List of Publications
2013

Staff : **ASHWIN M KHAMBADKONE**
Department : **ELECTRICAL & COMPUTER ENGINEERING**

ARTICLE IN JOURNAL

INTERNATIONAL REFEREED

PUBLISHED

1. Yu, Xiaoxiao and A M Khambadkone, "Reliability analysis and cost optimization of parallel-inverter system". *IEEE Transactions on Industrial Electronics*, 59, no. 10 (2012): 3881-3889. (United States).

2. THILLAINATHAN, L, D Srinivasan, A M Khambadkone and N A HTAY, "Multi-Agent System for Real-Time Optimal Operation of a Microgrid in Real-Time Digital Simulator". *IEEE Transactions on Smart Grid*, 3, no. 2 (2012): 925-933. (United States).

3. LIM, S F and A M Khambadkone*, "A Simple Digital DCM Control Scheme for Boost PFC Operating in Both CCM and DCM". *IEEE Transactions on Industry Applications*, 47, no. 4 (2011): 1802--1812. (United States).

4. ZHOU, H, T Battacharya, D TRAN, TST Siew and A M Khambadkone*, "Composite Energy Storage System Involving Battrey and Ultracapacitor with Dynamic Energy Management in Microgrid Applications". *IEEE Transactions on Power Electronics*, (2011). (United States).

5. THILLAINATHAN, L, D Srinivasan and A M Khambadkone, "Multi-Agent System for Energy Resource Scheduling of Integrated Microgrids in a Distributed System". *Electric Power Systems Research*, 81, no. 1 (2011): 138-148. (Switzerland).

6. WANG, H, A M Khambadkone* and X YU, "Control of Parallel Connected Power Converter for Low Voltage Microgrid-Part II: Dynamic Electrothermal Modeling". *IEEE Transactions on Power Electronics*, 25, no. 12 (2010): 2971-2980. (United States).

7. YU, X, A M Khambadkone*, H WANG and T S T Siew, "Control of Parallel-Connected Power Converters for Low-Voltage Microgrid-Part I: A hybrid Control Architecture". *IEEE Transactions on Power Electronics*, 25, no. 12 (2010): 2962-2970. (United States).

8. SINGH, R P and A M Khambadkone*, "Current sharing and sensing in N-paralleled converters using single current sensor". *IEEE Transactions on Industry Applications*, 46, no. 3 (2010): 1212-1219. (United States).

9. KONG, X and A M Khambadkone*, "Modelling of a PEM Fuel Cell Stack for Dynamic and Steady State Operation using ANN based submodels". *IEEE Transactions on Industrial Electronics*, 56, no. 12 (2009): 4903 - 4914. (United States).

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11. ZHOU, H and A M Khambadkone*, "Hybrid Modulation for Dual-Active Bridge Bidirectional Converter with Extended Power Range for Ultracapacitor Applicatiobs". *IEEE Transactions on Industry Applications*, 45, no. 4 (2009): 1434-1442. (United States).

12. SINGH, R P and A M Khambadkone*, "A Buck Derived Topology with Improved Step-down Transient Performance". *IEEE Transactions on Power Electronics*, 23, no. 6 (2008): 2855-2866. (United States).

13. Singh, R P and A M Khambadkone*, "Giant Magneto Resistive (GMR) Effect Based Current Sensing Technique for Low Voltage/High Current Voltage Regulator Modules". *IEEE Transactions on Power Electronics*, 23, no. 2 (2008): 915 - 925. (United States).

14. Gupta, A K and A M Khambadkone*, "A Space Vector Modulation Scheme to Reduce Common Mode Voltage for Cascaded Multilevel Inverter". *IEEE Transactions on Power Electronics*, 22, no. 5 (2007): 1672-1681. (United States).

15. Gupta, A K and A M Khambadkone*, "A Simple Space Vector PWM Scheme to Operate a Three-level NPC Inverter at High Modulation Index Including Over-modulation Region, with Neutral Point Balancing". *IEEE Transactions on Industry Applications*, 43, no. 3 (2007): 751--760. (United States).

