

## **Short Papers, Abstracts and Presentations**

1. M.R Barzegaran, A. Nejadpak, O.A. Mohammed, "Electromagnetic signature study of the power converter connected to an electric motor drives", presented at COMPUMAG 2013 Conference on the Computation of Electromagnetic Fields, Budapest, Hungary, July 2013.
2. M.R Barzegaran, O.A. Mohammed, "A Generalized Equivalent Source Model of AC Electric Machines for Numerical Electromagnetic Field Signature Studies", IEEE INTERMAG 2012, Vancouver, Canada 7-11 MAY 2012.
3. M.R Barzegaran, O.A. Mohammed, "3DFE Wire Modeling and Analysis of Electromagnetic Signatures from Electric Power Drive Components and Systems", Fifteenth Biennial IEEE Conference on Electromagnetic Field Computation (CEFC2012).
4. Arash Nejadpak, Ali Sarikhani, Osama A. Mohammed, "Analysis of Radiated EMI and Noise Propagation in Three-Phase Inverter System Operating Under Different Switching Patterns", CEFC November 11-14 Oita Japan 2012.
5. Ali Sarikhani, Arash Nejadpak, Osama A. Mohammed, "Estimation of Operational Inductance in Permanent Magnet Synchronous Machines by a Real-time Physics-based inductance Observer", CEFC November 11-14 Oita Japan 2012
6. A. Nejadpak, M.R Barzegaran, O.A. Mohammed, "Numerical Simulation of Low Frequency Far Fields from an Operating Multi-Component System Including Power Converter Load Switching", Fifteenth Biennial IEEE Conference on Electromagnetic Field Computation (CEFC2012).
7. M.R Barzegaran, O.A. Mohammed, "Multi-Dipole Modeling of XLPE Cable for Electromagnetic Field Studies in Large Power Systems", The Sixth International Conference on Electromagnetic Field Problems and Applications (ICEF), June 19-21 2012, Dalian, China.
8. M. Amin, H. Moussa, and O. A. Mohammed, "Development of A Wide Area Measurement System for Smart Grid Applications", 18th World Congress of the International Federation of Automatic Control (IFAC) Invited Session, IFAC 2011 proceedings, Vol. 18, Part 1, Aug. 28-Sep.2, 2011, Milano, Italy.
9. A. Sarikhani, M.R Barzegaran, O.A. Mohammed, "Optimum Equivalent Models of Multi-conductor Systems for the study of Electromagnetic Signatures and Radiated Emissions from Electric" IEEE COMPUMAG 2011, Australia 12-15 July 2011
10. Sarikhani, A.; Mohammed, O.A. "Hybrid GA-PSO multi-objective design optimization of coupled PM synchronous motor-drive using physics-based modeling approach," Electromagnetic Field Computation (CEFC), 2010 14th Biennial IEEE Conference on , pp. 1, 9-12 May 2010.
11. Mohammed, O.A.; Rosales, A.; Sarikhani, A. "Evaluation of radiated Electromagnetic Field Interference due to frequency switching in PWM motor drives by 3D finite elements," Electromagnetic Field Computation (CEFC), 2010 14th Biennial IEEE Conference on, pp.1, 9-12 May 2010.
12. Mohammed, O.A.; Abed, N.Y. "Application of Finite Elements to High Frequency Transformer Modeling," Electromagnetic Field Computation, 2006 12th Biennial IEEE Conference on, pp.100.
13. Mohammed, O.A.; Liu, Z.; Liu, S. "A Practical Method for Building the FE-based Phase Variable Model of Single Phase Transformers for Dynamic Simulations," Electromagnetic Field Computation, 2006 12th Biennial IEEE Conference on, pp.173.
14. Mohammed, O.A.; Liu, Z.; Liu, S. "FE-based Modeling of Single Phase Distribution Transformers with Internal Winding Short Circuit Faults," Electromagnetic Field Computation, 2006 12th Biennial IEEE Conference on, pp. 73.
15. Mohammed, O.A.; Liu, S.; Liu, Z. "Internal Short Circuit Fault Diagnosis for PM Machines Using FE-based Phase Variable Model and Wavelet Analysis," Electromagnetic Field Computation, 2006 12th Biennial IEEE Conference on , pp.157.

