastructure Systems - University of Cyprus, March 2018.
- **Italian Government Research Assessment Exercise 2004-2010**, Expert assessor.
- **Beijing Jiaotong University, Beijing, China**
 - **Member of the University's International Advisory Board**, 2012-2017.
 - **Professor** in the School of Electrical Engineering as High-End Foreign Experts: 2012-2014 (minimum requirement for the appointment two months per annum), 2015-2017 (minimum requirement for the appointment one month per annum); Funding provided by the Chinese Government through the State Administration of Foreign Expert Affairs.

11.15 Organising IEEE international conferences

I have been involved with the organisation of IEEE international conferences as follows.

- 1995 IEEE International Conference on Neural Networks, Chair of the Publicity and Public Relations Committee and Member of the Executive Committee.
- 1995 IEEE International Conference on Evolutionary Computing, Chair of the Publicity and Public Relations Committee and Member of the Executive Committee.
- 1996 IEEE Region 10 Conference TENCON, Digital Signal Processing and Applications, Member of the Executive Committee.
- 1998 IEEE 2nd International Conference on Power Electronics, Drives and Energy Systems for Industrial Growth, Chair of the Publicity and Public Relations Committee and Member of the Executive Committee.
- 2002 IEEE 33rd Power Electronics Specialists Conference, Cairns, Australia, Tutorials Chair and Member of the Executive/Organising Committee.
- 2005 IEEE 36th Power Electronics Specialists Conference, Recife, Brazil Publicity Chair.

- 2007 IEEE 38th Power Electronics Specialists Conference, Orlando, Florida, USA Vice Chair, Organising Committee.
- 2008 IEEE 39th Power Electronics Specialists Conference, Rhodes, Greece Technical Chair and Member of the Executive/Organising Committee.
- 2012 IEEE IECON, Montreal, Canada, Publicity Committee Member.
- 2013 IEEE TENCON Spring, Sydney, Australia, Technical co-chair.

11.16 Consulting to government bodies, business and industry

- Unitronics Pty. Ltd., Perth, Consultant and Technical Director, 1996-1997.
- Australis Technologies Pty. Ltd., Perth, Consultant and Managing Director, 1995-1996.
- IIDigital Technologies Ltd., Glasgow, Director and Secretary, May 2000-May 2005.
- Advanced Energy Technologies Ltd., Glasgow, Director and Secretary, July 2003-January 2005.
- ALCOA Alumina, Consultant, March 2005-2006.
- ABB AB Sweden, Consultant, July 2005-2010.
- I have acted as a consultant to numerous organisations in the Middle-East, Greece, the UK, Australia, and Canada, that included organisations such as large utility and power authorities, oil and gas companies as well as electronic and instrumentation companies.
- IIPower Pty Ltd, Sydney, Australia, Managing Director, July 2009 – July 2012.

11.17 Newspapers articles and interviews

- Interview on Saturday Herald on 19 March 2011 about the rekindled nuclear debate following the damage caused to nuclear power stations in the 11 March earthquake and tsunami, Saturday, 19 March 2011.
- Interview published on Kosmos, Daily Newspaper of Komotini, Greece, June 2011 (in Greek)
- “Collaboration sees business and University on the Smart Grid”, by Alistair Jones, The Weekend Australian, 20 August 2011.
- Interview with “Kathimerini”, Greek National Daily Newspaper, Greece, June 2013 (in Greek).
- Engineers Australia Cover Story on Energy Crisis in Australia, August 2014 (a six pages article on energy that highlighted the research work of the AERI and included numerous of my quotes).
- Interview to the Chinese Technical Magazine "Distribution and Utilisation" published by the State Grid Corporation of China, Issue 159, February 2014. The Interview was recorded in December 2013.
- Interview to Peter Trute (Associated Press) published by The Australian with the title: “Think outside the nuclear square: expert”, 3 November 2015 and many other media outlets online and in printed form.
- “Australia taking solar power to the next level”, by Jonathan Pearlman, For The Straits Times, Singapore, 31 January 2016.

11.18 Radio interviews and contributions

- ABC National Radio November 2009 Bush Telegraph, The future of energy in regional Australia.
- ABC Radio July 2010 interview about “research into electric cars”, Friday July 23, 2010.
- Contribution on ABC Radio National Breakfast 29 July 2011, “Clean energy developers see potential profits”.
- Live interview on ABC program: Sunday with James O’Loghlin, on energy matters, 31 July 2011 (25 min interview plus time with listeners’ participation and answering their questions).

