

6. References:

- 1) R. Kraus and H.J. Mattausch, "Status and Trends of Power Semiconductor Device Models for Circuit Simulation," IEEE Trans. on Power Elec., May 1998, Vol. 13, No. 3, pp. 452-466
- 2) H. Jin, "Behavior-Mode Simulation of Power Electronic Circuits," IEEE Transactions on Power Electronics, May 1997, Vol. 12, No. 3, pp. 443-452
- 3) S. Y. R. (Ron) Hui and K. K. Fung, "Fast Decoupled Simulation of Large Power Electronics Systems Using New Two-Port Companion Link Models," IEEE Transactions on Power Electronics, May 1997, Vol. 12, No. 3, pp. 462-473
- 4) L. Zhong, M. F. Rahman, W. Y. Hu, and K. W. Lim, "Analysis of Direct Torque Control in Permanent Magnet Synchronous Motor Drives," IEEE Transactions on Power Electronics, May 1997, Vol. 12, No. 3, pp. 528-536
- 5) Z. Mihailovic, H. V. Prasad and D. Borojevic, "Computer Modeling and Analysis of VSI Fed Permanent Magnet Synchronous Drive Systems with Adjustable Levels of Complexity," APEC '97, Conference Proceedings, Feb. 1997, Vol. 2, pp. 728-735
- 6) V. Vorperian, "The Charge-Controlled PWM Switch," PESC '96, Conference Record, June 1996, Vol.1, pp. 533-542
- 7) A. Agbossou et al., "A Comparative Study of High Power IGBT Model Behavior in Voltage Source Inverter," PESC '96, Conf. Rec, June 1996, Vol. 1, pp. 56-61
- 8) S. Hiti, D. Boroyevich, "Small-Signal Modeling of Three-Phase PWM Modulators," PESC'96, Conference Record, June 1996, Vol. 1, pp. 550-555
- 9) H. Mao, D. Boroyevich and F. C. Lee, "Novel Reduced-Order Small-Signal Model of Three-Phase PWM Rectifiers and Its Application in Control Design and System Analysis," PESC '96, Conference Record, June 1996, Vol. 1, pp. 556-562
- 10) J. J. Jeyappagash, T. V. Sivakumar, V. V. Sastry, "Object Oriented Modeling, Simulation and Optimization of Power Electronic Circuits," PESC '96, Conference Record, June 1996, Vol. 1, pp. 581-585
- 11) S. Hiti, "Modeling and Control of Three-Phase PWM Converters," Ph.D. Dissertation, Blacksburg, VPI&SU, 1995
- 12) N. Mohan et al., "Simulation of Power Electronic and Motion Control Systems - An Overview," IEEE Proceedings, August 1994, Vol. 82, pp. 1287-1302

- 13) S. Hiti, D. Boroyevich and C. Cuadros, "Small-signal modeling and control of three-phase PWM converters," 1994 IEEE IAS Annual Meet., Conf. Rec., pp. 1143-1150
- 14) G. Massobrio and P. Antognetti, "Semiconductor Device Modeling With SPICE," McGraw-Hill, Inc., USA 1993
- 15) A. R. Hefner and D. M. Diebolt, "An Experimentally Verified IGBT Model Implemented in the Saber Circuit Simulator," PESC '91, Conf. Record, June 1991
- 16) Saber Simulator User's Guide, Analogy, Inc. 1991-1992, Unpublished
- 17) Design Star User's Guide, Analogy, Inc. 1991-1992, Unpublished
- 18) P. Pillay and R. Krishnan, "Modeling, Simulation, and Analysis of Permanent Magnet Motor Drives, Part I: The Permanent Magnet Synchronous Motor Drive," IEEE Transactions on Industry Applications, March/April 1989, Vol. 25, No. 2, pp. 265-273
- 19) A. Salihbegovic, "Modeliranje Dinamickih Sistema," Svjetlost, Sarajevo, 1985
- 20) D. Ohm, "On Practical Digital Current Regulator design for PM Synchronous Motor drives," APEC '98, Conf. Proc., Feb. 1998, Vol. 1, pp. 56-63
- 21) K. Tatematsu et al., "Sensorless Permanent Magnet Synchronous Motor drive with Reduced Order Observer," APEC '98, Conf. Proc., Feb. 1998, Vol. 1, pp. 75-80
- 22) F. Bodin, S. Siala and L. Sicot, "State Space Fuzzy Controller for a Brushless Dc Motor," PESC'97, Conf. Record, June 1997, Vol. 2, pp. 869-874
- 23) D. Rendusara, P. N. Enjeti, "New Inverter Output Filter Configuration Reduces Common Mode and Differential Mode dv/dt at the Motor Terminals in a PWM Drive System," PESC'97, Conf. Record, June 1997, Vol. 2, pp. 1269-1275
- 24) R. Zhang, D. Boroyevich, V. Prasad, H. Mao, F. Lee and S. Dubovsky, "A Three-Phase Inverter with a Neutral Leg with Space Vector Modulation," APEC '97, Conf. Proc., Feb. 1997, Vol. 2, pp. 857-863
- 25) V. Prasad, D. Boroyevich and R. Zhang, "Analysis and Comparison of Space Vector Modulation Schemes for a Four-Leg Inverter," APEC '1997, Conf. Proc., Feb. 1997, Vol. 2, pp. 863-871
- 26) P. Chevrel, L. Sicot, S. Siala, "Switched LQ Controllers for DC Motor Speed and Current Control: a Comparison with Cascade Control," PESC '96, Conf. Record, June 1996, Vol. 1, pp. 906-912

