

International and National Refereed Conference Papers:

1. M. E. Hariri, T. Youssef, H. F. Habib and O. Mohammed, "A Network-in-the-Loop Framework to Analyze Cyber and Physical Information Flow in Smart Grids," 2018 IEEE Innovative Smart Grid Technologies - Asia (ISGT Asia), Singapore, Singapore, 2018, pp. 646-651.
2. M. E. Hariri, S. Faddel and O. Mohammed, "An artificially intelligent physical model-checking approach to detect switching-related attacks on power systems," 2017 IEEE 7th International Conference on Power and Energy Systems (ICPES), Toronto, ON, 2017, pp. 23-28.
3. Ahmed. F. Ebrahim and Osama Mohammed, "Household Load Forecasting based on a pre-processing Non-Intrusive Load Monitoring Techniques," Genentech 2018, April 04-06, 2018, Austin, Texas.
4. Ahmed. F. Ebrahim, A. A. S. Mohamed, Ahmed A. Saad, Osama A. Mohammed, "Vector Decoupling Control Design based on Genetic Algorithm for a Residential Microgrid System for Future City Houses at Islanding Operation," IEEE Southeast-Con 2018, hold at April 19-21 2018 in Tampa, FL.
5. Ahmed. F. Ebrahim, Nour Elsayad and Osama A. Mohammed, "Medium Voltage DC Testbed: A Hardware-Based Tool to Integrate DC Microgrids/Nanogrids to the Utility Infrastructure," IEEE IAS 2018 conference, 23-27 2018 in Portland, OR.
6. Ahmed. F. Ebrahim and Osama A. Mohammed, "Energy Disaggregation Based Deep Learning Techniques: A pre-processing Stage to Enhance the Household Load Forecasting," IEEE IAS 2018 conference, 23-27 2018 in Portland, OR.
7. Mohammad Mahmoudian Esfahani, Osama Mohammed, "Secure Blockchain-based Energy Transaction Framework in Smart Power Systems," IEEE IECON 2018, Washington, DC, October 2018.
8. Mohammad Mahmoudian Esfahani, Hany F Habib, Osama Mohammed, "A Hierarchical Power Routing Scheme for Interlinking Converters in Unbalanced Hybrid AC-DC Microgrids," IEEE IECON 2018, Washington, DC, October 2018.
9. Abla O. Hariri, M. Mahmoudian Esfahani, and Osama Mohammed, "A Cognitive Price-Based Approach for Real-time Management of En-route Electric Vehicles" in the 2018 IEEE Transportation Electrification Conference & Expo, Long Beach, CA, June 2018
10. M. Shojaie, N. Elsayad and O. A. Mohammed, "Design of an all-GaN bidirectional DC-DC converter for medium voltage DC ship power systems using series-stacked GaN modules," 2018 IEEE Applied Power Electronics Conference and Exposition (APEC), San Antonio, TX, USA, 2018, pp. 2155-2161.
11. M. Shojaie, and O.A. Mohammed, "A Multi-input DC-DC Converter with AC-DC PFC Buck-boost Stage for Hybrid Energy Storage Systems," Accepted in SoutheastCon, Tampa, FL, USA, 2018.
12. Hadi Moradisizkoochi, Nour Elsayad, and Osama Mohammed "Double-input converter, Gallium Nitride, multi-level converter, Renewable energy resources", SoutheastCon, Tampa, FL, USA, 2018.
13. Abla O. Hariri, Mohamad El Hariri, Tarek Youssef, and Osama Mohammed, "A Decentralized Multi-Agent System for Management of En Route Electric Vehicles" in SoutheastCon 2018, Tampa, FL, April 2018.
14. Moradisizkoochi, H.; Elsayad, N.; Mohammed, O. A Soft-Switched DC/DC Converter Using Integrated Dual Half-Bridge with High Voltage Gain and Low Voltage Stress for DC Microgrid Applications. *Inventions* 2018, 3, 63.

15. Elsayad, N.; Moradisizkoochi, H.; Mohammed, O. A New Three-Level Flying-Capacitor Boost Converter with an Integrated LC2D Output Network for Fuel-Cell Vehicles: Analysis and Design. *Inventions* 2018, 3, 61.