16. Kong, Xin and A M Khambadkone*, "Analysis and Implementation of a High Efficiency, Interleaved Current-fed Full Bridge Converter for Fuel Cell System". *IEEE Transactions on Power Electronics*, 22, no. 2 (2007): 543--550. (United States).

17. Gupta, A K and A M Khambadkone*, "A General Space Vecotr PWM Algorithm for Multilevel Inverters, Including Operation in Overmodulation Range". *IEEE Transactions on Power Electronics*, 22, no. 2 (2007): 517-526. (United States).

18. Gupta, A K and A M Khambadkone*, "A Space Vector PWM Scheme for Multilevel Inverters based on Two-level Space Vector PWM.". *IEEE Transactions on Industrial Electronics*, 53, no. 5 (2006): 1631-1639. (United States).

19. Tripathi, A, A M Khambadkone* and S K Panda, "Torque Control of Induction Motor in Field Weakening Range Using Dynamic Overmodulation with Predictive Stator Flux Control and Space Vector Modulation.". *IEEE Transactions on Power Electronics*, 21, no. 4 (2006): 1091-1098. (United States).

20. Xu, XINYU, A M Khambadkone*, M L Toh and R Oruganti, "A 1MHz Zero-Voltage-Switching Asymmetrical Half-Bridge DC-DC Converter: Analysis and Design.". *IEEE Transactions on Power Electronics*, 21, no. 1 (2006): 105-113. (United States).

21. Tripathi, A, A M Khambadkone* and S K Panda, "A Simple and Direct Method of Overmodulation with Integrated Closed Loop Stator Flux Vector". *IEEE Transactions on Power Electronics*, 20, no. 5 (2005): 1161-1168. (United States).

22. Tripathi, A, A M Khambadkone* and S K Panda, "Torque Ripple Analysis and Dynamic Performance of a Space Vector Modulation based Control Method for AC-Drives". *IEEE Transactions on Power Electronics*, 20, no. 2 (2005): 485-492. (United States).

23. Jabbar*, M A, A M Khambadkone and C Guo, "Quasi Resonant Converters based high efficiency spindle motor drives for magnetic data storage". *IEEE Transactions on Industrial Electronics*, 51, no. 6 (2004): 1338-1343. (United States).

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26. Zmeck*, M, L, J Balk, T Osipowicz, F Watt, J C H Phang, A M Khambadkone, F-J Niedernostheide and H-J Schulze, "Ion Beam Induced Charge Microscopy Studies of Power Diodes". *Journal of Physics-Condensed Matter*, 16, no. 2 (2004). (United Kingdom).

27. Chang*, C S, Z Xu and A M Khambadkone, "Enhancement and laboratory implementation of neural network detection of short circuit faults in DC transit system". *IEE PROCEEDINGS-ELECTRIC POWER APPLICATIONS*, 150, no. 3 (2003): 344-350. (United Kingdom). (Fault detection in MRTS systems).

28. Zmeck*, M, T Osipowicz, F Watt, J Phang, A M Khambadkone, F J Niedernostheide and H J Schulze, "Modeling of deep buried structures in high-power devices based on proton beam induced charge microscopy". *Nuclear Instruments &amp; Methods in Physics Research Section B-Beam Interactions with Materials and Atoms*, 210 (2003): 164-168. (Netherlands).

29. Chang*, C S, A M Khambadkone and K K Saravana, "Fast accurate and stable simulation of power electronic systems using virtual resistors and capacitors". *IEE PROCEEDINGS-ELECTRIC POWER APPLICATIONS*, 149, no. 5 (2002): 385-394. (United Kingdom). (power electronic simulation).

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36. Khambadkone*, A M and J Holtz, "Vector-controlled induction motor drives with a self-commissioning scheme". *IEEE Transactions on Industrial Electronics*, 38, no. 5 (1991): 322-327. (United States).

