

REFERENCES

A: Periodicals and Conference Proceedings

- [A1] A. Nabae, I. Takahashi, and H. Akagi, "A New Neutral-Point-Clamped PWM Inverter," *IEEE Trans. Indus. Applicat.*, vol. IA-17, no. 5, pp. 518-523, Sep./Oct. 1981.
- [A2] T. A. Meynard and H. Foch, "Multi-Level Choppers for High Voltage Applications," in *Proc. EPE'92*, March 1992, vol. 2, pp. 45-50.
- [A3] T. A. Meynard and H. Foch, "Multi-Level Conversion: High Voltage Choppers and Voltage-Source Inverters," in *Proc. IEEE-PESC'92*, 29 June-3 July, 1992, Toledo, Spain, vol. 1, pp. 397-403.
- [A4] M. Marchesoni, M. Mazzucchelli, and S. Tenconi, "A Nonconventional Power Converter for Plasma Stabilization," *IEEE Trans. Power Electron.*, vol. 5, no. 2, pp. 212-219, April 1991.
- [A5] F. Z. Peng, J.-S. Lai, J. W. McKeever, and J. VanCoevering, "A Multilevel Voltage-Source Inverter with Separate DC Sources for Static Var Generation," *IEEE Trans. Indus. Applicat.*, vol. 32, no. 5, pp. 1130-1138, Sep./Oct. 1996.
- [A6] J. P. Lyons, V. Vlatkovic, P. M. Espelage, F. H. Boettner, and E. Larsen, "Innovation IGCT Main Drives," in *Proc. IEEE Indus. Applicat. Conf.*, 3-4 Oct. 1999, Phoenix, AZ, USA, vol. 4, pp. 2655-2661.
- [A7] J. Rodríguez, J. Pontt, G. Alzamora, N. Becker, O. Einenkel, J. L. Cornet, and A. Weinstein, "Novel 20 MW Downhill Conveyor System Using Three-Level Converters," in *Proc. IEEE Indus. Applicat. Conf.*, 30 Sep.-4 Oct., 2001, Chicago, IL, USA, vol. 2, pp. 1396-1403.
- [A8] M. Rosenmayr, A. Cassat, H. Glavitsch, and H. Stemmler, "SWISSMETRO – Power Supply for a High-Power Propulsion System with Short Stator Linear Motors," in *Proc. MAGLEV'98*, 12-15 April, 1998, Mt. Fuji, Japan, pp. 280-286.
- [A9] M. Rosenmayr, A. Cassat, and H. Stemmler, "SWISSMETRO – Vector Control for Homopolar Synchronous Linear Motor," in *Proc. MAGLEV'00*, 7-10 June, 2000, Rio de Janeiro, Brazil, pp. 292-299.
- [A10] N. Celanovic, D.-H. Lee, D. Peng, D. Borojevic, and F. C. Lee, "Control Design of Three-Level Voltage Source Inverter for SMES Power Conditioning System," in *Proc. IEEE-PESC'99*, 27 June-1July, 1999, Charleston, SC, USA, vol. 2, pp. 613-618.

