

LIST OF PUBLICATIONS

Dr. B. Szabados

Nov 2006

PUBLICATIONS IN REFEREED JOURNALS

- M.N.Smadi and B. Szabados, "Error-Recovery Service for IEEE 802.11b Protocol", IEEE transactions on Instrumentation and Measurement, pp 1377-1382, Vol 55, Nb 4, Aug 2006
- B. Szabados, "Interactive Outcome-Based Assessment Using Multimedia", IJEE Special Issue on Current Trends in Electronics Education, 2003
- D. Fischer, B. Szabados, S. Poehlman, "Using a Bayes Classifier to Optimize Alarm Generation To Electric Power Generator Stator Overheating", accepted IEEE transactions on Instrumentation and Measurement, 2003
- J. Soltani, B. Szabados, "A Novel Method of Measurement of Synchronous Machine Losses Using Synthetic Loading", IEEE transactions on Instrumentation and Measurement, Volume: 51 Issue: 6 Dec. 2002 Page(s): 1228 -1233
- B. Szabados, A. Mihalcea, "Design and Implementation of a Calorimetric Measurement Facility for Determining Losses in Electrical Machines", IEEE transactions on Instrumentation and Measurement, Vol 51, nb 5, Oct 2002, pp 902-907
- J.Soltani, B. Szabados, G. Hoolboom "A New Synthetic Loading for Large Induction Machines with no Feedback Into the Power System", IEEE Transactions on Energy Conversion, Volume: 17 Issue: 3 , Sep 2002 Page(s): 319 -324
- A. Mihalcea, B. Szabados, J. Hoolboom, "Determining Total Losses and temperature Rise in Induction Motors Using Equivalent Loading Methods", IEEE transactions on Energy Conversion, Vol 16. Nb 3, Sep 01, pp.214-219.
- R. Ong, J.H. Dymond, R.D. Findlay, B. Szabados, "Shaft Current Phenomenon: Experimental Testing and Analysis of a Large Induction Motor", International Journal of Power & Energy Systems, Vol 20, nb 2 pp 75-80., 2000
- R. Ong, J.H. Dymond, R.D. Findlay, B. Szabados, "Systematic Practical Approach to the Study of Bearing Damage in Large Oil Ring Lubricated Induction Machines", IEEE transactions on Industrie Applications, Vol 36, Nov-Dec 2000. pp1715-1724
- M.Chan and B. Szabados, "On Line Production Control of Tandem Systems with Finite Inter-Stage

Storage, Using a Dynamic Maximum Cycle Time Algorithm”, Journal of Advanced Manufacturing Technology, (2000) 16:147-154, Dec 99

U.Schaible, B.Szabados, "Dynamic Motor Parameter Identification for High Speed Flux Weakening Operation of Brushless Permanent Magnet Synchronous Machines", IEEE transactions on Energy Conversion, Volume: 14 Issue: 3 , Sept. 1999, pp: 486 -492

U.Schaible, B.Szabados, "Peak Power Bi-Directional Transfer From High Speed Flywheel To Electrical Regulated Bus Voltage System; A Practical Proposal For Vehicular Technology", IEEE transactions on Energy Conversion, Vol 13. Nb 1, Mar 98, pp.34-41

M.Chan, B.Szabados, "A Novel Representation of Tandem Systems With Interstorage Applied to On-Line System Monitoring" The International Journal of Advanced Manufacturing Technologies 14:220-227. 1997

G.J.Hoolboom, B.Szabados, "Non-Polluting Automobiles", IEEE Transactions on Vehicular Technology, Vol.43 N.4 Nov 94, pp 1136-1144

G.Hoolboom, B.Szabados, "Value Engineering Considerations in Electrical Drive Systems for Traction Applications", Canadian Journal of Electrical and Computer Engineering, Vol.18 Nb.2, April 1993, pp.81-86.

R.Belmans, D.Verdyck, W.Geysen, R.D.Findlay, B.Szabados, S.Spencer, and S.Lie, "Magnetic Field Analysis in Squirrel Cage Induction Motors," IEEE Trans on Magnetics, Vol. 28 No. 2, March, 1992, pp1367-1370.

R.D.Findlay, B.Szabados, S.Lie, S.Spencer, R.Belmans and M.Poloujadoff, "Placement of Vents to Reduce Shaft Flux in Two Pole Induction Motors, with a Comment on Heating Effects," IEEE EC transactions, Vol. 7, No 3, sept 92, pp-483-490.

G.Brown, B. Szabados, G.J. Hoolboom, M. Poloujadoff, "High Power Cycloconverter Drive for Double Fed Induction Motors", IEEE Transactions on Industrial Electronics, Vol.39 No.3, June 92, pp-230-240.

G. Brown, B. Szabados, R.Belmans, "The Application of Double Fed Motors for Traction Drives", European Transactions on Electrical Machines, Vol 1. No.3, Dec 1991, pp-171-180.

B. Szabados, G.M. Brown, "Wide-Range oscillator with Digital Control for Digital Waveform Generation", Electronics Letters, IEE, Vol. 27 No.19 pg 1780-81, Sep 91.

G.M. Brown, B. Szabados, "Synchronization Circuit for Addition of Two Asynchronously Changing Digital Values in Digital Motor Control Circuits", Electronics Letters, IEE, Vol.27 No.15, pp.1313-1349, July 91.

D.C. McCrackin, B. Szabados, "Horizontal Demand Prefetching: a Novel Approach to Eliminating the Jump Problem", Can.J.Elect.& Comp. Eng., Vol.16 No3, pp 118-124, 1991.