16. Mohammed, O.A.; Abed, N.Y. "Modeling and Characterization of Transformers Internal Faults using Finite Elements and Discrete Wavelet Transforms," Electromagnetic Field Computation, 2006 12th Biennial IEEE Conference on, pp.392.
17. Mohammed, O.A.; Liu, S.; Liu, Z. "An FE-based Physical Phase Variable Model for PM Synchronous Machines Including Dynamic Core Losses," Electromagnetic Field Computation, 2006 12th Biennial IEEE Conference on, pp.137.
18. O. A Mohammed, S. Liu, and Z. Liu, "A Phase Variable Model of Brushless DC motor Based on Physical FE Model and Its Coupling with External Circuits," proceedings of the Eleventh Biennial IEEE Conference on Electromagnetic Field Computation, CEFC 2004, June 6-9, 2004, Seoul, Korea, pp. 265.
19. O. A Mohammed, N. Y. Abed, and S. Liu, "Coupled Finite Element Analysis of Distribution Transformer for Fault Studies," proceedings of the Eleventh Biennial

- IEEE Conference on Electromagnetic Field Computation, CEFC 2004, June 6-9, Seoul, Korea, pp.349.
20. Mohammed, O.A.; Ganu, S.C.; Liu, S. "FEM analysis and testing of Magnetostrictive effects in electrical steel samples for machinery applications," Power Engineering Society General Meeting, 2003, IEEE, vol.3, pp. 4 vol. 2666, 13-17 July 2003.
  21. Kanai, Y.; Matsubara, R.; Watanabe, H.; Mohammed, O.A.; Muraoka, H.; Nakamura, Y. "Recording field analysis of narrow-track SPT head with side-shields," Joint NAPMRC 2003. Digest of Technical Papers [Perpendicular Magnetic Recording Conference 2003], pp. 62, 6-8 Jan. 2003.
  22. Kasper, M., O. A. Mohammed, Russenschuck, S." Different Optimization Procedures for the Design of a Super-ferric Octupole," Presented at the International Workshop on Optimization and Inverse Problems in Electromagnetism, CERN, Geneva, Switzerland, pp.11, September 19-21,1994.
  23. Üler, F. G., Mohammed, O. A., "Genetic Algorithm - LaGrange Multiplier Hybrid Search Technique in Design Optimization," Presented at INTERMAG'95, San Antonio, TX, April 1995.
  24. Mohammed, O. A., Discussion on a Paper Titled " Electric Load Forecasting Using an Artificial Neural Network " IEEE Transactions on Power Systems, Vol. 6, No. 2, P. P. 449, May 1991.
  25. Mohammed, O. A. and Üler, F. G." An Integrated Optimization Environment for Electromagnetics Applications," Presented at the International Workshop on Optimization and Inverse Problems in Electromagnetism, CERN, Geneva, Switzerland, pp. 15, September 19-21,1994.
  26. Osama A. Mohammed, and Mundulas Jorge, "Improvements in RF Monitoring System on Generators," IEEE Power Engineering Review, Vol.9, No.6, pp.49, June-1989.
  27. Mohammed, O. A., Haggmann, M. J. and Üler, F. G. "Calculation of Potential Distribution Produced by Implanted Electrodes in a Two-dimensional Man Model by Finite Elements," Bioelectromagnetics Society (BEMS) Thirteenth Annual Meeting, Salt Lake City, Utah, June 23-27, 1991.
  28. Mohammed, O. A., Yen, K., Raman, V., and Ramdin, S. K.," Modeling of Acoustic Environment for the Purpose of Noise Cancellation," Journal of the Acoustical Society of America, S. 1, Vol. 85, May 1989, pp. s 140.
  29. Raman, V., Mohammed, O. A., Yen K. and Ramdin, S. K., "Cancellation of Noise in the Presence of Signals of Short Duration," Journal of the Acoustical Society of America, S. 1, Vol. 85, May 1989, pp. s23.
  30. Yen, K., Raman, V., Mohammed, O. A., and Ramdin, S. K. "Results of a Computer Simulation Scheme of Active Noise Reduction," Journal of the Acoustical Society of America, S. 1, Vol. 85, May 1989, pp. s 24.
  31. Kang Yen, Osama A. Mohammed, Vijay Raman and Kurt S. Ramdin, "Sound-pressure distribution on a cross section of a duct for active noise cancellation," Journal of the Acoustic Society of America. 86, S92 (1989).
  32. Raman, V., Mohammed, O. A., Yen K. and Ramdin, K. S. "An Improved Modeling Technique for High-Order Acoustic Spectra," Journal of the Acoustical Society of America, S. 1, Vol. 86, November 1989, pp. s 40.
  33. Mohammed, O. A., Ramdin, K. S., Raman, V. and Yen, K. "Finite Element Simulation of an Active Noise Canceling Scheme," Journal of the Acoustical Society of America, S. 1, Vol. 86, November 1989, pp. s 92.
  34. Puttgen, H.B.; Aimone, M.A.; Demerdash, N.A.; Fleming, P.J.; Garg, V.K.; Makram, E.B.; McCart, W.C.; Mohammed, O.A.; Malukutla, S.S.; Roark, C.; Schmehl, T.G.;