- 27) B. P. Muni, S. K. Pillai, S. N. Saxena, "A PC Based Internal Power Factor Angle Controlled Interior Permanent Magnet Synchronous Motor Drive," PESC '96, Conf. Rec., June 1996, Vol. 1, pp. 931-937
- 28) H.R. De Azevedo, N. Salvador Junior & T. T. Borges, "Application of Distinct Operation Modes and Control Philosophies to Permanent Magnet Synchronous Machine," PESC '96, Conference Record, June 1996, Vol. 1, pp. 938-943
- 29) T. S. Radwan, M. A. Rahman, A. M. Osheiba, A. E. Lashine, "Performance of a Hybrid Current-Controlled VSI Fed Permanent Magnet Synchronous Motor Drive," PESC '96, Conference Record, June 1996, Vol. 1, pp. 951-957
- 30) F. Blaabjerg and J. K. Pedersen, "Optimized Design of a Complete Three-Phase PWM-VS Inverter," PESC '96, Conf. Record, June 1996, Vol. 2, pp. 1272-1280
- 31) H. Mao, F. C. Lee, H. Zou and H. Dai, "Novel Soft Switched Three-Phase Voltage Source Converters with Reduced Auxiliary Switch Stress," PESC '96, Conf. Rec., June 1996, Vol. 1
- 32) R. L. A. Ribeiro et al., "AC/AC Converter with Four Switch Three Phase Structures," PESC '96, Conference Record, June 1996, Vol. 1, pp. 134-139
- 33) N. Abdel-Rahim and J. E. Quaicoe, "Small-Signal Model and Analysis of a Multiple Feedback Control Scheme for Three-Phase Voltage Source UPS Inverters," PESC '96 Conf. Record, June 1996, Vol. 1
- 34) R. Severns, "Circuit Reinvention in Power Electronics and How to Identify Prior Work," APEC '97, Conf. Proc., Feb. 1997, Vol. 1, pp. 3-9
- 35) M. S. P. Shrivathsan, "Design Guidelines for Inverter Fed Motor Drives in Distributed Power Systems Applications," M. M. Thesis, Blacksburg, VPI&SU, 1995
- 36) G. Hua, "Soft-Switching Techniques for Pulse-Width-Modulated Converters," Ph.D. Dissertation, Blacksburg, VPI&SU, 1994
- 37) J. A. Sabate, "Zero-Voltage Switched Resonant and PWM Converters: Design-Oriented Analysis and Performance Evaluation," Ph.D. Dissertation, Blacksburg, VPI&SU, 1994
- 38) D. M. Dozor, N. Hemati, "A Torque Improving Stationary Frame Controller for Permanent Magnet Synchronous Machines: Feedback Linearization Decoupling Control," IEEE IAS Annual Meeting, Conf. Rec., Oct. 1994, pp. 416-423
- 39) P. A. Merz et al., "Sensorless Synchronous Motor Drive for Use on Commercial Transport Airplanes," Proc. of the IEEE, Aug. 1994, Vol. 82, No. 8, pp. 553-559