- D.C. McCrackin, B. Szabados, "Using Horizontal Prefetching to Circumvent the Jump Problem" IEEE Trans. Computers, Vol 40 No9, pp1-5, Sep 91.
- B.Szabados, J.H.Dableh, R.D.Findlay, G.M.Obermeyer and R.E.Draper, "Measurement of the Torque-Speed Characteristics of Induction Motors Using an Improved New Digital Approach", trans. IEEE-EC, Vol. 5, No. 3, pp 565-571, Sept., 1990.
- J.H.Dableh, R.D.Findlay, R.T.H.Alden and B.Szabados, "A Novel Electromagnetic Field Shaper for Pipe-Type Cable System", IEEE Trans. on Power Delivery, Vol. 5, N. 1, Jan., 1990, pp 1-7
- B.Szabados, M.Poloujadoff, R.D.Findlay, I.El Nahas, S.J.Spencer, R.T.H.Alden, P.Birke, "Complete Three Dimensional Analysis of the Leakage Flux Densities in a Transformer", Electrotechnische Zeitschrift (ETZ Archiv.), Vol. 12, 1990, 6 pages.
- I.El-Nahas, B.Szabados, M.Poloujadoff, R.D.Findlay, X.WU, "A three dimensional electromagnetic field analysis technique utilizing the magnetic charge concept", IEEE transactions on Magnetics, vol MAG-23 number 5, pp. 3853-59, sept 1987.
- B.Szabados, I.El-Nahas, M.S.El Sobki, R.D.Findlay, M.Poloujadoff, "A New Approach To Determine Eddy Current Losses In The Tank Walls Of A Power Transformer", IEEE transactions vol PWRD-2 numb.3, pp- 810-816, july 87.
- G.Brown, B.Szabados, "A Flexible Hybrid Firing Controller for Cycloconverter Drives", IEEE transactions vol IE-33 nb 3, pp 297-303, Aug 1986.
- I.El-Nahas, B.Szabados, R.D.Findlay, M.Poloujadoff, S.Lee, P.Birke, D.Perco, W.Lam, "Three Dimensional Flux Calculation On A 3 Phase Transformer", IEEE trans. PWRD-1 nb 3, pp 156-160, july 1986.
- R.T.H.Alden, B.Szabados, "Interactive Fortran for Power Engineering Education", IEEE trans. PWRS-1 nb 2, pp 160-166, May 1986.
- O.Storoshchuk and B.Szabados, "Microprocessor Adaptive Control Of Oil temperature For Robot Arm Valves: A Practical Implementation", IEEE Trans. on Industrial Electronics Vol IE-33 nb.1, pp21-27, Feb 1986.
- B.Szabados, "Harmonic Effects on Communication Interference", Special publication of IEEE 84-EH0221-2-PWR, pp. 32-42, 1985.
- B.Szabados, "Harmonic Measurements: Instrumentation and Techniques", Special Publication IEEE 84-EH0221-2-PWR, pp. 113-125, 1985.
- B.Szabados, "Solutions to Noise Problems: Identification", Special Publication IEEE 84-EH0221-2-PWR, pp. 131-133, 1985.
- B.Szabados, IEEE Working Group on Harmonics, "Power Line Harmonic Effects On Communication Line

- Interference”, IEEE trans. volume PAS-104, nb 9, pp.2578-2587, Sept 1985.
- B.Szabados, “Characterizations Of The Electromagnetic Environment With the Installation Of Industrial Rectifiers”, Can. Electrical Engineering J. CEEJ-vol 10 nb 3, pp90-95 July 1985.
- B.Szabados, “Répercussion Sur Le Réseau Electrique De L’Alimentation Des Convertisseurs De Grande Puissance”, Revue Générale de l’Electricité RGE- 12/84, pp791-796, Dec 1984.
- B.Szabados, “On The Interaction Between Power System Configuration And Industrial Rectifier Harmonic Interference: A Practical Case Study”, IEEE Trans. PAS-101 nb 8, pp. 2762-2770, Aug. 1982.
- B.Szabados and J.Lee, “Harmonic Impedance Measurements On Transformers”, Trans. PAS and PES Meeting, IEEE PAS-100 nb 12, pp. 5020-26, Dec. 1981.
- B.Szabados and P.Lindon, “Pulse Width Modulation Inverter Drive With Fast Response To Frequency And Amplitude Controls”, IEEE Trans. on ICEI, vol IECI-28 nb 4, pp. 252-255, Nov. 1981.
- B.Szabados, “Optimum Distribution Feeder Balancing Using The Ampere- Mile Vector Theory”, Can. Electrical Engineering J., vol. 6, no. 4, pp. 21-26, Oct. 1981.
- P.Lindon and B.Szabados, “Dynamic Performance Of A Frequency Controller”, IEEE Trans. on Communications, vol. COM-28, no. 9, Sept. 1980, pp. 1762-1766.
- B.Szabados and R.Grierson, “Programmable Firing Controller”, IEEE Trans. Industrial Electronics and Control Instrumentation, vol. IECI-27, Aug 1980, pp. 242-247.
- B.Szabados and E.J.Burgess, “Optimizing Shunt Capacitor Installations Using Inductive Co-ordination Principles”, IEEE Trans. Power Apparatus and Systems, vol. PAS-96, 1977, pp. 234-239.
- B.Szabados, E.J.Burgess and W.A. Noble, “Harmonic Interference Corrected By Shunt Capacitors On Distribution Feeders”, IEEE Trans. Power Apparatus and Systems, vol. PAS-96, 1977, pp. 222-226.
- B.Szabados and E.F.Hill, “On Line Phase Measurement Of Power System Harmonics”, IEEE Trans. Instrument and Measurement, vol. IM-26, 1977, pp. 170-175.
- B.Szabados and A.Banihaschemi, “Circle Diagram Of Induction Machines From Practical Test Results”, CEIJ, vol. 1, no. 3, 1976, pp. 27-32.
- C.diCenzo, B.Szabados and N.K.Sinha, “Digital Measurement Of Angular Velocity For Instrumentation And Control”, IEEE Trans. IECI, vol. IECI-23, no. 1, pp. 83-86, 1976.
- B.Szabados, “A Load Insensitive Chopper”, IEEE Trans. IECI, vol. 22, no. 1, 1975, pp. 31-34.
- N.K.Sinha, C.D.diCenzo, and B.Szabados, “Modeling Of D.C. Motors For Control Applications”, IEEE Trans. Industrial Electronics and Control Instrumentation, vol. IECI-21, no. 2, 1974, pp. 84-88.
- B.Szabados, N.K.Sinha and C.D.diCenzo, “Steppers And PM Motors Compete For Control