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37. THILLAINATHAN, L, D Srinivasan, A M Khambadkone and N A HTAY, "Multi-Agent System for the Operation of a Distributed Power System with an Integrated Microgrid". *Electric Power Systems Research*, (2011). (Switzerland).

38. THILLAINATHAN, L, D Srinivasan, A M Khambadkone and R T SUNDAR, "Long-Term Planning of Distributed Energy Resources for an Integrated Microgrid Using an Evolutionary Algorithm". *Electric Power Systems Research*, (2011). (Switzerland).

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> @ - indicates journal classification is based on the proposed classification of the author(s).

CONFERENCE PAPER

LOCAL/REGIONAL

ORAL PRESENTATION

1. Singh, R P, A M Khambadkone*, G S Samudra and Y C Liang, "Modelling, analysis and design of cascaded forward and interleaved converter for powering future microprocessors". *Proceedings 2005 International Conference on Power Electronics and Drive Systems* (2005). KL: PEDS 2005 Committee. (Power Electronics and Drives Systems, PEDS 2005, 28 Nov - 1 Dec 2005, Renassiance Hotel,, Luala Lumpur, Malaysia)

2. Kong*, X and A M Khambadkone, "Dynamic Modelling of Fuel Cell with power electronics circuits and performance analysis". *2003 International Conference on Power Electronics and Drive Systems, PEDS 2003* (2003): 607-612 (2003 International Conference on Power Electronics and Drive Systems, PEDS 2003, 17 - 20 Nov 2003)

3. Jiang, Y H., A M Khambadkone* and R Oruganti, "Parallel Operation of Power Electronic Cells Using Serial Communication for Cell Based Converter Architecture". *2003 International Conference on Power Electronics and Drive Systems, PEDS 2003* (2003): 1156-1161 (2003 International Conference on Power Electronics and Drive Systems, PEDS 2003, 17 - 20 Nov 2003, Singapore)

4. Niu, P.Y, A M Khambadkone* and R Oruganti, "Parameter Optimization and Design of an AC to DC converter for a cell based power electronic system". *2003 International Conference on Power Electronics and Drive Systems, PEDS 2003* (2003): 904-909 (2003 International Conference on Power Electronics and Drive Systems, PEDS 2003, 17 - 20 Nov 2003)

5. Xu*, X, A M Khambadkone and R Oruganti, " Analysis and Design of an Asymmetrical Half-bridge DC-DC Converter". *T2003 International Conference on Power Electronics and Drive System, PEDS2003* (2003): 120-125 (T2003 International Conference on Power Electronics and Drive System, PEDS2003, 17 - 20 Nov 2003, Singapore)

6. Reardon, A and A M Khambadkone, "Off-line optimized pulse patterns for minimum distortion using the method of simulated annealing with downhill simplex". *Proceedings of the International Conference on Power Electronics and Drive Systems, PEDS'97*, ed. S K Panda (1997): 553-558. Singapore: PEDS/IEEE Copyright. (2nd International Conference on Power Electronics and Drive Systems, PEDS'97, 1 May 1997)

INTERNATIONAL

ORAL PRESENTATION

7. THILLAINATHAN, L, D Srinivasan, A M Khambadkone and R T SUNDAR, "Optimal Sizing of Distributed Energy Resources for Integrated Microgrids using Evolutionary Strategy". *Prof of CEC2012* (2012). United States: IEEE. (IEEE Congress on Evolutionary Computation (CEC 2012), 10 - 15 Jun 2012)

8. Khambadkone*, A M and S F LIM, "A multimode digital control scheme for boost PFC with higher efficiency and power factor at light load". *Conference Proceedings 27th IEEE APEC* (2012): 291-298. NJ: IEEE. (27th Annual IEEE Applied Power Electronics Conference and Exposition, 5 - 12 Feb 2012, Orlando, Orlando/Florida, United States)

