

JOURNAL PAPERS

Submitted :

1. Mehmet H. Cintuglu, Ricardo de Azevedo, Osama A. Mohammed "A Fully Distributed Approach for Agent-Based Protection of Meshed Microgrids" IEEE Transactions on Power Delivery, 19 April 2016
2. Christopher R. Lashway, Ahmed T. Elsayed and Osama A. Mohammed "Modelling and Coordinated Control of Hybrid Energy Storage Systems for Extended Operation" Electric Power Systems Research Journal, ELSEVIER
3. Ricardo de Azevedo, Mehmet H. Cintuglu, Osama A. Mohammed "Multi-Agent Based Optimal Microgrid Control Using Fully Distributed Diffusion Strategy " IEEE Transactions on Smart Grid, February 2016
4. Mehmet H. Cintuglu, Tarek Youssef, Osama A. Mohammed "Development and Application of a Real-Time Testbed for Multiagent System Interoperability: A Case Study on Hierarchical Microgrid Control" IEEE Transactions on Smart Grid, February 2016
5. A. A. S. Mohamed, Alberto Berzoy, and Osama Mohammed, "Power Flow Modeling of Wireless Power Transfer for EVs Charging and Discharging in V2G Applications", IEEE Transaction on Vehicular Technology.
6. A. A. S. Mohamed, Alberto Berzoy, and Osama Mohammed, "Design and Hardware Implementation of FL-MPPT Control of PV Systems Based on GA and Small-Signal Analysis", IEEE Transaction on Sustainable Energy.
7. C.R. Lashway, A.T. Elsayed, O.A. Mohammed, "Hybrid Energy Storage Management for Ship Power Systems with Multiple Pulsed Loads" IEEE Transactions on Transportation Electrification, 6 April 2016
8. Mehmet H. Cintuglu, Osama A. Mohammed "Auctioning POMDP Agent for Power Frequency Support by Dispersed Microgrids" IEEE Transactions on Systems, Man and Cybernetics, December 2015
9. S. Hossain, E. Srisarsha, K. Davis, M. Cintuglu, S. Zonouz, O. Mohammed "Cyber-Physical Intrusion Tolerance in Power Grid Critical Infrastructures" Elsevier International Journal of Power Systems, October 2015
10. Mehmet H. Cintuglu, Tan Ma, Osama A. Mohammed , "Protection of Autonomous Microgrids using Agent-Based Distributed Communication." Accepted for IEEE Transactions on Power Delivery.
11. Mehmet H. Cintuglu, Osama A. Mohammed , "Behavioral, Response-Based Auction Scheme for Frequency Support by Dispersed Microgrids," IEEE Transactions on Smart Grid.
12. A. A. S. Mohamed, Alberto Berzoy, Osama Mohamed, "Optimum Fuzzy Control for MPPT with Load Protection in PV Applications", Journal of Industrial Electronics.
13. Mustafa Farhadi and Osama Mohammed, "Energy Storage Technologies for High Power Applications" submitted to IEEE Transactions on Industry Applications 18 May 2016
14. Mustafa Farhadi and Osama Mohammed, "A New Protection Scheme for Multi-Bus DC Power Systems Using an Event Classification Approach" Submitted to IEEE Transactions on Industry Applications Oct 2015

Published :

1. C.R. Lashway, O.A. Mohammed, "Adaptive Battery Management and Parameter Estimation through Physics based Modeling and Experimental Verification" IEEE Transactions on Transportation Electrification, 20 April 2016
2. Tarek A. Youssef, Ahmed T. Elsayed and Osama A. Mohammed. "DDS Based interoperability framework for Smart Grid Testbed Infrastructure" MDPI Energies 2 March 2016
3. Mustafa Farhadi and Osama Mohammed "Performance Enhancement of Actively Controlled Hybrid DC Microgrid and Pulsed Power Load" IEEE Transactions on Industry Applications Published: vol.51, no.5, pp.3570-3578 , Sept-Oct 2015
4. Ahmed T. Elsayed, Tarek Youssef, and O. A. Mohammed "Modeling and Control of a Low Speed Flywheel Driving System for Pulsed Load Mitigation in DC Distribution Networks" IEEE Transactions on Industrial Applications, Page 1-6, DOI 10.1109/IAS.2015.7356826 18-22 October 2015
5. Mazloomzadeh, Ali.; Mohammed, O.A.; Zonouzsaman, S., "Empirical Development of a Trusted Sensing Base for Power System Infrastructures," IEEE Transaction on Smart, vol.6, no.5, pp.2454-2463, Sept. 2015.
6. A. A. Mohammed ; Alberto Berzoy and O. A Mohammed , " Optimizing Power Converter PCB Magnetic Design for Lower EMI Levels , The International Journal For Computation and Mathematics in Electric and Electronic Engineering ,COMPEL 2015 .
7. M.R Barzegaran, Arash Nejadpak, and O.A. Mohammed, "Numerical Simulation of Electromagnetic Field Correlation between Components of Power Converter-Pulse Load System," Applied Computational Electromagnetics Society Journal, 2015.