- Applications”, *Electronic Engineering*, 1973, pp. 61-63.
- B.Szabados, C.D.diCenzo and N.K.Sinha, “Digital Measurement Of Angular Velocity”, *J. Physics E: Scientific Instruments*, vol. 6, 1973, pp. 549-552.
- B.Szabados, N.K.Sinha and C.D.diCenzo, “A Szögsebesség Es Szöggyorsulás Követlen, Digitalis Mérése”, *Finommechanika 11 EVF*, 1972.
- C.D.diCenzo, N.K.Sinha and B.Szabados, “Comparison of Mathematical Models For Electromagnetic And Permanent Magnet Dc Motors”, *The Engineering Journal, EIC-72-Elect. 5* (McMaster University, Hamilton, Canada, Oct. 1972), vol. 15, no. C-4.
- B.Szabados, N.K.Sinha and C.D.diCenzo, “A Time-optimal Digital Position Controller Using A Permanent Magnet DC Motor”, *IEEE Trans. IE and CI*, vol. IECI-19, 1972, pp. 74-77.
- B.Szabados, N.K.Sinha and C.D.diCenzo, “Practical Switching Characteristics For Minimum-time Position Control Using A Permanent Magnet Motor” *IEEE Trans. IE and EC*, vol. IECI-19, 1972, pp. 59-73.
- B.Szabados, N.K.Sinha and C.D.diCenzo, “Modèles En Régime Dynamique De Machines En Courant-continu”, *Trans. Eng. Ins. Can.*, vol. 15, 1972, pp. I-V.
- B.Szabados, N.K.Sinha and C.D.diCenzo, “Digital Techniques Simplify Angular Velocity Measurements”, *Electronic Engineering*, vol. 44, no. 531, 1972.
- B.Szabados, N.K.Sinha and C.D.diCenzo, “High Resolution Precision Digital Tachometer”, *IEEE Trans. Instrumentation and Measurement*, vol. IM-21, no. 2, 1972, pp. 144-148.
- B.Szabados, N.K.Sinha and C.D.diCenzo, “A New Digital Instrument For Measuring Angular Velocity And Acceleration”, *Proc. IEEE*, 1972, pp. 455-456.
- B.Szabados, N.K.Sinha and C.D.diCenzo, “A Schmitt-trigger For Driving I.C. Logic”, *Electronic Engineering*, 1972, p. 64.
- B.Szabados, N.K.Sinha and C.D.diCenzo, “A Realistic Math Model For DC Motors”, *Control Engineering*, 1972, pp. 49-53.
- N.K.Sinha, B.Szabados and C.D.diCenzo, “New High-precision Digital Tachometer”, *Electronic Letters*, vol. 7, no. 8, 1971, pp. 174-176.

B.Szabados, C.D.diCenzo and N.K.Sinha, "Dynamic Measurements Of The Main Electrical Parameters Of A DC Machine", IEE Trans., vol. IGA-7, no. 1, 1971, pp. 109-115.

FULLY REFEREED CONFERENCE PROCEEDINGS

Barna Szabados, Many Peung, "Stabilizing of a Synthetic Loading Test Rig for Large Induction Machines", Proceedings of the IEEE Instrumentation and Measurement Technology Conference, Sorrento, Italy 24-27 April 2006

M. Smadi , B. Szabados, "Error Recovery Service for the IEEE 802.11b Medium Access Protocol via Adaptive Packet Sizing and Fragmentation, Retransmission and Adaptive Forward Error Correction", Proceedings of the IEEE Instrumentation and Measurement Technology Conference, May 2005

B.Szabados, M. Ye, "Dynamic Parameter Identification of Induction Machines Using Spectral Analysis and Output Error Optimization", Proceedings of the IEEE Instrumentation and Measurement Technology Conference, pg 2200-2203, May 2004

D. Fischer; B. Szabados; S. Poehlman, "Combining Neural Networks, Fuzzy Logic, and Kalman Filtering in an Oil Leak Detector for Underground Electric Power Cables", Proceedings of the IEEE Instrumentation and Measurement Technology Conference, pg 2099-2104, May 2004

B. Szabados , P. Hodaie , J. Lu , and K. Ahluwalia , "Application of Remote Instrumentation to Manufacturing", Proceedings of the IEEE Instrumentation and Measurement Technology Conference, May 2003

D. Fischer, B. Szabados, S. Poehlman, "Combining Partial Least Squares and Feed Forward Neural Network Technologies in a Fault Detection System with large Number of Correlated Sensors", Proceedings of the IEEE Instrumentation and Measurement Technology Conference, Anchorage AK, pg 829-834, May 21-23, 2002.