- [A11] J.-S. Lai and F. Z. Peng, "Multilevel Converters - A New Breed of Power Converters," *IEEE Trans. Indus. Applicat.*, vol. 32, no. 3, pp. 509-517, May/June 1996.
- [A12] B. Mwinyiwiwa, Z. Wolanski, B.-T. Ooi, and Y. Chen, "Multilevel Converters as Series VAR Compensators," in *Proc. IEEE-PESC'97*, 22-27 June, 1997, St. Louis, MO, USA, vol. 1, pp. 338-343.
- [A13] F. Z. Peng, J. W. McKeever, and D. J. Adams, "A Power Line Conditioner Using Cascade Multilevel Inverters for Distributing Systems," *IEEE Trans. Indus. Applicat.*, vol. 34, no. 6, pp. 1293-1298, Nov./Dec. 1998.
- [A14] Y. Chen and B.-T. Ooi, "STATCOM Based on Multimodules of Multilevel Converters Under Multiple Regulation Feedback Control," *IEEE Trans. Power Electron.*, vol. 14, no. 5, pp. 959-965, Sep. 1999.
- [A15] L. M. Tolbert, F. Z. Peng, and Thomas G. Habetler, "Multilevel Converters for Large Electric Drivers," *IEEE Trans. Ind. Applicat.*, vol. 35, no. 1, pp. 36-44, Jan./Feb. 1999.
- [A16] M. Marchesoni, "High-Performance Current Control Techniques for Applications to Multilevel High-Power Voltage Source Inverters," *IEEE Trans. Power Electron.*, vol. 7, no. 1, pp. 189-204, Jan. 1992.
- [A17] K. A. Corzine, "A Hysteresis Current-Regulated Control for Multi-Level Drives," *IEEE Trans. Energy Conversion*, vol. 15, no. 2, pp. 169-175, June 2000.
- [A18] M. Lafoz, I. J. Iglesias, C. Venganzones, and M. Visiers, "A Novel Double Hysteresis-Band Current Control for a Three-Level Voltage Source Inverter," in *Proc. IEEE-PESC'00*, 18-23 June, 2000, Galway, Ireland, vol. 1, pp. 21-26.
- [A19] T. Ishida, K. Matsuse, K. Sugita, L. Huang, and K. Sasagawa, "DC Voltage Control Strategy for a Five-Level Converter," *IEEE Trans. Power Electron.*, vol. 15, no. 3, pp. 508-515, May 2000.
- [A20] J. K. Steinke, "Switching Frequency Optimal PWM Control of a Three-Level Inverter," *IEEE Trans. Power Electron.*, vol. 7, no. 3, pp. 487-496, July 1992.
- [A21] G. Carrara, S. Gardella, M. Marchesoni, R. Salutari, and G. Scututto, "A New Multilevel PWM Method: A Theoretical Analysis," *IEEE Trans. Power Electron.*, vol. 7, no. 3, pp. 497-505, July 1992.
- [A22] V. G. Agelidis and M. Calais, "Application Specific Harmonic Performance Evaluation of Multicarrier PWM Techniques," in *Proc. IEEE-PESC'98*, 17-22 May, 1998, Fukuoka, Japan, vol. 1, pp. 172-178.
- [A23] S. Ogasawara and H. Akagi, "A Vector Control System Using a Neutral-Point-Clamped Voltage Source PWM Inverter," in *Proc. IEEE-IAS Annu. Meeting*, 28 Sep.-4 Oct. 29, 1991, Dearborn, MI, USA, vol. 1, pp. 422-427.
- [A24] B. Kaku, I. Miyashita, and S. Sone, "Switching Loss Minimised Space Vector PWM Method for IGBT Three-Level Inverter," in *Proc. IEE Electric Power Applic.*, May 1997, vol. 144, no. 3, pp. 182-190.
- [A25] L. Wei, Y. Wu, C. Li, H. Wang, S. Liu, and F. Li, "A Novel Space Vector Control of Three-Level PWM Converter," in *Proc. IEEE-PEDS'99*, 27-29 July, 1999, Hong Kong, vol. 2, pp. 745-750.