- SBS interview on energy, 18 March 2016, (pre-recorded), in Greek.
<http://www.sbs.com.au/yourlanguage/greek/el/content/miloyme-ellinika-ton-martio-energeia-me-ton-dr-vasileio-aggelidi?language=el>

11.19 Television interviews

- CNBC live interview on 1 April 2011.
- CNBC live interview on 14 April 2011.
- ABC News 24 live interview on 10 June 2011.
- CNBC live interview on 20 June 2011.
- ABC News at 7 pm Sydney, NSW, commentary on 15 August 2011 (pre-recorded).
- CNBC live interview on 19 September 2011.
- CNBC live interview on 15 February 2013.
- Australia's Energy Future Symposium: pre-recorded panel discussion 16 September 2015. Policy certainty and stability was the key theme running through the symposium held in Sydney for participants by invitation only. The filmed event was moderated by SBS talk show host Jenny Brockie and co-hosted by *The Australian Financial Review* and *General Electric (GE)*. I was one of a number of the nation's energy leaders who discussed whether Australia is heading in the right direction (<http://www.afr.com/news/special-reports/australia-energy-future/certainty-lacking-in-national-policy-20150916-ginn5a#ixzz42B2GKJuC>)
- I was fortunate enough to be selected by Reuters of London and Toshiba of Japan after an international search of a leading authority and expert in the field, as the only person featured in the 2019 marketing video of Toshiba regarding power semiconductors and power electronics. The production was filmed at the Technical University of Denmark (DTU), was paid by Toshiba and was filmed and produced by Reuters on behalf of Toshiba.
<https://www.reuters.com/brandfeatures/road-to-a-new-day/powering-up-electrification>

11.20 Opinion Editorials

- **V.G. Agelidis**, "Too late for nuclear?", UNIKEN, (a UNSW magazine), November/December 2010 issue.
- **V.G. Agelidis**, "Too late for nuclear", ABC News online: The Drum Unleashed: 7 December 2010.
- **V.G. Agelidis** and T. Dixon, "Embracing the change: Energy storage and the grid", *Utility - Engineering, Construction and Maintenance*, May 2015, p. 74-77.

11.21 Public speeches

- "Power Engineering: The keystone of our journey towards energy sustainability", The University of Sydney, 3 April 2007. The event was attended by approximately 100 people, was organised as part of the launching of the EnergyAustralia Chair at the University and celebrate my appointment. Approximately 70 industry leaders at Chief Executive Officer (CEO) and Managing Director (MD) level attended along with the University's Vice-Chancellor, 6 Pro-Vice Chancellors, the Dean of Engineering and the Heads of all Engineering Schools.
- School of Electrical and Information Engineering, Faculty of Engineering and Information Technologies, The University of Sydney, Graduation ceremony: Occasional Address, 30 November 2007.
- 39th IEEE PESC 2008, Rhodes, Greece, Opening address as the Technical Chair of the Conference and gala dinner address.
- Opening of Sir William Tyree Laboratory in Power Engineering at the University of Sydney, 31 August 2009, with Minister of Science and Medical Research of NSW Government Jodi MacKay.

- Invited to give a keynote address on “smart” grid developments in Australia at the Energy Futures in Regional Australia: A National Conference updating Regional Leaders on the Social, Economic and Environmental Issues for Creating a Sustainable Future, 8 - 10 November 2009, Bendigo, Victoria (video available online).
- Official opening of the ABB Technology Centre, The University of Sydney, 9 February 2010.

12 OFFICIAL ENGAGEMENTS - UNSW

As Director of AERI, I regularly hosted Australian and international political leaders and representatives at UNSW. Some selected information includes:

- Delegation from Brunei Darussalam on 11 August 2014. His Excellency, Zakaria Ahmad, High Commissioner of Brunei Darussalam, and the High Commission’s Academic Coordinator toured the Institute’s research laboratories and were briefed about our research.

13 PROFESSIONAL DEVELOPMENT

- Two-day leadership workshop at Murdoch University, February 2006.
- 27 March 2007, “Philanthropy and leadership”, Training Program for Senior Executives organised by the Indiana Centre of Philanthropy, USA.
- 3 December 2007, “Major Gifts Masterclass: The Art of Asking”, Council for Advancement & Support of Education, Asia-Pacific.
- 30 June 2009, “SF₆ handling: how to limit emissions by improving the equipment”, organised by AREVA Transmission and Distribution.
- 27 July 2009, “Clean Power Today Roadshow Sydney”, organised by ALSTOM Power.