B. Szabados, P. Hodaie, J. Liu, "Hybrid Architecture for Remote Instrumentation Application", Proceedings of the IEEE Instrumentation and Measurement Technology Conference, Anchorage AK, pg 813-816, May 21-23, 2002.

D. Fischer, B. Szabados, S. Poehlman, "Using a Bayes Classifier to Optimize Alarm Generation To Electric Power Generator Stator Overheating", Proceedings of IEEE International Workshop on Virtual and Intelligent Measurement Systems, Girdwood AK, pg 140-145, May 19-20, 2002.

B. Szabados, A. Mihalcea, "Design and Implementation of a Calorimetric Measurement Facility for Determining Losses in Electrical Machines", Proceedings of the IEEE Instrumentation and Measurement Technology Conference Budapest, Hungary, pg 1785-90, May 21-23, 2001.

J. Soltani, B. Szabados, "A Novel Method of Measurement of Synchronous Machine Losses Using Synthetic Loading", Proceedings of the IEEE Instrumentation and Measurement Technology Conference Budapest, Hungary, pg 1948-53, May 21-23, 2001.

- B. Szabados, "Intelligent Monitoring System Used to Control Asynchronous Production Systems", Proceedings of IEEE International Workshop on Virtual and Intelligent Measurement Systems Budapest, Hungary, pg 35-40, May 19-20, 2001.
- B. Szabados, J. Soltani, G. Hoolboom, "A New Synthetic Loading of Induction Machines Based on Phase Modulation", INDUSCON2000, Conference Proceedings pg 7-11, Porto-Alegre, Brazil, Nov 2000
- J. Soltani, B. Szabados, G. Hoolboom, "A New Equivalent Loading Test for Measuring Total Losses in Induction Machines", LESCOPE'00, Conference Proceedings pg 86-90, Halifax, July 2000
- R.Ong, J.H.Dymond, J.V.Kay, R.D.Findlay, B.Szabados, "Systematic Practical Approach to the Study of Bearing Damage in a Large Oil Ring Lubricated Induction Machine," 1999 PCIC, San Diego, California, 13-15 September, 1999
- Raymond Ong, J.H.Dymond, R.D.Findlay and B.Szabados, "Significance of Joints Due to Lamination Segmentation on Shaft Current in Induction Machines," 1999 IEEE Biennial International Electrical Machines and Drives Conference, Seattle Washington, 9-12 May, 1999.
- U.Schaible, B.Szabados, "Computer Based Motor Parameter Determination for High Speed Operation of Permanent Magnet Synchronous Machines", conference proceedings IEEE PEDES'98, Perth, Australia, pg-8-13, Dec 98.
- R.Ong, J.H.Dymond, J.V.Kay, R.D.Findlay and B.Szabados, "Impact of Oil Lubrication on the Magnitude of Shaft Current in a Large Oil Ring Lubricated Induction Machine," ICEM'98, Istanbul, Turkey, 2-4 September, 1998.
- B. Szabados, "Software Engineering, an Established Accreditable Engineering Discipline", 11th Canadian Conference on Engineering Education, Halifax, pg-541-550, July 98
- U.Schaible, B.Szabados, "Non Linear Machine Model Development for Optimal Power Transfer in Sinusoidal Flux High Speed Synchronous Machines", LESCOPE'98, Conference Proceedings pg 196-200, Halifax, June 98
- Raymond Ong, J.H.Dymond, R.D.Findlay, B.Szabados, "Shaft Current Phenomenon: Experimental Testing and Analysis of a Large Induction Motor," Proc. International Association of Science and Technology for Development, International Conference on High Technology in the Power industry, Orlando, Florida, Paper 262-025, pp 241-6, Oct., 27-30, 1997,.
- B.Szabados, U.Schaible, "Computer Based Motor Parameter Determination for High Speed Operation of Brushless Permanent Magnet Synchronous Motors", IEEE International Symposium SDEMPED'97, Carry le Rouet, conference proceedings pg 225-230, Sep 1997.
- R.Ong, J.H.Dymond, R.D.Findlay, B.Szabados, "Shaft Current Measurement of a Large Induction Machine Using the Rogowski Coil Method", IEEE International Symposium SDEMPED'97, Carry le Rouet, conference proceedings pg 23-26, Sep 1997.