8. Farhadi, M.; Mohammed, O.A.; " Event - Based Protection Scheme for a Multi-terminal Hybrid DC Power System," in Smart Grid, IEEE Transactions on , vol.6, no.4, pp. 1658-1669, July 2015.
9. M.R. Barzegaran,; ,A.Nejadpak,; O.A. Mohammed,; Physics - Based Modeling of Power Converter Drive System for Evaluation of Electromagnetic Compatibility,;" Applied Computation Electromagnetic Society Journal (ACES), Vol. 30, ,No.6,June 2015.
10. Elsayed, A.T.; Lashway, C.R.; Mohammed, O.A., " Advanced Battery Management and Diagnostic System for Smart Grid Infrastructure," in Smart Grid , IEEE Transactions on vol.PP, no.99, pp.1-1 ,April 2015.
11. Mehmet Hazar Cintuglu and Osama Mohammed, " Real Time Multi Agent Based Game Theory Reverse Auction Model for Microgrid Market Operation" IEEE Transactions On Smart Grid , Vol.6, NO.2, March 2015.
12. Ahmed Elsayed, Ahmed Mohamed, and Osama A. Mohammed, " DC Microgrids and Distribution Systems: An Overview," Journal of Electric Power Systems Research (EPSR)- Elsevier, 119 (February 2015) 407-417.
13. M. R. Barzegaran, Tarek Youssef, Alberto Berzoy, and O. A Mohammed, "Electric Machine Drive Design Improvements through Control and Digital Signal Processing Techniques", IEEE Transaction on Energy conversion , Volume:30 , Issue.3 , January 2015.
14. Abla O. Hariri, Tarek Youssef, Ahmed Elsayed, Osama Mohammed, "A Computational Approach for a Wireless Power Transfer Link Design Optimization Considering Electromagnetic Compatibility" in IEEE Transactions on Magnetics DOI: 10.1109/TMAG.2015.2492922, 26 October 2015
15. M.R Barzegaran, Ahmed Mohamed, Tarek Youssef, O.A. Mohammed "Electromagnetic signature study of the power converter connected to an electric motor drives," IEEE Transaction on Magnetics, Vol. 50, No 2, February 2014, PP 4804-4807.

16. Farhadi, M.; Mohammed, O., "Real-time Operation and Harmonic Analysis of Isolated and Non-Isolated Hybrid DC Microgrid," *Industry Applications, IEEE Transactions on* , Vol., PP, no.99, pp.1,1, Jan 2014 .
17. Tan Ma and O. A. Mohammed, "Economic Analysis of Real-time Large Scale PEVs Network Power Flow Control Algorithm with the Consideration of V2G Services", *IEEE Transaction on Industry Applications* , Volume.50 , NO.6 , December 2014.
18. Mustafa Farhadi and Osama Mohammed," Adaptive Energy Management in Redundant hybrid Dc Microgrid for Pulse Load Mitigation", *Smart Grid, IEEE Transactions on*, Vol 06, no.99, Issue:1 , sept-2014.
19. M.R. Barzegaran, O.A. Mohammed, "Computational Electromagnetics for the Evaluation of EMC Issues in Multi Component Energy Systems," *The Applied Computation Electromagnetic Society Journal (ACES)*, Vol. 29, No.12, December 2014.
20. Tan Ma; Mohammed, O.A., "Optimal Charging of Plug-in Electric Vehicles for a Car-Park Infrastructure," *IEEE Transactions on Industry Applications*, vol.50, no.4, pp.2323,2330, July-Aug. 2014.
21. Ahmed Mohammed, Vahid Salehi, Tan Ma and Osama Mohammed, "Real-Time Management Algorithm for Plug-in Hybrid Electric Vehicle Charging Parks Involving Sustainable Energy", *IEEE Transaction on Sustainable Energy*, Volume 5, No 2, April 2014, pp 577-586.
22. M.R Barzegaran, O.A. Mohammed, "Multi-Dipole Modeling of XLPE Cable for Electromagnetic Field Studies in Large Power Systems," *The International Journal for Computation and Mathematics in Electrical and Electronic Engineering (COMPEL)*, vol. 33, No. 1/2, pp 3-13, January 2014.
23. Barzegaran, M.; Mazloomzadeh, A.; Mohammed, O.A., "Fault Diagnosis of the Asynchronous Machines Through Magnetic Signature Analysis Using Finite-Element Method and Neural Networks", *Energy Conversion, IEEE Transactions on*, Dec.2013, vol. 28, no.4, pp 1064-1071.
24. Sarikhani, A.; Mohammed, O.A., "Inter-Turn Fault Detection in PM Synchronous Machines by Physics-Based Back Electromotive Force Estimation", *Industrial Electronics, IEEE Transactions on*, Aug. 2013, vol. 60, no.8, pp 3472-3484
25. Nejadpak, A.; Sarikhani, A.; Mohammed, O.A., "Analysis of Radiated EMI and Noise Propagation in Three-Phase Inverter System Operating Under Different Switching Patterns", *Magnetics, IEEE Transactions on*, May-13, vol. 49, no.5, pp 2213-2216
26. Barzegaran, M.R.; Mohammed, O.A., "3-D FE Wire Modeling and Analysis of Electromagnetic Signatures From Electric Power Drive Components and Systems", *Magnetics, IEEE Transactions on*, May-13, vol. 49, no.5, pp 1937-1940
27. Sarikhani, A.; Nejadpak, A.; Mohammed, O.A., "Coupled Field-Circuit Estimation of Operational Inductance in PM Synchronous Machines by a Real-Time Physics-Based Inductance Observer", *Magnetics, IEEE Transactions on*, May-13, vol. 49, no.5, pp 2283-2286.