- [A26] N. Celanovic and D. Boroyevich, "A Fast Space-Vector Modulation Algorithm for Multilevel Three-Phase Converters," *IEEE Trans. Indus. Applicat.*, vol. 37, no. 2, pp. 637-641, March/April 2001.
- [A27] O. Alonso, L. Marroyo, and P. Sanchis, "A Generalized Methodology to Calculate Switching Times and Regions in SVPWM Modulation of Multilevel Converters," in *Proc. EPE'01*, 27-29 Aug., 2001, Graz, Austria.
- [A28] F. Springmeier and J. Steinke, "Control of the DC-Link Neutral Potential of a Three-Level GTO Inverter as a Part of the Direct Self Control (DSC)," in *Proc. PEMC'90*, Budapest, Hungary, 1990, vol. 2, pp. 479-483.
- [A29] S. Ogasawara and H. Akagi, "Analysis of Variation of Neutral Point Potential in Neutral-Point-Clamped Voltage Source PWM Inverters," in *Proc. IEEE-IAS Annu. Meeting*, 2-8 Oct., 1993, Toronto, Ont., Canada, vol. 2, pp. 965-970.
- [A30] C. Newton and M. Summer, "Neutral Point Control for Multi-level Inverters: Theory, Design and Operation Limitations," in *Proc. IEEE-IAS Annu. Meeting*, 5-9 Oct. 1997, New Orleans, LA, USA, vol. 2, pp. 1336-1343.
- [A31] H. L. Liu, N. S. Choi, and G. H. Cho, "DSP Based Space Vector PWM for Three-Level Inverter with DC-Link Voltage Balancing," in *Proc. IEEE-IECON'91*, Oct.-Nov. 1991, vol. 1, pp. 197-203.
- [A32] N. Celanovic and D. Boroyevich, "A Comprehensive Study of Neutral-Point Voltage Balancing Problem in Three-Level Neutral-Point-Clamped Voltage Source PWM Inverters," *IEEE Trans. Power Electron.*, vol. 15, no. 2, pp. 242-249, March 2000.
- [A33] N. Celanovic, I. Celanovic, and D. Boroyevich, "The Feedforward Method of Controlling Three-Level Diode Clamped Converters with Small DC-Link Capacitors," in *Proc. IEEE-PESC'01*, 17-21 June, 2001, Vancouver, BC, Canada, vol. 3, pp. 1357-1362.
- [A34] J. H. Seo and C. H. Choi, "Compensation for the Neutral-Point Potential in Three-Level Space Vector PWM," in *Proc. IEEE-APEC'01*, 4-8 March, 2001, Anaheim, CA, USA, vol. 2, pp. 1135-1140.
- [A35] J. Pou, D. Boroyevich, and R. Pindado, "New Feedforward Space-Vector PWM Method to Obtain Balanced AC Output Voltages in a Three-Level Neutral-Point-Clamped Converter," *IEEE Trans. Indus. Electron.*, vol. 49, no. 5, pp. 1026-1034, Oct. 2002.
- [A36] D. H. Lee, S. R. Lee, and F. C. Lee, "An Analysis of Midpoint Balance for the Neutral-Point-Clamped Three-Level VSI," in *Proc. IEEE-PESC'98*, 17-22 May, 1998, Fukuoka, Japan, vol. 1, pp. 193-199.
- [A37] M. Marchesoni and P. Tenca, "Theoretical and Practical Limits in Multilevel MPC Inverters with Passive Front Ends," in *Proc. EPE'01*, 27-29 Aug., 2001, Graz, Austria.
- [A38] R. Rojas, T. Ohnishi, and T. Suzuki, "PWM Control Method for a Four-Level Inverter," in *Proc. IEE Electric Power Applicat.*, vol. 142, no. 6, pp. 390-396, Nov. 1995.
- [A39] J. Pou, "Modulación de Convertidores DCI de Cuatro Niveles con Equilibrado de las Tensiones en los Condensadores," in *Proc. SAAEI'00*, 13-15 Sep., 2000, Terrassa, Catalonia, Spain, pp. 511-514.