16. H. Moradisizkoochi, N. Elsayad, and O. A. Mohammed, " Experimental Verification of a GaN-Based Double-Input Soft-Switched DC/DC Converter for Hybrid Electric Vehicle Application," IEEE Industry Applications Society (IAS) Annual Meeting, 2018, (Accepted).
17. H. Moradisizkoochi, N. Elsayad, and O. A. Mohammed, " A Double-Input Three-Level Quasi-Z Source Converter Using GaN Switches with Reduced Voltage Stress for Multiple Energy Interface," IEEE SoutheastCon, 2018, (Accepted).
18. N. Elsayad, H. Moradisizkoochi, and O. A. Mohammed, " A Modular High-Frequency AC Link Power Electronic Transformer for Large-Scale Renewable Energy Systems with Energy Storage Units," 44th Annual Conference of the IEEE Industrial Electronics Society (IECON), 2018, (Accepted).
19. N. Elsayad, H. Moradisizkoochi, O. A. Mohammed, " A Three-Level Boost Converter with an Extended Gain and Reduced Voltage Stress Using WBG Devices," IEEE 6th Workshop on Wide Bandgap Power Devices & Applications (WiPDA), 2018.
20. M. Mahmoudian Esfahani, M.H. Cintuglu, O.A. Mohammed, "Optimal real-time congestion management in power markets based on particle swarm optimization", IEEE Power and Energy Society General Meeting 2017, DOI: 10.1109/PESGM.2017.8274117, July 2017.
21. Samy Faddel, Tarek Youssef, and Osama Mohammed, "Decentralized Controller for Energy Storage Management on MVDC Ship Power System with Pulsed Loads" in The 2018 IEEE Transportation Electrification Conference & Expo, May 2018
22. Hassan Eldeeb, Osama Mohammed, Control and Voltage Stability of a Medium Voltage DC Micro-grid Involving Pulsed loads," 2018 IEEE (EEEIC / I&CPS Europe), Palermo, 2018
23. Hany F. Habib, Mohammad Mahmoudian Esfahani, and Osama Mohammed, "Development of Protection Scheme for Active Distribution Systems with Penetration of Distributed Generation", accepted in SoutheastCon, Tampa, FL, 2018.
24. Hany F. Habib, Mohammad Mahmoudian Esfahani, and Osama Mohammed," Microgrid Stability Improvement using a Fuzzy-Based PSS Design for Virtual Synchronous Generator", accepted in SoutheastCon, Tampa, FL, 2018.
25. Ahmed. F. Ebrahim, A. A. S. Mohamed, Ahmed A. Saad, Osama A. Mohammed, "Vector Decoupling Control Design based on Genetic Algorithm for a Residential Microgrid System for Future City Houses at Islanding Operation" accepted to be presented at Southeast-Con 2018, to be held on April 19-21 2018 in Tampa, FL, United States.
26. M. Mahmoudian Esfahani, Abla Hariri and O. Mohammed, "Game-theory-based Real-Time Inter-Microgrid Market Design Using Hierarchical Optimization Algorithm" IEEE Power and Energy Society General Meeting, August 2018.
27. Samy Faddel, Mohamad El Hariri, and Osama Mohammed, "Intelligent Control Framework for Energy Storage Management on MVDC Ship Power System" in the 18th International Conference on Environment and Electrical Engineering 2018 (EEEIC), Palermo, Italy, June 2018.
28. Mohammad Mahmoudian Esfahani and Osama Mohammed, "Loadability Improvement of Unbalanced Hybrid AC- oop Framework to Analyze Cyber and Physical Information Flow in Small DC Microgrids Using a Supervisory Control Scheme for Interlinking Converters" 2018 IEEE PES Innovative Smart Grid Technologies Asia (ISGT Asia 2018), Singapore, May 2018.