28. M.R Barzegaran, Ali Sarikhani, Osama A. Mohammed, "An Optimized Equivalent Source Modeling for the Evaluation of Time Harmonic Radiated Fields from Electrical Machines and Drives" *The Applied Computational Electromagnetics Society Journal*, Vol. 28, No. 4, pp. 273-282, Apr. 2013.
29. Nejadpak, A.; Mohammed, O.A., "Physics-Based Modeling of Power Converters From Finite Element Electromagnetic Field Computations", *Magnetics, IEEE Transactions on*, Jan. 2013, vol. 49, no.1, pp 567-576
30. M.R Barzegaran, O.A. Mohammed, "Multi-Dipole Modeling of XLPE Cable for Electromagnetic Field Studies in Large Power Systems," *The International Journal for Computation and Mathematics in Electrical and Electronic Engineering*, vol. 33, No. 1, 2014

31. Mohamed, A.; Salehi, V.; Mohammed, O., "Real-Time Energy Management Algorithm for Mitigation of Pulse Loads in Hybrid Microgrids", *Smart Grid, IEEE Transactions on*, Dec. 2012, vol. 3, no.4, pp 1911-1922
32. Mohammed, O.A.; Khan, A.A.; El-Tallawy, A.M.; Nejadpak, A.; Roberts, M.J., "A Wavelet Filtering Scheme for Noise and Vibration Reduction in High-frequency Signal Injection-Based Sensorless Control of PMSM at Low Speed", *Energy Conversion, IEEE Transactions on*, Jun-12, vol. 27, no.2, pp 250-260
33. Sarikhani, A.; Mohammed, O.A., "HIL-Based Finite-Element Design Optimization Process for the Computational Prototyping of Electric Motor Drives", *Energy Conversion, IEEE Transactions on*, Sept. 2012, vol. 27, no.3, pp 737-746
34. Ahmed Mohamed, M. Elshaer, Osama Mohammed, "Control enhancement of power conditioning units for high quality PV systems", *Elsevier Electric Power Systems Research*, Vol. 90, pp. 30-41, September 2012.
35. Sarikhani, A.; Mohammed, O.A., "Sensorless Control of PM Synchronous Machines by Physics-Based EMF Observer", *Energy Conversion, IEEE Transactions on*, Dec. 2012, vol. 27, no.4, pp 1009-1017
36. Sarikhani, A.; Mohammed, O.A., "Demagnetization Control for Reliable Flux Weakening Control in PM Synchronous Machine", *Energy Conversion, IEEE Transactions on*, Dec. 2012, vol. 27, no.4, pp 1046-1055
37. Salehi, V.; Mohamed, A.; Mazloomzadeh, A.; Mohammed, O.A., "Laboratory-Based Smart Power System, Part II: Control, Monitoring, and Protection", *Smart Grid, IEEE Transactions on*, Sept. 2012, vol. 3, no.3, pp 1405-1417
38. Salehi, V.; Mohamed, A.; Mazloomzadeh, A.; Mohammed, O.A., "Laboratory-Based Smart Power System, Part I: Design and System Development", *Smart Grid, IEEE Transactions on*, Sept. 2012, vol. 3, no.3, pp 1394-1404
39. Barzegaran, M. R.; Mohammed, O.A., "A Generalized Equivalent Source Model of AC Electric Machines for Numerical Electromagnetic Field Signature Studies", *Magnetics, IEEE Transactions on*, Nov. 2012, vol. 48, no.11, pp 4440-4443
40. Sarikhani, A.; Barzegaran, M.; Mohammed, O.A., "Optimum Equivalent Models of Multi-Source Systems for the Study of Electromagnetic Signatures and Radiated Emissions from Electric Drives", *Magnetics, IEEE Transactions on*, Feb. 2012, vol. 48, no.2, pp 1011-1014.
41. Mahmoud Amin, Heba Musa and Osama Mohammed, "Wide Area Measurement System for Smart Grid Applications Involving Hybrid Energy Sources," *Springer Journal on Energy Systems, Energy Systems: Volume 3, Issue 1, PP. 3-21* February, 2012.
42. Amin, M.M.N.; Mohammed, O.A., "DC-Bus Voltage Control Technique for Parallel-Integrated Permanent Magnet Wind Generation Systems", *Energy Conversion, IEEE Transactions on*, Dec. 2011, vol. 26, no.4, pp 1140-1150.
43. Sarikhani A. and Mohammed O.A., "Electromagnetic field computation with external circuit coupling for evaluating the performance of electric motor designs," *Journal of Applied Computational Electromagnetic (ACES)*, Vol. 26, No.12 , pp. 1054-4887, Dec. 2011.