9.   TRAN*, D and A M Khambadkone, "Design and Dynamic Power Management of Energy Storage System for Wind Plant". *Conference Proceedings of PEDS* (2011): 351-355. Singapore: PEDS. (Power Electronics and Drive Systems, 5 Dec 2011 - 8 Dec 2012, Singapore)

10. WANG*, H, A M Khambadkone and K E BIRGERSSON, "Improved Comprehensive Thermal Model for Power Electronics Building Block Applications". *The Applied Power Electronics Conference and Exposition 2011 (APEC 2011)* (2011) (The Applied Power Electronics Conference and Exposition 2011 (APEC 2011), 6 - 11 Mar 2011, Fort Worth convention center, Forth Worth, United States)

11. THILLAINATHAN, L, D Srinivasan, A M Khambadkone and N A HTAY, "Multi-Agent System (MAS) for short-term generation scheduling of a microgrid". *Proc of ICSET* (2010). United States: IEEE. (2010 IEEE International Conference on Sustainable Energy Technologies (ICSET), 6 - 9 Dec 2010, Sri Lanka)

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14. ZHOU, H, D TRAN and A M Khambadkone, "Energy management and dynamic control in Composite Energy Storage System for micro-grid applications". *IECON Proceedings (Industrial Electronics Conference)* (2010): 1818-1824. NJ: IEEE. (36th Annual Conference of the IEEE Industrial Electronics Society, IECON 2010, 7 - 10 Nov 2010, Glendale, Arizona, United States)

15. Khambadkone*, A M, X YU, H WANG and T S T Siew, "A hybrid control architecture for low voltage microgrid". *2010 IEEE Energy Conversion Congress and Exposition, ECCE 2010 - Proceedings* (2010): 3161-3168. NJ: IEEE. (2010 2nd IEEE Energy Conversion Congress and Exposition, ECCE 2010;, 12 - 16 Sep 2010, Atlanta, Georgia, United States)

16. WANG, H, X YU and A M Khambadkone, "Dynamic electro-thermal modeling in Power Electronics Building Block (PEBB) applications". *2010 IEEE Energy Conversion Congress and Exposition, ECCE 2010 - Proceedings* (2010): 2993-3000. NJ: IEEE. (2010 2nd IEEE Energy Conversion Congress and Exposition, ECCE 2010, 12 - 16 Sep 2010, Atlanta, Georgia, United States)

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18. ZHOU*, H, T Bhattacharya, D TRAN, TST Siew and A M Khambadkone, "Composite energy storage system with flexible energy management capability for micro-grid applications". *2010 IEEE Energy Conversion Congress and Exposition, ECCE 2010 - Proceedings*, comp. IEEE (2010): 2558-2563. NJ: IEEE. (2010 2nd IEEE Energy Conversion Congress and Exposition, ECCE 2010;, 12 - 16 Sep 2011, Atlanta, Geogia, United States)

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20. ZHOU, H, T S T Siew, D TRAN and A M Khambadkone*, " Interleaved bi-directional Dual Active Bridge DC-DC converter for interfacing ultracapacitor in micro-grid application". *Proceedings of ISIE, IEEE 2010* (2010): 2229 - 2234. NJ: IEEE. (Industrial Electronics (ISIE), 2010 IEEE International Symposium on, 4 - 7 Jul 2010, Bari, Italy)

21. ZHOU, H, D TRAN and A M Khambadkone, "A simple design of DC power system with multiple source-side converters to operate stably under constant power load". *2nd International Symposium on Power Electronics for Distributed Generation Systems, PEDG 2010* (2010): 520-525. China: PEDG. (2nd International Symposium on Power Electronics for Distributed Generation Systems, PEDG 2010;, 16 - 18 Jun 2010, Hehei, Hefei, China)

22. YU, X, A M Khambadkone* and H WANG, "Control of paralleled power converter modules to facilitate the efficient operation of microgrid". *2010 International Power Electronics Conference - ECCE Asia -, IPEC 2010* (2010): 2970-2975. Sapporo: IPEC. (2010 International Power Electronics Conference - ECCE Asia -, IPEC 2010, 21 - 24 Jun 2010, Sapporo, Japan)