- [A40] G. Sinha and T. A. Lipo, "A Four-Level Inverter Based Drive with a Passive Front End," *IEEE Trans. Power Electron.*, vol. 15, no. 2, pp. 285-294, March 2000.
- [A41] G. Sinha and T. A. Lipo, "A New Modulation Strategy for Improved DC Bus Utilization in Hard and Soft Switched Multilevel Inverters," in *Proc. IEEE-IECON'97*, 9-14 Nov. 1997, New Orleans, LA, USA, vol. 2, pp. 670-675.
- [A42] F. Z. Peng, J.-S. Lai, J. McKeever, and J. VanCoevering, "A multilevel Voltage-Source Converter System with Balanced DC Voltages," in *Proc. IEEE-PESC'95*, 18-22 June, 1995, Atlanta, GA, USA, vol. 2, pp. 1144-1150.
- [A43] L. Wei, C. Li, C. Liu, and F. Li, "A Dual PWM Scheme for Three-Level Voltage Source Converter System with IGBT Modules," in *Proc. IEEE-IECON'98*, 31 Aug.-4 Sep., 1998, Aachen, Germany, vol. 2, pp. 755-760.
- [A44] M. Marchesoni, M. Mazzucchelli, F. V. P. Robinson, and P. Tenca, "A Minimum-Energy-Based Capacitor Voltage Balancing Control Strategy for MPC Conversion Systems," in *Proc. IEEE-ISIE'99*, 12-16 July, 1999, Bled, Slovenia, vol. 1, pp. 20-25.
- [A45] Y.-H. Lee, B.-S. Suh, C.-H. Choi, and D.-S. Hyun, "A New Neutral Point Current Control for a 3-level Converter/Inverter Pair System" in *Proc. IEEE Ind. Applic. Conf.*, 3-7 Oct., 1999, Phoenix, AZ, USA, vol. 3, pp. 1528-1534.
- [A46] F. Wang, "Control of IGCT Based PWM Voltage Source Inverter High Power High Performance Synchronous Motor Drive," in *Proc. IEEE-PIEMC'00*, 15-18 Aug., 2000, Beijing, China, vol. 2, pp. 769-773.
- [A47] M. Marchesoni, M. Mazzucchelli, and P. Tenca, "An Optimal Controller for Voltage Balance and Power Losses Reduction in MPC AC/DC/AC Converters," in *Proc. IEEE-PESC'00*, 18-23 June, 2000, Galway, Ireland, vol. 2, pp. 662-667.
- [A48] J. Bordonau, M. Cosan, D. Borojevic, H. Mao, and F. C. Lee, "A State-Space Model for the Comprehensive Dynamic Analysis of Three-Level Voltage-Source Inverters," in *Proc. IEEE-PESC'97*, 22-24 June, 1997, St. Louis, MO, USA, vol. 2, pp. 942-948.
- [A49] S. Alepuz, J. Bordonau, and J. Peracaula, "A Novel Control Approach of Three-Level VSIs Using a LQR-Based Gain-Scheduling Technique," in *Proc. IEEE-PESC'00*, 18-23 June, 2000, Galway, Ireland, vol. 2, pp. 743-748.
- [A50] S. Fukuda, Y. Matsumoto, and A. Sagawa, "Optimal-Regulator-Based Control of NPC Boost Rectifiers for Unity Power Factor and Reduced Neutral-Point-Potential Variations," *IEEE Trans. Indus. Electron.*, vol. 46, no. 3, pp. 527-534, June 1999.
- [A51] N. P. Schibli, T. Nguyen, and A. C. Rufer, "A Three-Phase Multilevel Converter for High-Power Induction Motors," *IEEE Trans. Power Electron.*, vol. 13, no. 5, pp. 978-986, Sep. 1998.
- [A52] M. D. Manjrekar, P. K. Steimer, and T. A. Lipo, "Hybrid Multilevel Power Conversion System: A Competitive Solution for High-Power Applications," *IEEE Trans. Indus. Applicat.*, vol. 36, no. 3, pp. 834-841, May/June 2000.
- [A53] J. Holtz, W. Lotzkat, and A. M. Khambadkone, "On Continuous Control of PWM Inverters in Overmodulation Range Including Six-Step," *IEEE Trans. Power Electron.*, vol. 8, no. 4, pp. 546-553, Oct. 1993.

- [A54] A. M. Khambadkone, J. Holtz, "Compensated Synchronous PI Current Controller in Overmodulation Range and Six-Step Operation of Space-Vector-Modulation-Based Vector-Controlled Drives," *IEEE Trans. Indus. Electron.*, vol. 49, no. 3, pp. 574-580, June 2002.
- [A55] S. K. Mondal, B. K. Bose, V. Oleschuk, J. O. P. Pinto, "Space Vector Pulse Width Modulation of the Three-Level Inverter Extending Operation into Overmodulation Region," in *Proc. IEEE-PESC'02*, 23-27 June 2002, vol. 2, pp. 497-502.
- [A56] B. H. Kwon, J. H. Youm, and J. W. Lim, "A Line-Voltage-Sensorless Synchronous Rectifier," *IEEE Trans. Power Electron.*, vol 14, no. 5, pp. 966-972, Sep. 1999.
- [A57] H. L. Liu and G. H. Cho, "Three-Level Space Vector PWM in Low Index Modulation Region Avoiding Narrow Pulse Problem," *IEEE Trans. Power Electron.*, vol 9, no. 5, pp. 481-486, Sep. 1994.
- [A58] P. F. Seixas, M. A. Severo Mendes, P. Donoso-Garcia, and A. M. N. Lima, "A Space Vector PWM Method for Three-Level Voltage Source Inverters," in *Proc. IEEE-APEC*, 6-10 Feb. 2000, New Orleans, LA, USA, vol. 1, pp. 549-555.
- [A59] Dongsheng Zhou, "A Self-Balancing Space Vector Switching Modulator for Three-Level Motor Drives," in *Proc. IEEE-PESC*, 17-21 June 2001, Vancouver, BC, Canada, vol. 3, pp. 1379-1374.