44. A. Nejadpak, M.R Barzegaran, O.A. Mohammed, "Evaluation of High Frequency Electromagnetic Behavior of Planar Inductor Designs for Resonant Circuits in Switching Power Converters," *ACES Journal*, vol.26, no.9, pp. 737-747, Sept. 2011
45. Mahmoud Amin and Osama Mohammed, "A Three-Phase High Frequency Semi-Controlled Battery Charging Power Converter for Plug-In Hybrid Electric Vehicles," *Journal of Power Electronics*, vol. 11, no. 4, pp. 490-498, July 2011
46. Abed, N.Y.; Mohammed, O.A., "Frequency-Dependent Coupled Field-Circuit Modeling of Armored Power Cables Using Finite Elements", *Magnetics, IEEE Transactions on*, May-11, vol. 47, no.5, pp 930-933

47. Sarikhani, A.; Mohammed, O.A., "Multiobjective Design Optimization of Coupled PM Synchronous Motor-Drive Using Physics-Based Modeling Approach", *Magnetics, IEEE Transactions on*, May-11, vol. 47, no.5, pp 1266-1269
48. Rosales, A.; Sarikhani, A.; Mohammed, O.A., "Evaluation of Radiated Electromagnetic Field Interference Due to Frequency Switching in PWM Motor Drives by 3D Finite Elements", *Magnetics, IEEE Transactions on*, May-11, vol. 47, no.5, pp 1474-1477
49. Amin, M.M.; Mohammed, O.A., "Development of High-Performance Grid-Connected Wind Energy Conversion System for Optimum Utilization of Variable Speed Wind Turbines", *Sustainable Energy, IEEE Transactions on*, Jul-11, vol. 2, no.3, pp 235-245
50. Abed, N.Y.; Mohammed, O.A., "Physics-Based High-Frequency Transformer Modeling by Finite Elements", *Magnetics, IEEE Transactions on*, Aug. 2010, vol. 46, no.8, pp 3249-3252
51. Mohammed, O.A.; Ganu, S., "FE-Circuit Coupled Model of Electric Machines for Simulation and Evaluation of EMI Issues in Motor Drives", *Magnetics, IEEE Transactions on*, Aug. 2010, vol. 46, no.8, pp 3389-3392
52. Liu, Z.; Mohammed, O.A.; Shuo Liu, "Equivalent Hardware Representation of PM Synchronous Motors From the Physics-Based Phase Variable Model Obtained Through FE Computation", *Magnetics, IEEE Transactions on*, Mar-09, vol. 45, no.3, pp 1450-1453
53. Mohammed O.A., Liu S., and Liu Z., "FE-based physical phase variable model of PM synchronous machines under stator winding short circuit faults," *IET Science Measurement & Technology*, Vol.1, No.1, pp.12-16, January 2007.
54. O. A. Mohammed, S. Ganu, N. Y. Abed, S. Liu, and Z. Liu, "High frequency phase variable model of electric machines from electromagnetic field computations," *Applied Computational Electromagnetics Society Journal*, Vol. 22, No. 1, pp. 164-171, March 2007.
55. Liu, S.; Liu, Z.; Mohammed, O.A., "FE-Based Modeling of Single-Phase Distribution Transformers With Winding Short Circuit Faults", *Magnetics, IEEE Transactions on*, Apr-07, vol. 43, no.4, pp 1841-1844
56. Mohammed, O.A.; Liu, Z.; Liu, S.; Abed, N.Y., "Internal Short Circuit Fault Diagnosis for PM Machines Using FE-Based Phase Variable Model and Wavelets Analysis", *Magnetics, IEEE Transactions on*, Apr-07, vol. 43, no.4, pp 1729-1732
57. Shuo Liu; Mohammed, O.A.; Liu, Z., "An Improved FE-Based Phase Variable Model of PM Synchronous Machines Including Dynamic Core Losses", *Magnetics, IEEE Transactions on*, Apr-07, vol. 43, no.4, pp 1801-1804
58. Abed, N.Y.; Mohammed, O.A., "Modeling and Characterization of Transformers Internal Faults Using Finite Element and Discrete Wavelet Transforms", *Magnetics, IEEE Transactions on*, Apr-07, vol. 43, no.4, pp 1425-1428
59. Liu, Z.; Liu, S.; Mohammed, O.A., "A Practical Method for Building the FE-Based Phase Variable Model of Single Phase Transformers for Dynamic Simulations", *Magnetics, IEEE Transactions on*, Apr-07, vol. 43, no.4, pp 1761-1764
60. Mohammed, O.A.; Ganu, S.; Abed, N.; Liu, S.; Liu, Z., "High frequency PM synchronous motor model determined by FE analysis", *Magnetics, IEEE Transactions on*, Apr-06, vol. 42, no.4, pp 1291-1294
61. Mohammed, O.A.; Liu, Z.; Liu, S.; Abed, N.Y., "Finite-element-based nonlinear physical model of iron-core transformers for dynamic simulations", *Magnetics, IEEE Transactions on*, Apr-06, vol. 42, no.4, pp 1027-1030
62. Mohammed, O.A.; Abed, N.Y.; Ganu, S., "Modeling and Characterization of Induction Motor Internal Faults Using Finite-Element and Discrete Wavelet Transforms", *Magnetics, IEEE Transactions on*, Oct. 2006, vol. 42, no.10, pp 3434-3436

63. Mohammed, O.A.; Abed, N.Y.; Liu, S., "Investigation of the harmonic behavior of three phase transformer under nonsinusoidal operation using finite element and wavelet packets", *Magnetics, IEEE Transactions on*, Apr-06, vol. 42, no.4, pp 967-970