23. THILLAINATHAN, L, D Srinivasan*, A M Khambadkone and R T SUNDAR, "Optimal Sizing of an Islanded Microgrid Using Evolutionary Strategy". *11th International Conference on Probabilistic Methods Applied to Power Systems (PMAPS2010)* (2010): 12-17 (11th International Conference on Probabilistic Methods Applied to Power Systems (PMAPS2010), 14 - 17 Jun 2010, Singapore)

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25. Wittkopf*, S K, A M Khambadkone, Q He and P K NG, "Development of a solar radiation and BIPV design tool as Energy Plus plug-in for Google Sketch Up". *Proceedings of Building Simulation 2009 (IBPSA)*, ed. Paul Strahan (2009). Strathclyde: IBPSA. (Building Simulation 2009, 27 - 30 Jul 2009, University of Strathclyde, Glasgow, United Kingdom)

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27.   LIM, S F and A M Khambadkone*, "Non Linear Inductor Design for Improving Light Load Efficiency of Boost PFC". *2009 IEEE Energy Conversion Congress and Exposition* (2009): 1339--1346 (2009 IEEE Energy Conversion Congress and Exposition, 20 - 24 Sep 2009, San Jose, California, United States)

28.   SINGH, R P and A M Khambadkone*, "Current Sharing and Sensing in N-Paralleled Converters Using Single Current Sensor". *Proceedings of Industry Applications Society Annual Meeting, 2008* (2008): 1-7. NJ: IEEE. (5 - 8 Oct 2008, Edmonton, Canada)

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32.   Zhou, Haihua, A M Khambadkone* and Xin Kong, "A Passivity Based Control with Augmented Integration for an Interleaved Current Fed Full Bridge Converter as a Front End for Fuel Cell Source". *Proceedings of Industry Applications Conference, 2007. 42nd IAS Annual Meeting. Conference Record of the 2007 IEEE* (2007). United States: IEEE. (Industry Applications Conference, 2007. 42nd IAS Annual Meeting. Conference Record of the 2007 IEEE, 23 - 27 Sep 2007, New Orleans, United States)

33.   ZHOU, H, A M Khambadkone* and X KONG, "A Passivity Based Control with augmented integration for an Interleaved Current Fed Full Bridge Converter as a front end for a fuel cell source". *Proceedings of Annual Meeting of the IEEE Industry Applications Society, IAS 2007* (2007): 643--649. NJ: IEEE. (Annual Meeting of the IEEE Industry Applications Society, IAS 2007, 23 - 27 Sep 2007, New Orleans, United States)

34.   Kong, X, W Yeau and A M Khambadkone*, "ANN Modeling of Nonlinear Subsystem of a PEMFC Stack for Dynamic and Steady State Operation". *Conference Proceedings of 32nd Annual Conference of the IEEE Industrial Electronics Society IECON'06* (2006). Paris: IEEE IECON. (The 32nd Annual Conference of the IEEE Industrial Electronics Society, 7 - 10 Nov 2006, Conservatoire National des Arts & Metiers -, - Paris, France)

35. Singh, R P, A M Khambadkone*, G S Samudra and Y C Liang, "An FPGA based Digital Control Design for high-frequency DC-DC Converters". *Proceedinge of 37th Annual Meeting of the Power Electronics Society* (2006). NJ: IEEE-PELS. (37th IEEE Power Electronics Specialist Conference, PESC 2006, 18 - 22 Jun 2006, ICC Jeju, Jeju Islands, South Korea)

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37. Gupta, A K and A M Khambadkone*, "A Simple Space Vector PWM Scheme to Operate a Three-level NPC Inverter at High Modulation Index Including Over-modulation Region, with Neutral Point Balancing". *Proceedings of 40th Annual Meeting of the Industry Applications Society*. 40th Annual meeting of IAS IEEE, vol. 3 (2005): 1657-1664. NJ: IEEE. (Industry Applications Society, 40th Annual General Meeting, 2 - 6 Oct 2005, Sheraton Hong Kong, Hong Kong)