- R.D.Findlay and B.Szabados, "Prediction of Zero Sequence Currents in Some Induction Motor Designs, with the Aid of a Hybrid/Finite Element Model", International Conference on Electric and Magnetic Fields, Liege, Belgium, 6-8 May, 1997.
- Payman Hodaie, Barna Szabados, "Dynamic light-weight Client Architecture for Network-Centric Computing", 2nd Conference on Object-Oriented Technologies and Systems (COOTS), Toronto, Ont., Canada, June 17-21, 1996
- Payman Hodaie, Barna Szabados, "A Common Computing Environment For Industrial Applications", CSME Hamilton, Ont, Canada, May 7-9, 1996
- Payman Hodaie, Barna Szabados, "Intelligent Monitoring System for Asynchronous Production Systems", CSME Hamilton, Ont, Canada, May 7-9, 1996
- Payman Hodaie, Barna Szabados, "Migration of Plant Floor Applications to a Network-Centric Architecture", IntraNet NY, New York City, NY, April 8-10, 1996
- U. Schaible, B.Szabados, "A Torque Controlled High Speed Flywheel Energy Storage System for Peak Power Transfer in Electric Vehicles", IEEE-IAS, Denver, Conference Proceedings Vol-1 Oct 1994, pp 435-442.
- J.H.Dableh, R.D.Findlay, B.Szabados, R.Belmans, S. Lie, "Investigation of the Air Gap Influence on the Performance and Cost Optimization of a Squirrel Cage Induction Motor", IEE 6th International Conference on Electrical Machines and Drives, Oxford, England, 8-10 Sept., 1993.
- R.Belmans, Ph.K.Sattler, R.D.Findlay, B.Szabados and W.Geysen, "Influence of the Supply Harmonics on Audible of Induction Motors", International Conference on Harmonics in Power Systems(IV), Budapest, Hungary, 4 Oct., 1990, p298-303.
- B.Szabados, J.H.Dableh, R.D.Findlay and D.Strafford, "A New Approach for the Measurement of the Torque - Speed Characteristics of Induction Motors", IEE 4th International Conference on Electrical Machines and Drives, London, England, 13-15 Sept 89. pp.246-250.
- J.H.Dableh, R.D.Findlay and B.Szabados, "Finite Element Predictions of Transient Electromagnetic Forces in Axisymmetric Geometries", ISEF-89, Lodz, Poland, Sep 20-22, 89. pp.5-8.
- G.M.Brown, L.Magnard, B.Szabados, "Improving the Harmonic Performance of a Cyclo Converter by a Novel Jitter Control Method", IEEE International Conference on Harmonics in Power Systems, Nashville (Ind), ICHPS III conference proceedings, pp.209-215, Sept 88.
- R.D.Findlay, B.Szabados, I.EI-Nahas, M.S.El Sobki, M.Poloujadoff, "Application of the harmonic analysis technique to determining eddy currents in conducting plates", International Symposium on Electromagnetic Fields in Electrical Engineering, Pavia, conference proceedings, Sept 1987. pp.265-270.
- B.Szabados, A.Bruno, "A Novel Algorithm To Compute On-line Harmonic Impedances From Field Data", Proceedings of the Second International Conference on Harmonics, pp 126-133, Oct 1986.

- B.Szabados, "Proposed Philosophy To Establish Guidelines For Harmonic Levels", Proceedings of International Conference on Harmonics in Power Systems, W.P.I., Oct. 1984, pp. 21-24.
- B.Szabados, "Répercussion Sur Le Réseau Electrique De L'Alimentation Des Convertisseurs De Grande Puissance", SEE Lyon (France), Conference Proceedings, May 1983.
- O.Storoshchuk and B.Szabados, "Industrial Area Network", IEEE Toronto, Sept. 83, Proceedings, pp. 451-455.
- B.Szabados and Y.H.Kim, "Microprocessor Controlled Cyclo-converter Near Synchronous Speed", Proceedings of CONUMEL 83, May 1983, pp. I-1 to I-5.
- B.Szabados and P.Lindon, "Pulse Width Modulation Controller For A 3 Phase Electrical Drive", CONUMEL 80 (Lyon, France, April 1980), pp. I-10 to I-20.
- R.Arseneau, B.Szabados, E.Hill and D.Perry, "Synchronous Motor Impedances Measured At Harmonic Frequencies", IEEE-PES Summer Meeting (July 1979), paper A79515-1.
- B.Szabados, "The Ampere Mile Vector Theory Applied To Inductive Coordination", IEEE-PES Winter Meeting (Feb. 1979), paper A79095-1.
- B.Szabados, "The Neutral Current Phase Shift On Distribution Feeders Theory And Field Tests", Proc. NTC 76, vol. III, 1976, pp. 12-3-1.
- B.Szabados, N.K.Sinha and C.D.diCenzo, "Direct Digital Measurement Of Angular Velocity And Acceleration", Proc. Inter. Conf. Mechanical Aspects of Electronic Design (CONSTRONIC '72) (Budapest, Hungary, April 1972), pp. 89-97.

BOOKS

- P.Hoddaie, B.Szabados, B. Chan, O. Storoshchuk "Robot and PLC Support System Based on Fiber Optic Map Network", chapter 14 of "Microprocessors in Robotics and Manufacturing Systems", Kluwer Academic Publishers, 1991.
- J.H.Dableh, R.D.Findlay, B.Szabados, "Finite Element Predictions of Transient Electromagnetic Forces in Asxisymmetric Geometries", in Electromagnetics Fields in Electrical Engineering, edited by J.Turowski and Zakrzewsky, James and James Science Publishers, Ltd., London, UK, ISBN 0-907383-52-1, 1990, pp1-4.
- R.D.Findlay, B.Szabados, I.El-Nahas, M.S.El Sobki, M.Poloujadoff, "Application of the harmonic analysis technique to determining eddy currents in conducting plates", published in book "Electromagnetic Fields in Electrical Engineering", Plenum Publishing Limited, New York ISBN0-306-42992-6, pp.263-268, 1988.
- R.D.Findlay, A.A.Jimoh and B.Szabados, "Development of Parasitic Torques Leading to Shaft Vibrations

in Induction Motors”, in Vibrations and Audible Noise in Alternating Current Machines, ed. R.Belmans, K.J.Binns, W.Geysen and A.Vandenput, Kluwer Academic Publishers, NATO ASI Series E; Applied Sciences-vol. 148, ISBN 90-247-3732-x, 1988, pp347-362.