29. Alberto Berzoy, H. H. Eldeeb and O. A. Mohammed, " Online Fault Detection of Stator Winding Faults in IM driven by DTC using the Off-diagonal Term of the Symmetrical Component Impedance Matrix," 2018 Applied Power Electronics Conference APEC in San Antonio Texas USA in 4-8 March of 2018

30. M. E. Hariri, Samy Faddel and O. Mohammed, "An artificially intelligent physical model-checking approach to detect switching-related attacks on power systems," 2017 IEEE 7th International Conference on Power and Energy Systems (ICPES), Toronto, ON, 2017, pp. 23-28.
31. Mohamad El Hariri, Tarek Youssef, Hany Habib, and Osama Mohammed, "A Network-in-the-Loop Framework to Analyze Cyber and Physical Information Flow in Smart Grids," In the 2018 IEEE PES Innovative Smart Grid Technologies Asia Conference (ISGT Asia 2018), Singapore, May 22-25, 2018. (Accepted on 28 February 2018).
32. Christopher R. Lashway, Alberto Berzoy, Nour Elsayad, and Osama Mohammed "Breakdown Voltage Assessment of GaN HEMT Devices through Physics-Based Modeling", ACES 2017.
33. Samy Faddel, A. Elsayed and O. Mohammed, "Bi-layer multi-objective optimal allocation and sizing of electric vehicle parking garage,"2017 IEEE Industry Applications Society Annual Meeting, Cincinnati, OH, 2017, pp. 1-8.
34. Ahmed. F. Ebrahim, O. A. Mohammed, "Household Load Forecasting based on a pre-processing Non-Intrusive Load Monitoring Techniques, "accepted to be presented at Greentech 2018, April 04-06, 2018 in Austin, Texas, United States.
35. H. Moradisizkoochi, N. Elsayad and O. A. Mohammed, "A resonant Bi-directional buck-boost converter with distributed voltage stress using eGaN HEMTs," 2017 IEEE 5th Workshop on Wide Bandgap Power Devices and Applications (WiPDA), Albuquerque, NM, 2017, pp. 143- 147.
36. Mohammed, O.A. Lashway, C., "Modeling and energy management of modern shipboard power systems," 2017 IEEE Energy Conversion Congress and Exposition, ECCE 2017, 3 November 2017, doi: 10.1109/ECCE.2017.8096979
37. A. Berzoy, C. R. Lashway, H. Moradisizkoochi and O. A. Mohammed, "Breakdown voltage improvement and analysis of GaN HEMTs through field plate inclusion and substrate removal,"2017 IEEE 5th Workshop on Wide Bandgap Power Devices and Applications (WiPDA), Albuquerque, NM, 2017, pp. 138-142.
38. Nour Elsayad, and Alberto Berzoy , "An Integrated PEBB using e-GaN FETs and Nanocrystalline Inductors for Multiple DC-DC, AC-DC and DC-AC Applications" – Workshop on Wide Bandgap Power Devices and Applications (WiPDA 2017), Albuquerque, NM, 2017
39. Hadi Moradisizkoochi, and Nour Elsayad, " A resonant Bi-directional buck-boost converter with distributed voltage stress using eGaN HEMTs" – Workshop on Wide Bandgap Power Devices and Applications (WiPDA 2017), Albuquerque, NM, 2017.
40. Mehdi Shojaie, and Nour Elsayad, "Design of an All-GaN Bidirectional DC-DC Converter for Medium Voltage DC Ship Power Systems Using Series-Stacked GaN Modules" – APEC 2018.
41. Nour Elsayad and Osama Mohammed "A PEBB using e-GaN FETs and Nanocrystalline Magnetics" – GOMAC2018, Miami, Florida.
42. Mohamad El Hariri, Tarek A. Youssef, Hany F. Habib, and Osama Mohammed, "Online False Data Detection and Lost Packet Forecasting System Using Time Series Neural Networks for IEC 61850 Sampled Measured Values", in IEEE Innovative Smart Grid Technologies North America (IEEE ISGT 2017), Washington DC, USA. Published 30 October 2017.
43. Mohamad El Hariri, Eric Harmon, Hany F. Habib, Tarek A. Youssef, and Osama Mohammed, "A Targeted Attack For Enhancing Resiliency of Intelligent Intrusion Detection Modules in Energy Cyber Physical Systems", in 19th International Conference on Intelligent Systems Applications to Power (ISAP 2017), San Antonio, Texas, USA. Published 18 December 2017.