38. Kong, X, A M Khambadkone* and Y T Sok, "A Hybrid model with Combined Steady-state and Dynamic Characteristics of PEMFC Fuel Cell Stack". *Conference Proceedings of 40th Annual Meeting of Industry Applications Society*. 40th IAS, vol. 3 (2005): 1618-1625. NJ: IEEE. (Industry Applications Society, 40th Annual General Meeting, 2 - 6 Oct 2005, Sheraton Hong Kong, Hong Kong)

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44. Singh*, R P, A M Khambadkone, G S Samudra and Y C Liang, "Optimal power converter topology for powering future microprocessor demands". *IEEE IECON 2004* (2004): 530-535. South Korea. (IEEE IECON 2004, 1 Nov 2004, South Korea)

45. Xu, X, A M Khambadkone and R Oruganti, "An Asymmetrical Half Bridge DC-DC Converter: Close Loop Design in Frequency Domain". *Conference Preceedings of PESC 2005* (2004) (Power Electronic Specialist Conference, PESC'05, 21 - 25 Jun 2004, Eurogress, Aachen, Germany)

46. Tripathi*, A, A M Khambadkone and S K Panda, "Direct Method of Overmodulation with Integrated Closed Loop Stator Flux Vector Control". *Conference Proceedings of PRSC 2005* (2004) (Power Electronics Specialist Conference, PESC'05, 21 - 25 Jun 2004, Eurogress, Aachen, Germany)

47. Jabbar*, M A, A M Khambadkone and Q H Liu, "IEE PEMD-2004". *IEE International Conference on Power Electronics, Machines & Drives* (2004) (IEE International Conference on Power Electronics, Machines & Drives, 31 Mar - 2 Apr 2004, Edinburgh University, Edinburgh, United Kingdom)

48. Liu*, Q H, A M Khambadkone and M A Jabbar, "Direct Flux Control of Interior Permanent Magnet Synchronous Motor drives for wide-speed operation". *2003 International Conference on Power Electronics and Drive Systems, PEDS2003* (2003): 1680-1685 (2003 International Conference on Power Electronics and Drive Systems, PEDS2003, 17 - 20 Nov 2003)

49. Tripathi*, A, A M Khambadkone and S K Panda, "Speed Sensorless Control of AC Machines uisng Direct Flux Control scheme". *2003 International Conference on Power Electronics and Drive Systems, PEDS2003* (2003): 1647-1652. United Kingdom: IEEE. (2003 International Conference on Power Electronics and Drive Systems, PEDS2003, 17 - 20 Nov 2003)

50. Tripathi, A, A M Khambadkone and S K Panda, "Dynamic torque control performance of the Direct Flux Control scheme in field weakening". *Proceedings of Industrial Electronics Society,2003, IECON'03* (2003). United States. (The 29th Annnual Conference of the IEEE Industrial Eletronics Society, 2 - 6 Nov 2003, Roanoke, Virginia, United States)

51. Tripathi*, A, A M Khambadkone and S K Panda, "Analysis and performance of direct flux control scheme for dynamic torque control in AC drives". *IEEE International Electric Machines and Drives Conference*. 2 (2003): 709-714. United States. (Electric Machines and Drives Conference, 2003. IEMDC'03. IEEE International, 1 - 4 Jun 2003, Wisconsin, Madison, United States)

52. Qinghua*, LIU, A M Khambadkone*, ANSHUMAN Tripathi and M A Jabbar, "Torque control of IPMSM drives using direct flux control for wide speed operation". *International Electric Machines and Drives Conference*, ed. Organising Committee (2003): 188-193. Madison: IEEE/IEMDC. (International Electric Machines and Drives Conference, 1 - 4 Jun 2003, Madison, Wisconsin, United States)

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