- 40) R.D. Lorentz, "Advanced Flux & Torque Control Methods for Field Oriented Induction Motor Drives," Univ. of Wisconsin-Madison, Course Notes
- 41) T. M. Jahns, "Motion Control with Permanent Magnet AC Machines," Proceedings of the IEEE, Aug. 1994, Vol. 82, No. 8, pp. 1241-1252
- 42) S. Morimoto et al., "Design and Control System of Inverter-Driven Permanent Magnet Synchronous Motors for High Torque Operation," IEEE Transaction on Industry Applications, Nov/Dec. 1993, Vol. 29, No. 6, pp. 1150-1154
- 43) M. Shahian, M. Hassul, "Control System Design Using Matlab," Prentice Hall, 1993
- 44) Benjamin C. Kuo, "Digital Control Systems," Saunders HBJ, 1992
- 45) R. B. Sepe, J. H. Lang, "Real-Time Observer-Based (Adaptive) Control of a Permanent Magnet Synchronous Motor without Mechanical Sensors," IEEE Transactions on Industry Applications, Nov/Dec. 1992, Vol. 28, No. 6, pp. 1345-1352
- 46) S. Yamamura, "Spiral Vector Theory of Salient-Pole Synchronous Machine," IEEE, Conf. Record, IAS Annual Meeting 1992, pp. 204-211
- 47) Mark J. Nave, "Power Line Filter Design for Switched-Mode Power Supplies," Van Nostrand Reinhold, 1991
- 48) P. Pillay, K. Ramu, "Application Characteristics of Permanent Magnet Synchronous and Brushless DC Motors for Servo Drives," IEEE Trans. on Industry Appl., Sept/Oct. 1991, Vol. 27, No. 5, pp. 986-996
- 49) S. Yamamura, "Spiral Vector Theory of AC Motor Analysis and Control," APEC 1990, Conference Record, 1990, Vol. 1, pp. 77-86
- 50) R. Dhaouadi, N. Mohan, "Analysis of Current-Regulated Voltage-Source Inverters for Permanent Magnet Synchronous Motor Drives in Normal and Extended Speed Ranges," IEEE Trans. on Energy Conv., March 1990, Vol. 5, No. 1, pp. 137-144
- 51) S. Morimoto, Y. Takeda, T. Hirasa, "Current Phase Control Methods for Permanent Magnet Synchronous Motors," IEEE Trans. on Power Electr., April 1990, Vol. 5, No.2, pp. 133-139
- 52) P. Pillay and R. Krishnan, "Control Characteristics and Speed Controller Design for a High Performance Permanent Magnet Synchronous Motor Drive," IEEE Transactions on Power Electronics, April 1990, Vol. 5, No. 2, pp. 151-159
- 53) H. Le-Huy, L. A. Dessaint, "An Adaptive Current Control Scheme for PWM Synchronous Motor Drives: Analysis and Simulation," IEEE Transactions on Power Electronics, Oct. 1989, Vol. 4, No. 4, pp. 486-495

- 54) "Field Oriented and High Performance Motion Control," Summary of Publications 1981-1988, WEMPEC, 1989
- 55) R.W. De Doncker, D.W. Novotny, "The Universal Field Oriented Controller," Conf. Rec. IEEE-IAS '88, Oct. 1988, pp. 450-456
- 56) B. K. Bose, "A High Performance Inverter Fed Drive System of an Interior Permanent Magnet Synchronous Motor," IEEE IAS Annual Meet. Conf. Rec., 1987, pp. 269-276
- 57) P.C. Krause, "Analysis of Electric Machinery," McGraw-Hill, 1986
- 58) T. M. Jahns, G. B. Kliman, T. W. Neumann, "Interior Permanent Magnet Synchronous Motors for Adjustable-Speed Drives," IEEE Trans. on Industry Appl., July/Aug. 1986, Vol. IA-22, No. 4, pp. 738-747
- 59) A. Nabae, S. Ogasawara and H. Akagi, "A Novel Control Scheme for Current-Controlled PWM Inverters," IEEE Transactions on Industry Applications, July/Aug. 1986, Vol. IA-22
- 60) D. M. Brod and D. W. Novotny, "Current Control of VSI-PWM Inverters," IEEE Transactions on Industry Applications, May/June 1985, Vol. IA-21, n.4, pp. 562-570
- 61) M. L. Mazenc, C. Villanueva and J. Hector, "Study and Implementation of Hysteresis Controlled Inverter on a Permanent Magnet Synchronous Machine," IEEE Trans. on Industry Applications, March/April 1985, Vol. IA-21, No. 2, pp. 408-413
- 62) T. A. Nondahl, "Brushless DC Motor Control," Small Motor Manufacturers Association Fall Meeting," Nov. 15-16, 1984, pp. 4-12
- 63) S. Morimoto, M. Senada, Y. Takeda, "Effects and Compensation of Magnetic Saturation in Flux-Weakening Controlled Permanent Magnet Synchronous Motor Drives," IEEE Trans. on Ind. Appl., Nov/Dec. 1994, Vol. 30, No. 6
- 64) X. Xu, D. Novotny, "Selection of the Flux Reference for Induction Machine Drives in the Field Weakening Region," IEEE Trans. On Industry Appl., Vol. 28, No. 6, Nov/Dec. 1992
- 65) S. Morimoto, Y. Takeda, T. Hirasaka and K. Taniguchi, "Expansion of Operating Limits Permanent Magnet Motor By Current Vector Control Considering Inverter Capacity," IEEE Trans. On Ind. Appl, Sep/Oct. 1990, Vol. 26, pp. 866-871
- 66) A. Kumamoto, Y. Hirane, "A Semi-Closed Loop Torque Control of a Buried Permanent Magnet Motor Based on a New Flux-Weakening Approach," IEEE-IAS 1989 Annual Meeting Conf. Record, pp. 656-661