- Smith, J.C.; Stambach, M.R.; Truax, C.J., "Continuing Education Courses", Power Engineering Review, IEEE, Feb. 1989, vol. 9, no.2, pp 26-27.
35. Mohammed, O. A. and Garcia, L. F. "Numerical Design of Radio Frequency Powered Coils for Implantable Tissue Simulators," American Association for the Advancement of Medical Instrumentation, pp. 47-, May 1987.
  36. Mohammed, O. A. and Batina, W. P. "Computer Aided Design Tool for Implantable Telemetry Systems," Abstract Published in IEEE Transactions on Biomedical Engineering, Vol. BME-5, No. 10, pp. 881, October 1985.
  37. Demerdash N. A., Mohammed, O. A. and Nehl T. W., "Forces on Conductor Segments and Magnetized Ferrous Cores Using a Three-Dimensional Finite Element Vector Potential Method," IEEE Power Engineering Review, Vol.PER-6, No.9, pp.34- 35, Sept 1986
  38. Mohammed O. A., Demerdash N. A., and Nehl T. W., "Nonlinear Vector Potential Formulation and Experimental Verification of Newton-Raphson Solution of Three Dimensional Magnetostatic Fields in Electrical Devices," IEEE Power Engineering Review, Vol. PER-6, No.3, pp.45, March 1986.
  39. Mohammed O. A., Demerdash N. A., Nehl, T. W. "Validity of Finite Element Formulation and Solution of Three Dimensional Magneto static Problems in Electrical Devices with Applications of Transformers and Reactors," IEEE Power Engineering Review, Vol. PER-4, No.7, pp.60-61, July 1984.
  40. Nagarkatti A. K., Mohammed O. A., and Demerdash N. A., "Special Losses in Rotors of Electronically Commutated Brushless DC Motors Induced by Non-Uniformly Rotating Armature MMFS," IEEE Power Engineering Review, Vol. PER-2, No.12, pp.33, Dec. 1982.
  41. Demerdash N. A., Mohammed O. A., Nehl T. W., Fouad F. A., and Miller R. H., "Solution of Eddy Current Problems Using Three Dimensional Finite Element Complex Magnetic Vector Potential," IEEE Power Engineering Review, Vol. PER-2, No.11, pp.22, Nov. 1982
  42. Demerdash N. A., Fouad F. A., Nehl T. W. and Mohammed O. A., "Three Dimensional Finite Element Vector Potential Formulation of Magnetic Fields in Electrical Apparatus," IEEE Power Engineering Review , Vol. PER-1, No.8, pp. 64, Aug. 1981.
  43. Demerdash, N.A.; Mohammed, O.A.; Nehl, T.W.; Fouad, F.A., "Experimental Verification and Application of the Three Dimensional Finite Element Magnetic Vector Potential Method in Electrical Apparatus", Power Engineering Review, IEEE, Aug. 1981, PER-1, no.8, pp 62-63