44. H. F. Habib, M. E. Hariri, A. Elsayed and O. Mohammed, "Utilization of supercapacitors in adaptive protection applications for resiliency against communication failures: A size and cost optimization case study," 2017 IEEE Industry Applications Society Annual Meeting, Cincinnati, OH, 2017, pp. 1-8.
45. H. F. Habib, C. R. Lashway and O. A. Mohammed, "On the adaptive protection of microgrids: A review on how to mitigate cyber-attacks and communication failures," 2017 IEEE Industry Applications Society Annual Meeting, Cincinnati, OH, 2017, pp. 1-8.
46. A. A. S. Mohamed, Siguang An, A. A. Marim, and O. Mohammed, "Coil Design Multi-Objective Optimization of Power Pad in WPT System for EV Applications," in 2017 International Conference on the Computation of Electromagnetic Fields (Compumag), Daejeon, Korea, June 18, 2017.
47. Hassan H. Eldeeb, Abla O. Hariri, Christopher R. Lashway, and Osama A. Mohamed, "Optimal Sizing of Inverters and Energy Storage for Power Oscillation Limiting in Grid Connected Large Scale Electric Vehicle Park with Renewable Energy", 2017 IEEE Transportation electrification Conference and Expo (ITEC), Chicago, IL, USA, June 2017 (accepted)
48. Hassan H. Eldeeb, Abla O. Hariri, and Osama A. Mohammed, "Coordinated Control for the Integration of a Large Scale Electric Vehicle Park with PV into the MV Grid". 2017 IEEE 17th International Conference on Environment and Electrical Engineering (EEEIC), Milan, Italy, June 2017 (Accepted).
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50. Ahmed. F. Ebrahim, Tarek A. Youssef, Osama A. Mohammed, "Power Quality Improvements for Integration of Hybrid AC/DC Nanogrids to Power Systems" IEEE Greentech 2017, Denver, Colorado, March 29 – 31, 2017.
51. Hassan. H. Eldeeb and O. A. Mohammed, "Coordinated Power Management for the Integration of Active Distribution Networks with High PV Penetration into the Medium Voltage Grid," 2017 Ninth Annual IEEE Green Technologies Conference (GreenTech), Denver, CO, USA, 2017, pp. 254-259
52. Mohammad M. Esfahani, Mehmet H. Cintuglu, and Osama A. Mohammed, "Optimal Real-Time Congestion Management in Power Markets Based on Particle Swarm Optimization" accepted for publication in the IEEE Power and Energy Society General Meeting (PESGM), 2017.
53. Luis Garcia, Ferdinand Brassler, Mehmet H. Cintuglu, Ahmad-Reza Sadeghi, Osama A. Mohammed, and Saman A. Zonouz, "Hey, My Malware Knows Physics! Attacking PLCs with Physical Model Aware Rootkit" Network and Distributed System Security Symposium, DOI: 10.14722/ndss.2017.23313, January 2017.
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55. A. Berzoy, A. A. S. Mohamed, and O. A. Mohammed, "Stator Winding Inter-turn Fault in Induction Machines: Complex-Vector Transient and Steady-State Modelling," in 2017 IEEE IEMDC, 2017.
56. Nour Elsayad, Osama Mohammed "A Cascaded High Frequency AC Link System with Reduced Switch count and Low-Voltage Ride-Through Capability for Large Scale PV Systems", PES general meeting, 2017.

57. Nour Elsayad, Osama Mohammed "A Cascaded High Frequency AC Link System for a PV-Assisted Large-Scale EV fast charging station", ITECH 2017.
58. Nour Elsayad, Osama Mohammed, "Adaline and Recursive Least Square Error Based Techniques for Submodule Voltage Monitoring for High frequency AC Link Systems", GreenTech 2017.
59. Hadi Moradisizkoochi, Nour Elsayad, and Osama Mohammed "A Multi-level Bi-Directional Buck-Boost Converter Using GaN Devices for Electric Vehicle Applications", ITECH 2017.