64. Mohammed, O.A.; Liu, Z.; Liu, S., "A novel sensorless control strategy of doubly fed induction motor and its examination with the physical modeling of machines", *Magnetics, IEEE Transactions on*, May-05, vol. 41, no.5, pp 1852-1855
65. Mohammed, O.A.; Liu, S.; Liu, Z., "A phase variable model of brushless dc motors based on finite element analysis and its coupling with external circuits", *Magnetics, IEEE Transactions on*, May-05, vol. 41, no.5, pp 1576-1579
66. Mohammed, O.A.; Liu, S.; Liu, Z., "Physical modeling of PM synchronous motors for integrated coupling with Machine drives", *Magnetics, IEEE Transactions on*, May-05, vol. 41, no.5, pp 1628-1631
67. Saleh, K.I.; Mohammed, O.A.; Badr, M.A., "Field-oriented vector control of synchronous motors with additional field winding", *Energy Conversion, IEEE Transactions on*, Mar-04, vol. 19, no.1, pp 95-101
68. Mohammed, O.A.; Liu, S.; Liu, Z., "Phase-variable model of PM synchronous machines for integrated motor drives", *Science, Measurement and Technology, IEE Proceedings -*, 4 Nov. 2004, vol. 151, no.6, pp 423-429
69. O. A. Mohammed, S. Liu, and S. Ganu, "Inverse Magnetostrictive Effects and Its inclusion in Magneto-Mechanical Modeling of Electric Machines," *Middle East Power Systems Journal*, vol.1, July 2004, pp. 21-25.
70. Mohammed O.A., Liu S., and Liu Z., "Phase-variable model of PM synchronous machines for integrated motor drives," *IEE Proceedings Science Measurement and Technology*, Vol.151, No.6, pp. 423- 429, Nov 2004.
71. O. A. Mohammed, T.E. Calvert, L. Petersen and R. McConnell, "Transient Modeling of Magnetoelastic Problems in Electric Machinery," *Journal of the Applied Computational Electromagnetic Society*, Vol.11, No. 3, November 2003, P.P. 77-83.
72. Kanai Yasushi, Osama A. Mohammed, Matsubara Ryo, Muraoka Hiroaki, and Nakamura Yoshisha, "Numerical analysis of narrow-track single-pole-type head with side shields for 1 Tb/in.2," *Journal of Applied Physics* , Vol.93, No.10, pp.7738-7740, May-2003.
73. Kanai, Y.; Mohammed, O.A.; Matsubara, Ryo; Muraoka, H.; Nakamura, Yoshisha, "Numerical analysis of narrow-track single-pole-type head with side shields for 1 Tb/in²," *Journal of Applied Physics*, May-03, vol. 93, no.10, pp 7738-7740.
74. Yao Yingying; Xie Dexin; Wang Jinming; Mohammed, O.A., "A multi-step method for 3-D nonlinear transient eddy current problems", *Magnetics, IEEE Transactions on*, Sep-01, vol. 37, no.5, pp 3194-3197
75. Wang Jinming; Xie Dexin; Yao Yingying; Mohammed, O.A., "A modified solution for large sparse symmetric linear systems in electromagnetic field analysis", *Magnetics, IEEE Transactions on*, Sep-01, vol. 37, no.5, pp 3494-3497
76. Mohammed, O.A.; Lowther, D.A.; Lean, Meng H.; Alhalabi, B., "On the creation of a generalized design optimization environment for electromagnetic devices", *Magnetics, IEEE Transactions on*, Sep-01, vol. 37, no.5, pp 3562-3565
77. Mohammed, O.A.; Calvert, T.; McConnell, R., "Coupled magnetoelastic finite element formulation including anisotropic reluctivity tensor and magnetostriction effects for machinery applications", *Magnetics, IEEE Transactions on*, Sep-01, vol. 37, no.5, pp 3388-3392
78. Moallem, M.; Mirzaeian, B.; Mohammed, O.A.; Lucas, C., "Multi-objective genetic-fuzzy optimal design of PI controller in the indirect field oriented control of an induction motor", *Magnetics, IEEE Transactions on*, Sep-01, vol. 37, no.5, pp 3608-3612

79. Arkadan, A.A.; Isaac, F. N.; Mohammed, O.A., "Parameters evaluation of ALA synchronous reluctance motor drives", *Magnetics, IEEE Transactions on*, Jul-00, vol. 36, no.4, pp 1950-1955
80. Mohammed, O.A.; Sebastien, R.Y., "A real-time electromagnetic analysis of electric machines for educational purposes and laboratory implementation", *Magnetics, IEEE Transactions on*, Sep-98, vol. 34, no.5, pp 3628-3631
81. Mohammed, O.A.; Uler, G.F., "A hybrid technique for the optimal design of electromagnetic devices using direct search and genetic algorithms", *Magnetics, IEEE Transactions on*, Mar-97, vol. 33, no.2, pp 1931-1934
82. Mohammed, O.A.; Uler, F.G.; Russenschuck, S.; Kasper, M., "Design optimization of a superferric octupole using various evolutionary and deterministic techniques", *Magnetics, IEEE Transactions on*, Mar-97, vol. 33, no.2, pp 1816-1821
83. Mohammed, O. A. " Stochastic Design in Applied Electromagnetics...The Genetic Algorithm Approach and System Optimization Strategies," *International Compumag Society Newsletter*, ISSN 1026-0854, Vol. 4, No. 2, P.P. 5-10, July 1997.