B.Szabados, P.Hodaie, O.Storoshchuk, “Microprocessor Based Control Systems”, D.Reidel Publishing Company, ISBN 90-277-2287-0, Chapter 16: pp 317-342, 1986.

CONFERENCE PROCEEDINGS REVIEWED ON ABSTRACT

M. Smadi , B. Szabados, “Error Recovery Service for the IEEE 802.11b Medium Access Protocol via Adaptive Packet Sizing and Fragmentation, Retransmission and Adaptive Forward Error Correction”, Proceedings of the IEEE Canadian Conference on Electrical and Computer Engineering, May 2004

B. Szabados, "Outcome Based Assessment Using Multi-media", AEAS Conference, Toronto, Proceedings on CD, June 2-4, 2000

P. Hodaie, O. Storoshchuk, B. Szabados, M.A. Maslied, L. Van Der Jagt, G. Martin, “Propagation Measurements at a G.M. Manufacturing Plant for Wireless LAN Communication”, Wireless 93, Calgary, July 12-14, 1993, Conference Proceedings pp.10.6.1-4.

R.D. Findlay, B. Szabados, S. Lie, M.A. Rahman, “Heating Effects Due to Placement of Vents in Two Pole Induction Motors, “ Proceedings Newfoundland Electrical and Computer Engineering Conference, Memorial University, St.Johns, Nfld, April 30, 1993, pp.11-15.

P. Hodaie, O. Storoshchuk, B. Szabados, “Manufacturing Automation Protocol From Application Developer’s Point of View” Proceedings of ENE’92 Conference, March 16-19, 1992 Washington, D.C., Application Development.

Brown G, Szabados B., Belmans R., “High Power Cycloconverter Drive for Double-Fed Induction Motors”, EPE-91, Proceedings pp1-5, Sept 1991.

S.Spencer, B.Szabados, R.Findlay, M.Poloujadoff, R.Belmans and S.Lie, “An Industrial Approach to CAD of Squirrel Cage Induction Motors,” China International Conference on Electrical Machines, Wuhan, China, Paper No. F-19, Proceedings pp21-24, Sept. 18-20,91.

R.Belmans, W.Geysen, R.D.Findlay, B.Szabados, S.Spencer, S.Lie, “Magnetic Field Analysis in Squirrel Cage Motors,” Paper No.PC10, COMPUMAG, The 8th Conference on the Computation of Electromagnetic Fields, Sorrento, Italy, July 7-11, 1991.

Szabados B., Brown G, Hoolboom G., Belmans R., “Microprocessor Control for a Cycloconverter Drive for Double Fed Induction Motors”, MCED’91, (IEEE Industrial Society), Marseille 1-2 July 1991, ppH1-10.

- M.S.El Sobki, I.El Nahas, B.Szabados, R.D.Findlay, S.Spencer, M.Anderson, "Interactive Graphics Module and Automatic Mesh Generation for Two and Three Dimensional Magnetic Field Analysis", Middle East Power Conference MEPCON-89, Cairo, Jan 89. pp.219-224.
- S.Spencer, B.Szabados, I.El Nahas, M.S.El Sobki, R.D.Findlay, "Interactive Graphics Module for Prediction of Eddy Current Losses in the Tank Walls of a Power Transformer", Middle East Power Conference MEPCON-89, Cairo, Jan 89. pp.225-231.
- S. Spencer, B. Szabados, I. El-Nahas, M.S. El-Sobki and R.D. Findlay, "The Interactive Graphics Module for Prediction of Eddy Current Losses in the Tank Walls of a Power Transformer", IEEE Power Industry Computer Applications Conference, Montreal, Canada, May 4-7, 1987.
- B.Szabados, Z.Chen, "A Real Time Multitasking Monitor Transforms The P.C. Into A Powerful And Versatile Controller", IEEE Montech'86, pp75-78, Oct 1986
- R.D.Findlay, A.A.Jimoh, B.Szabados, "Development of Parasitic Torques Leading to Shaft Vibrations in Induction Motors", NATO sponsored seminar, on Vibration and Noise in Alternating Current Machinery, Leuven, Belgium, Aug 1986.
- B.Szabados, "A Single Microprocessor Based Quasi Parallel Process Controller For An Automatic Punch Press", Proceedings, May 1984, pp. 49-1.
- B.Szabados and O.Storoshchuk, "Microprocessor Optimum Control Of Oil Temperature For Robot Arm Valves", 25th Symposium on circuits and Systems, Proceedings (4 pages), Aug. 1982.
- B.Szabados and M.A.Shadeed, "Microprocessor Armature Controlled DC Motor", Proc. IEEE Inter. Electrical, Electronics Conf. (Toronto, Canada, Oct. 1981), 2 pages.
- B.Szabados, "Reducing Power Line Interference By Optimum Feeder Balancing", IEEE Canadian Communications and Power Conf. (Oct. 1980), pp. 189-191.
- B.Szabados, "Measurement of Harmonic Currents Generated In A Power Transformer", Proc. IEEE Int. Electronics Conf. 79-90130 (Oct. 1979), paper 79122, pp. 82-84.
- B.Szabados, "Field Measurement Of Power System Impedance At Harmonic Frequencies", Proc. IEEE Int. Electronics Conf. (Oct. 1979), pp. 5-52.
- B.Szabados, "Noise In Telephone Systems, Its Generation And Minimization", Proc. Plant Supervisors Conf. (Wausau, WI, Feb. 1978), pp. 1-14.
- B.Szabados, "Inductive Coordination, A Diagnostic For Power Systems", Proc. Joint Telephone Power Symp. (Wisconsin, Feb. 1977), pp. 37-76.
- B.Szabados, "A New Look At Inductive Coordination", Proc. CEA (Montreal, Canada, March 1974).