B: Ph. D. Dissertations, M. Sc. Thesis, Books and Application Notes

- [B1] N. Celanovic, "Space Vector Modulation and Control of Multilevel Converters," *Ph. D. Dissertation*, Virginia Polytechnic Institute and State University (Virginia Tech), Department of Electrical Engineering and Computer Engineering, Sep. 2000.
- [B2] R. Zhang, "High Performance Power Converter Systems for Nonlinear and Unbalanced Load/Source," *Ph. D. Dissertation*, Virginia Polytechnic Institute and State University (Virginia Tech), Department of Electrical Engineering and Computer Engineering, Nov. 1998.
- [B3] S. Hiti, "Modeling and Control of Three-Phase PWM Converters," *Ph.D. Dissertation*, Virginia Polytechnic Institute and State University (Virginia Tech), Department of Electrical Engineering and Computer Engineering, July 1995.
- [B4] M. J. Superczynski, "Analysis of the Power Conditioning System for a Superconducting Magnetic Energy Storage Unity," *M. Sc. Thesis*, Virginia Polytechnic Institute and State University (Virginia Tech), Department of Electrical Engineering and Computer Engineering, Aug. 2000.
- [B5] S. Busquets-Monge, "Methodology for the Analysis of SVM Techniques in Multilevel Three-Phase Converters: Application to the Synthesis of a New Strategy for Three-Level Converters," *M. Sc. Thesis*, ETSEIB, Universitat Politècnica de Catalunya (UPC), Department of Electronic Engineering, Barcelona, Spain, June 1999.
- [B6] B. K. Bose et al., *Power Electronics and Variable Frequency Drives: Technology and Applications*, IEEE Press and John Wiley & Sons, Inc., Edited by Bimal K. Bose, University of Tennessee at Knoxville, 1997, pp. 192-203.
- [B7] N. Mohan, T. M. Undeland, and W. P. Robbins, *Power Electronics: Converters, Applications, and Design*, John Wiley & Sons Inc., 2nd ed., 1995.
- [B8] K. Ogata, *Modern Control Engineering*, Prentice Hall Inc., 2nd ed., 1993.
- [B9] K. Ogata, *Discrete-Time Control Systems*, 2nd ed., Prentice Hall Inc., 1995.
- [B10] P. Dorato, C. Abdallah, and V. Cerone, *Linear-Quadratic Control: An Introduction*, Prentice Hall Inc., 1995.
- [B11] A. Ollero, *Control por Computador: Descripción Interna y Diseño Óptimo*, Ed. Marcombo Boixareu Editores, Barcelona-Mexico, 1991, pp. 49-63.
- [B12] *Implementing Space Vector Modulation with the ADMC401*, Analog Devices, Application Note AN401-17, Jan. 2000.
Available: <http://www.analog.com/marketSolutions/motorControl/applicationCode/admc401/pdf/svpwm.pdf>
- [B13] *Clarke & Park Transforms on the TMS320C2xx*, Texas Instruments, Literature Number BPRA048, 1997.
Available: <http://www-s.ti.com/sc/psheets/bpra048/bpra048.pdf?familyId=322>
- [B14] *Field Orientated Control of 3-Phase AC-Motors*, Texas Instruments, Literature Number BPRA073, Feb. 1998.
Available: <http://www-s.ti.com/sc/psheets/bpra073/bpra073.pdf>