84. Uler, G.F.; Mohammed, O.A., "Ancillary techniques for the practical implementation of GAs to the optimal design of electromagnetic devices", *Magnetics, IEEE Transactions on*, May-96, vol. 32, no.3, pp 1194-1197
85. Mohammed, O. A and Uler, F. G., "Hybrid GA Optimization of Electromagnetic Devices," *The Studies in Applied Electromagnetics and Mechanics, Volume 10 (Nonlinear Electromagnetic Systems)*, IOS Press, 1996 P.P. 214-217.
86. Mohammed, O. A. and Uler, F. G., "Premature Convergence in the Application of Genetic Algorithms to Optimal Design in Electromagnetics," *Studies in Applied Electromagnetics and Mechanics, Volume 10 (Nonlinear Electromagnetic Systems)*, IOS Press, 1996 P.P. 218-221.
87. Mohammed, O.; Park, D.; Merchant, R.; Dinh, T.; Tong, C.; Azeem, A.; Farah, J.; Drake, C., "Practical experiences with an adaptive neural network short-term load forecasting system", *Power Systems, IEEE Transactions on*, Feb-95, vol. 10, no.1, pp 254-265
88. Uler, G.F.; Mohammed, O.A.; Chang-seop Koh, "Design optimization of electrical machines using genetic algorithms", *Magnetics, IEEE Transactions on*, May-95, vol. 31, no.3, pp 2008-2011
89. Xie Dexin; Bai Baodong; Yao Yingying; Wang Fengxiang; Mohammed, O.A., "Shape design optimization in non-linear magnetic problems using simulated annealing with complex strategy", *Magnetics, IEEE Transactions on*, Nov-95, vol. 31, no.6, pp 3569-3571
90. Bai Baodong; Xie Dexin; Cui Jiefan; Mohammed, O.A., "Optimal transposition design of transformer windings by Genetic Algorithms", *Magnetics, IEEE Transactions on*, Nov-95, vol. 31, no.6, pp 3572-3574
91. Chang-seop Koh; Mohammed, O.A.; Song-yop Hahn, "Nonlinear shape design sensitivity analysis of magnetostatic problems using boundary element method", *Magnetics, IEEE Transactions on*, May-95, vol. 31, no.3, pp 1944-1947
92. Mohammed, O. A. and Uler, F. G." Recent Trends in Computational Electromagnetics for Analysis and Design," *The International Journal of Applied Electromagnetics in Materials*, Elsevier Science B.V., Vol. 6, P.P. 195-198, March, 1995.
93. Uler, F. G., Mohammed, O. A. and Koh, C. S. " Genetic Algorithms Applied to Design Optimization," *The International Journal of Applied Electromagnetics in Materials*, Elsevier Science B.V., Vol. 6, pp. 43- 46, March 1995.
94. Dexin, X., Mohammed, O. A., Uler, F. G. and Koh, C. S." T-W Finite Element Analysis of 3D Nonlinear Transient Eddy Current Problems," *The International Journal of Applied Electromagnetics in Materials*, Elsevier Science B.V., Vol. 6, P.P. 211-214, March, 1995.
95. Koh, C. H., Mohammed, O. A., Jung, H. K. and Hahn, S. Y., " The Application of Artificial Neural Networks to Defect Characterization in Eddy Current NDT," *The International*

- Journal of Applied Electromagnetics in Materials, Elsevier Science B.V., Vol. 6, P.P. 161-164, March, 1995.
96. Koh Chang Seop, Osama A. Mohammed, Kim Jun-o and Hahn Song-yop , "Optimum design of voice coil motor with constant torque coefficients using evolution strategy," Journal of Applied Physics, Vol.75, No.10, pp.6045-6047, May -1994.
 97. Mohammed, O. A., Merchant, R., Park, D. C., Uler, F. G. " An Adaptively Trained Neural Network for the Optimal Design of Electromagnetic Devices," The International Journal of Applied Electromagnetics in Materials, Elsevier Science B.V., Vol. 5, pp. 171-174, 1994.