PATENTS

B. Szabados, "Apparatus for Dimming a Fluorescent Lamp With a Magnetic Ballast", US patent 6,121,734, Sep 2000.

B. Szabados, J. Dableh, J. Tavares, "Dimmer for fluorescent lighting", PCT International Application, #PCT/CA97/00079, Feb 6, 97.

INDUSTRIAL REPORTS

B.Szabados, R.D.Findlay, R.T.H.Alden, M.Poloujadoff, S.Spencer, "Induction Machine Modelling Program; final report", NSERC GUIP/Westinghouse report, 1 Oct, 91.

B.Szabados, R.D.Findlay, R.T.H.Alden, M.Poloujadoff, Y.H.Dableh, S.Spencer, "Circuit Model, Including Harmonics for 3Phase, 2300V, 600HP, 10 Pole Test Motor 3", NSERC GUIP/Westinghouse report, 4 May, 1989, 29pg.

B.Szabados, R.D.Findlay, R.T.H.Alden, M.Poloujadoff, Y.H.Dableh, S.Spencer, "Program for the Determination of the Operating Parameters of Form Wound Squirrel Cage Motors, Version 1", NSERC GUIP/Westinghouse report, Jan 1989, 90pg.

B.Szabados, Y.H.Dableh, "Dynamic Measurement of Torque Speed Characteristic for One 600Hp Westinghouse Induction Motor", report 21 Jun, 1989, 9pg.

B.Szabados, R.D.Findlay, R.T.H.Alden, M.Poloujadoff, I.El-Nahas, M.El-Sobki, S.Spencer, "Interactive Graphics Module and Automatic Mesh Generation Geometry Processor and Analysis Module, and Power Loss Analysis Module for Three Dimensional Magnetic Field Analysis", Report for PRAI (McMaster U/Westinghouse, Canada) final project report, January 1988, 41pg.

B.Szabados, Y.H.Dableh, "Measurement of the Torque Speed Characteristics for Two 20Hp Westinghouse Induction Motors", report to Westinghouse Canada, 30 Mar, 1988, 7pg.

"Harmonic Interference Environment Characterization", preliminary report to COMINCO, B.C., Sept. 1980.

"Interference by Dow Chemical", report July 1980.

"Customer complaints", report to NBEPC, August 1980.

"Dow Chemical Interference into CPL", report June 1978.

"Beechwood Switching", NBEPC report August 1973.

"Kingston Peninsula", NBEPC report October 1973.

"Stanley-Napedogan", NBEPC report October 1973.

"General Report Summer 1973", October 1973.

- “Standard Engineering Practices”, (NBEPC) on Inductive Coordination, General.
- “Standard Engineering Practices”, (NBEPC) III - 2.00 - 1.0 Levels of responsibility
- “Standard Engineering Practices”, (NBEPC) III - 2.00 - 2.0 Severity ratings
- “Standard Engineering Practices”, (NBEPC) III - 2.00 - 3.0 Time limits and course of action
- “Standard Engineering Practices”, (NBEPC) III - 2.00 - 4.0 Investigation and correction of a 60 Hz problem
- “Standard Engineering Practices”, (NBEPC) III - 2.00 - 5.0 Investigation of harmonic voltage problems
- “Standard Engineering Practices”, (NBEPC) III - 2.00 - 6.0 NBPower-NBTel Test set up
- “Standard Engineering Practices”, (NBEPC) III - 2.00 - 7.0 Ampere-Nile Vector Theory
- “Standard Engineering Practices”, (NBEPC) III - 2.00 - 8.0 Prediction of 60 Hz interference
- “Standard Engineering Practices”, (NBEPC) III - 2.00 - 9.0 Application of shunt capacitors to solve induced voltage and noise frequency problems.
- “Standard Engineering Practices”, (NBEPC) III - 2.00 - 10.0 Solution of a noise frequency problem caused by shunt capacitors
- “Standard Engineering Practices”, (NBEPC) III - 2.00 - 11.0 Solution of noise frequency problems caused by transformers and voltage regulators
- “Standard Engineering Practices”, (NBEPC) III - 2.00 - 12.0 Definition of terms
- “Standard Engineering Practices”, (NBEPC) III - 2.00 - 13.0 Feeder Balance

- “Standard Operating Practice”, NBEPC practice S.O.P. III - 2.00

- “Joint Use Practice for NBPower and NBTel”, operating practice.

PROFESSIONAL PAPERS LECTURES AND COURSES GIVEN

- "Zero Emission Vehicles, technological problems", multimedia lecture at ISTASE (St Etienne), JUSSIEUX (Paris) and ENSEL (Annecy) March 98.

- "Intelligent Monitoring Production Systems", multimedia lecture given at ISTASE (St Etienne), Mar 98

- Modern Microprocessor Design Techniques, Invited lecture series (3 weeks) to the Ministry of Aviation Peoples Republic of China (Zhouzou, Shanghai, Nanjing, Beijing), Apr-May 87

- “Harmonic Effects on Communication Interference”, Tutorial IEEE PES, Feb. 1985.