- 67) B. K. Bose and P. M. Szczesny, "A Microcomputer-Based Control and Simulation of an Advanced IPM Synchronous Machine Drive System for Electric Vehicle Propulsion," IEEE Trans. On Ind. Electron., November 1988, Vol. 35, No. 4, pp. 547
- 68) B. K. Bose, "A High Performance Inverter-Fed Drive System of an Interior Permanent Magnet Synchronous Machine," IEEE Trans. On Industry Applications, Nov/Dec. 1988, Vol. 24, No. 6, pp. 987
- 69) T. M. Jahns, "Flux-Weakening Regime Operation of an Interior Permanent-Magnet Synchronous Motor Drive," IEEE Trans. on Ind. Appl., July/Aug. 1987, Vol. 23, pp. 681-689
- 70) B. Sneyers, D. Novotny, "Field-Weakening in Buried Permanent Magnet AC Motor Drives," IEEE Trans. On Ind. Appl., March/April 1985, Vol. IA-21, No. 2, pp. 398-407
- 71) E. K. Persson and S. Meshkat, "Brushless Servo System with Expanded Torque-Speed Operating Range," European PCI Motor-Con '85, April 1985, Hannover Fair, W. Germany
- 72) D. G. Holmes, "The Significance of Zero Space Vector for Carrier based PWM Schemes," Conference Proceedings IEEE-IAS 1995 Annual Meeting, pp. 2451-2458
- 73) J. Holtz, "Pulsewidth Modulation for Electronic Power Conversion," Proceedings of the IEEE, August 1994, Vol. 82, No. 8, pp. 1194-1212
- 74) Thomas G. Habetler, "A Space Vector Based Rectifier Regulator for AC/DC/AC Converters," IEEE Trans. on Power Electronics, Jan. 1993, Vol. 8, No. 1, pp. 30-36
- 75) J. Holtz, "Pulsewidth Modulation - A Survey," IEEE IAS-91, IEEE Trans. on Ind. Electronics, Oct. 1992, Vol. 39, No. 5, pp. 410-420
- 76) Victor R. Stefanovic, and Slobodan N. Vukosavic, "Space Vector PWM Voltage Control with Optimized Switching Strategy," IEEE IAS-1992 Annual Meeting, pp. 1025-1033
- 77) J.T. Boys and P. G. Handley, "Harmonic Analysis of Space Vector Modulated PWM Waveforms," IEE Proc., July 1990, Vol. 137, Pt. B, pp. 197-204
- 78) H. W. Van der Broeck, H.C. Skudelny, and G.V.Stanke, "Analysis and Realization of a Pulse Width Modulator Based on Voltage Space Vector Modulation," IEEE Trans. on Ind. Appl., Feb. 1988, Vol. 24, No. 1, pp. 142-150
- 79) D. Borojevic, "Nonlinear Algorithms for Fast and Robust Control of Electric Drives," Ph.D. Dissertation, Blacksburg, VPI&SU, 1986
- 80) D. Borojevic, L. Garces, and F.C. Lee, "Performance Comparison of Variable Structure Controls with PI Control for D.C. Motor Speed Regulation," IEEE IAS Annual Meeting 1984