 98. Uler, G.F.; Mohammed, O.A.; Chang-seop Koh, "Utilizing genetic algorithms for the optimal design of electromagnetic devices", Magnetics, IEEE Transactions on, Nov-94, vol. 30, no.6, pp 4296-4298
 99. Mohammed, O.A.; Merchant, R.; Uler, F.G., "An intelligent system for design optimization of electromagnetic devices", Magnetics, IEEE Transactions on, Sep-94, vol. 30, no.5, pp 3633-3636
 100. Chang-seop Koh; Mohammed, O.A.; Song-Yop Hahn, "Detection of magnetic body using artificial neural network with modified simulated annealing", Magnetics, IEEE Transactions on, Sep-94, vol. 30, no.5, pp 3644-3647
 101. Uler, F.G.; Mohammed, O.A., "A 3-D finite element mesh generator for complex volumes", Magnetics, IEEE Transactions on, Sep-94, vol. 30, no.5, pp 3539-3542
 102. Chang-seop Koh; Mohammed, O.A.; Kim, Jun; and Song-Yop Hahn, "Optimum design of voice coil motor with constant torque coefficients using evolution strategy", Journal of Applied Physics, May-94, vol. 75, no.10, pp 6045-6047
 103. Mohammed, O.A.; Merchant, R.S.; Uler, F.G., "Utilizing Hopfield neural networks and an improved simulated annealing procedure for design optimization of electromagnetic devices", Magnetics, IEEE Transactions on, Nov-93, vol. 29, no.6, pp 2404-2406
 104. Mohammed, O.A.; Uler, F.G., "Detailed 2-D and 3-D finite element modeling of the human body for the evaluation of defibrillation fields", Magnetics, IEEE Transactions on, Mar-93, vol. 29, no.2, pp 1403-1406
 105. Mohammed, O.A.; Uler, F.G., "A state space approach and formulation for the solution of nonlinear 3-D transient eddy current problems", Magnetics, IEEE Transactions on, Mar-92, vol. 28, no.2, pp 1111-1114
 106. Mohammed, O.A.; Dong C.Park; Uler, F.G.; Chen Ziqiang, "Design optimization of electromagnetic devices using artificial neural networks", Magnetics, IEEE Transactions on, Sep-92, vol. 28, no.5, pp 2805-2807
 107. Mohammed, O.A.; Uler, F.G., "A state space technique for the solution of nonlinear 3-D transient eddy current problems", Magnetics, IEEE Transactions on, Nov-91, vol. 27, no.6, pp 5220-5222
 108. Mohammed, O.A.; Gordon, H.W., "Analysis of rotating machine concepts in the energy conversion laboratory from experimental data", Power Systems, IEEE Transactions on, May-91, vol. 6, no.2, pp 876-881
 109. Mohammed, O.A.; Uler, F.G., "3-D finite element time-varying fields and eddy currents in nonlinear thin steel channels", Magnetics, IEEE Transactions on, Sep-91, vol. 27, no.5, pp 4008-4011
 110. Mohammed, O.A.; Hagmann, M.J.; Uler, F.G., "Calculations of potential distributions produced by implanted electrodes in a man model by finite elements", Magnetics, IEEE Transactions on, Sep-90, vol. 26, no.5, pp 1777-1779
 111. Mohammed, O. A., "Optimal Design of Magnetic Circuits by Finite Elements and Dynamic Search Procedure," The International Journal For Computation and Mathematics in Electrical and Electronic Engineering, COMPEL Vol. 9, No. 1, Sup. A. pp. 107-110, March, 1990.

112. Mohammed, O. A., Xiaodi, Z. and Üler, F. G., "3D Eddy Current Calculations in an Asymmetrical Conductor With a Hole Using The Iterative Scalar Potential Method," The International Journal For Computation and Mathematics in Electrical and Electronic Engineering, COMPEL, Vol. 9, No.1, Sup. A. pp. 242- 244, March, 1990.
113. Mohammed, O. A. , Üler, F. G. and Ming, Z., "3D Finite Element Transient Field and Eddy Current Computations in Nonlinear Thin Steel Plates Over A Coil;" The International Journal For Computation and Mathematics in Electrical and Electronic Engineering, COMPEL Vol. 9, No. 1, Sup. A., pp. 269-271, March, 1990.
114. Mohammed O. A., Xiaodi, Z. and Üler, F. G. "An Iterative Technique for 3D Eddy Current Computations by Finite Elements and Scalar Potential;" The International Journal For Computation and Mathematics in Electrical and Electronic Engineering, COMPEL Vol.9, No.1, Supplement A., pp. 17-20, March, 1990.
115. Mohammed, O.A.; Uler, F.G.; Zhang, X., "The ISP technique 3D electromagnetic and eddy current computations in general media", Magnetics, IEEE Transactions on, Sep-90, vol. 26, no.5, pp 1668-1670
116. Mohammed, O.A.; Jones, W.K., "A dynamic programming-finite element procedure for the design of nonlinear magnetic devices", Magnetics, IEEE Transactions on, Mar-90, vol. 26, no.2, pp 666-669
117. Mohammed, O. A. and Jones, W. K., "Synthesis of Electromagnetic Devices by Finite Element and Dynamic Programming;" Electromagnetic Fields in Electrical Engineering, International Academic Publishers, Pergamon Press, pp. 653-656, October 1989.
118. Osama A. Mohammed, and Jones W. Kinzy, "A miniature transformer/dc-dc converter for implantable medical devices," Journal of Applied Physics, Vol.64, No.10, pp.5856-5858, Nov -1988.