- “Harmonic Measurements: Instrumentation and Techniques”, Tutorial IEEE PES, Feb. 1985.

- B.Szabados, “Field Measurement Of Power System Impedance At Harmonic Frequencies”, IEEE chapter invited lecturer, Winnipeg, Manitoba, feb 1984

- “Harmonic Effects of Large Rectifier Installations on Power Systems”, Nov. 30, 1983, invited lecturer at Ottawa National Research Council Department of Electrical Engineering.

- “Technical Applications of Microprocessors”, Nov. 6, 1982, short course to APEO Professional Development Series.

“Répercussion Sur Le Réseau Electrique Des Convertisseurs Electroniques”, Invited lecturer, Université de Trois Rivières, March 1982.

“Inductive Coordination”, 1 week course to Power and Tel. engineers, University of Minnesota, extension course services Feb. 1978.

Guest lecturer (2 days) at Telephone and Power Joint Symposium, Stevens Point, Wisc., Feb. 1977.

“Telephone Interference”, 1 week course to Manitoba Hydro, Calgary Power and Telephone, May 1976.

“Interférence Téléphonique” (en francais), 1 week courses to Hydro Quebec, June 1975 in Quebec City, Jan. 1975 in Montreal.

PAPERS PRESENTED BY INVITATION

R.D.Findlay, A.A.Jimoh, B.Szabados, “Development of Parasitic Torques Leading To Shaft Vibrations In Induction Motors”, NATO Advanced Research Workshop on Vibrations and Noise in Alternating Current Machines, Aug 4-8, 1986, Catholic University of Leuven, Belgium.

“Harmonic Effects on Communication Interference”, Tutorial IEEE PES, Feb. 1985.

“Harmonic Measurements: Instrumentation and Techniques”, Tutorial IEEE PES, Feb. 1985.

“Répercussion sur les Réseaux Electriques de l'Alimentation des Convertisseurs de Grande Puissance”, invited paper at the 25-26 May 1983 Workshop of SOCIETE des ELECTRICIENS et ELECTRONICIENS de FRANCE, Lyon, France.

“Power System Harmonics”, invited speaker by the Winnipeg, Man. IEEE Subsection, Jan. 1980.

“A New Look at Inductive Interference”, invited speaker at the Maritime Pool Distribution meeting in St. John's, NF, Feb. 1974.

THESIS

P.Wu, "A Component Based 3D Collision Avoidance System", M.Sc. 2003

F.Ye, "Parameter Identification of Induction Motor Model with Variable Frequency Voltage Supply", M.Sc. 2003

M.Smadi, "Error Recovery Service for the IEEE 802.1 Protocol", M.Sc. 2004

D. Fischer, "Artificial Intelligence Techniques Applied to Fault Detection Systems", PhD, 2004.

N.VanStyke, "Torque Control in High Speed Permanent Magnet Motors", M.Sc. 2002

K. McCombe, "Analysis of TCP/IP over the Ethernet in the Win32 Environment with Consideration Towards Soft Real Time Applications", Master's thesis, Sep 99.

A. Mihalcea, "Equivalent Loading Methods for Determining Total Power Loss in Induction Motors", Master's thesis, Sep 99.

U. Schaible, "Peak Power Transfer in Electric Vehicles", PhD thesis, Dec 1997.

F. Leung, "Conveyor System Analysis and Design Using Modern Computer Aided Technology", Master's Thesis, Nov 1997

C.J.DiLello "AGV Work-Cell Off-Line Programming and Evaluation Tool", Master's thesis, May 1995.

K.M.Chan "An Abstract Representation and Analysis of Production Lines With Inter-Stage Storage", PhD thesis, 1995.

U.D.Schaible "Implementation Strategy of a Practical High Speed Flywheel Energy Storage System for Electric Vehicle Applications", Master's thesis, 1994.

K.Jonhson "Investigation of the Effect of Jitter Control on a Hybrid Cycloconverter" Master's thesis, 1993.

P. Hodaie "Design and Implementation of Interworking System for Factory Floor Communication" Master's Thesis 1991.

A.Santuro "Data Acquisition Module Using DMA in Business Pro Computer" Master's Thesis 1991.

M.Chan "A Programmable Industrial Controller", Master's thesis 1989.

Brown G.M. "Application of Dual Cycloconverters to a Double Fed Motor for Traction Drives", PhD thesis, 1989.

McCrakin D.C. "The Microcode Level Timeslicing Processing Architecture", Phd thesis, 1988.

Bruno A. "A Novel Algorithm to Compute On-Line Harmonic Impedances from Measurements", M.Eng thesis, July 87.

Chan B.L. "A Microprocessor Controlled Harmonic Analyzer", M.Eng thesis, Oct 86.

Eisner J. "A Digital Remote Controller Module in a Temperature Control Application", M.Eng thesis, Apr 86.

McCrakin D.C. "Microcode Level Timeslicing: A Novel Processor Accelerator", M.Eng Thesis Oct 85

Storoshchuk O.L. "Industrial Local Area Computer Communication Network", M.Eng thesis, Apr 85.

Brown G.M. "Hybrid Control of a Cycloconverter for Traction Drives", M.Eng Thesis Sep 84.

Kim Y.H. "A Microprocessor Controlled Cycloconverter for Driving a Synchronous Motor", M.Eng thesis,