119. Mohammed, O.A.; Mundulas, J.M., "Improvements in RF monitoring system on generators", Energy Conversion, IEEE Transactions on, Jun-89, vol. 4, no.2, pp 237-243
120. Mohammed, O.A.; Garcia, L.F., "A finite element/superposition technique for the design of electromagnetically coupled coils", Magnetics, IEEE Transactions on, Sep-89, vol. 25, no.5, pp 3575-3577.
121. 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., "A listing of continuing education courses in electric power engineering-1988", Power Systems, IEEE Transactions on, Aug-89, vol. 4, no.3, pp 1263-1275
122. Mohammed, O.A.; Garcia, L.F., "An optimum finite element automatic grid generator for electromagnetic field computations", Magnetics, IEEE Transactions on, Nov-88, vol. 24, no.6, pp 3177-3179
123. Mohammed, O.A.; Demerdash, N.A., "An extremely fast technique for nonlinear three dimensional finite element magnetic field computations", Magnetics, IEEE Transactions on, Sep-87, vol. 23, no.5, pp 3575-3577
124. Demerdash, N.A.; Mohammed, O.A.; Nehl, T.W., "Forces on Conductor Segments and Magnetized Ferrous Cores using a Three Dimensional Finite Element Vector Potential Method", Energy Conversion, IEEE Transactions on, Sept. 1986, EC-1, no.3, pp 109-117
125. Mohammed, O.A.; Demerdash, N.A.; Nehl, T.W., "Nonlinear Vector Potential Formulation and Experimental Verification of Newton-Raphson Solution of Three Dimensional Magnetostatic Fields in Electrical Devices", Power Engineering Review, IEEE, Mar-86, PER-6, no.3, pp 45-45
126. Mohammed, O.A.; Demerdash, N.A.; Nehl, T.W., "Nonlinear Vector Potential Formulation and Experimental Verification of Newton-Raphson Solution of Three Dimensional Magnetostatic Fields in Electrical Devices", Energy Conversion, IEEE Transactions on, Mar-86, EC-1, no.1, pp 177-185

127. Mohammed, O.A.; Batina, W.; Gipson, L., "Electromagnetic field modeling of implantable telemetry systems", *Magnetics, IEEE Transactions on*, Sep-85, vol. 21, no.5, pp 2068-2070
128. Mohammed, O.A.; Demerdash, N.A., "A 3-D finite element perturbational method for determining saturated values of transformer winding including experimental verification", *Magnetics, IEEE Transactions on*, Sep-85, vol. 21, no.5, pp 1877-1879
129. Mohammed, O.A.; Demerdash, N.A.; Nehl, T.W., "Validity of Finite Element Formulation and Solution of Three Dimensional Magnetostatic Problems in Electrical Devices with Applications to Transformers and Reactors", *Power Apparatus and Systems, IEEE Transactions on*, Jul-84, PAS-103, no.7, pp 1846-1853
130. Mohammed, O.A.; Demerdash, N.A.; Nehl, T.W., "Nonlinear three dimensional field computation methods in laminated iron cores under saturated conditions", *Magnetics, IEEE Transactions on*, Sep-83, vol. 19, no.5, pp 2091-2093
131. Mohammed O. A., Davis W. A., and Popovic B. D., and Nehl T. W., Demerdash N. A., "On the uniqueness of solution of magnetostatic vector-potential problems by three-dimensional finite-element methods," *Journal of Applied Physics*, Vol.53, No.11, pp.8402-8404, Nov 1982.
132. Mohammed, O. A., Riad, S. M., Davis, W. A. and Ahmad, M. "Modeling of Thick-Film Striplines Using the Finite Element Method," *The International Journal for Hybrid Microelectronics*, Vol. 5, No. 2, pp. 455-459, November 1982.
133. Nagarkatti, A. K.; Mohammed, O.A.; Demerdash, N.A., "Special Losses in Rotors of Electronically Commutated Brushless DC Motors Induced by Non-Uniformly Rotating Armature MMFS", *Power Apparatus and Systems, IEEE Transactions on*, Dec. 1982, PAS-101, no.12, pp 4502-4507
134. Demerdash, N.A.; Nehl, T.W.; Mohammed, O.A.; Miller, R. H.; Fouad, F.A., "Solution of Eddy Current Problems Using Three Dimensional Finite Element Complex Magnetic Vector Potential", *Power Apparatus and Systems, IEEE Transactions on*, Nov. 1982, PAS-101, no.11, pp 4222-4229
135. Demerdash, N.A.; Nehl, T.W.; Mohammed, O.A.; Fouad, F.A., "Nonlinear three dimensional magnetic vector potential finite element solution of field problems including experimental verification", *Magnetics, IEEE Transactions on*, Nov-81, vol. 17, no.6, pp 3408-3410
136. 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 Apparatus and Systems, IEEE Transactions on*, Aug. 1981, PAS-100, no.8, pp 4112-4122
137. Demerdash, N.A.; Fouad, F.A.; Nehl, T.W.; Mohammed, O.A., "Three Dimensional Finite Element Vector Potential Formulation of Magnetic Fields in Electrical Apparatus", *Power Apparatus and Systems, IEEE Transactions on*, Aug. 1981, PAS-100, no.8, pp 4104-4111.