60. Samy Faddel, Ahmed A.S Mohamed, and Osama Mohammed, "Linear Autonomous Control of Electric Vehicles Charging in Distribution Systems," 2017 IEEE Power & Energy Society General Meeting, Chicago, IL, 2017, pp. 1-5
61. Samy Faddel, and Osama Mohammed, "Automated Electric Vehicle Charger for Distributed Residential Demand Side Management," 2017 IEEE Industry Applications Society Annual Meeting, Cincinnati, OH, 2017, pp. 1-8.
62. H. F. Habib and O. Mohammed, "Decentralized Multi-Agent System for Protection and the Power Restoration Process in Microgrids," 2017 Ninth Annual IEEE Green Technologies Conference (GreenTech), Denver, CO, USA, 2017, pp. 358-364. doi: 10.1109/GreenTech.2017.58
63. Hany F. Habib, Abla Hariri, and Osama Mohammed," Deployment of Electric Vehicles in an Adaptive Protection Technique for Riding through Cyber Attack Threats in Microgrids" in 17th International Conference on Environment and Electrical Engineering, Milan, Italy, 2017.
64. Mohamad El Hariri, Tarek A. Youssef, Hany F. Habib, and Osama Mohammed, "Online False Data Detection and Lost Packet Forecasting System Using Time Series Neural Networks for IEC 61850 Sampled Measured Values", in IEEE Innovative Smart Grid Technologies North America (IEEE ISGT 2017), Washington DC, USA, April 23-25 2017. Accepted.
65. A. Sheikh, T. Youssef and O. Mohammed, "AC Microgrid Control Using Adaptive Synchronous Reference Frame PLL," 2017 Ninth Annual IEEE Green Technologies Conference (GreenTech), Denver, CO, 2017, pp. 46-51. doi: 10.1109/GreenTech.2017.13
66. C.R. Lashway, O.A. Mohammed, "3DFEA for the Study of Lithium Ion Battery Voltage Behavior under Loading and Charging Conditions," presented at the 17th Biennial Conference on Electromagnetic Field Computation (CEFC 2016), Miami, FL, 15th November 2016.
67. Ahmed Elsayed, Nour Elsayad, and O. A. Mohammed "Pareto Based Optimal Sizing and Mix of Energy Storage in Ship Power Systems with Considering Weight" IAS annual meeting October 2016
68. A. S. Mohamed, Felipe G. N. de Almeida, and Osama Mohammed, "Steady-state Performance Assessment of Different Compensation Topologies in Bidirectional IWPT System for V2G Applications", IEEE VTC2016-Fall, 18 Sept 2016.
69. Sriharsha Etigowni, Mehmet Cintuglu, Maryam Kazerooni, Shamina Hossain, Pengfei Sun, Katherine Davis, Osama Mohammed, Saman Zonouz "Cyber-Air-Gapped Detection of Controller Attacks through Physical Interdependencies ", in International Conference on Smart Grid Communications, Sydney, Australia, August 2016
70. C.R. Lashway, A. Elsayed, O.A. Mohammed, "Management Scheme for Parallel Connected Hybrid Energy Storage in Electric Vehicles," presented at the 2016 IEEE Power & Energy Society General Meeting (PES 2016), Boston, MA, 18 Jul 2016.
71. A. S. Mohamed, and Osama Mohammed, "Harmonics-Based Steady-State Mathematical Model of Bi-directional Inductive Wireless Power Transfer System in V2G Applications", IEEE ITEC2016, June 27, 2016.
72. Tarek A. Youssef, Mohamad El Hariri, Nicole Bugay, and Osama A. Mohammed, "IEC

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 76. C.R. Lashway, G. Constant, J. Theogene, O.A. Mohammed, "A Real-time Circuit Topology for Battery Impedance Monitoring" SoutheastCon 2016, 30 Mar - 01 Apr 2016
 77. C.R. Lashway, A.T. Elsayed, O.A. Mohammed, "DC Voltage Ripple Quantification for a Flywheel-Battery based Hybrid Energy Storage System" IEEE Applied Power Electronics Conference and Exposition (APEC), 23 Mar 2016
 78. A. S. Mohamed, Alberto Berzoy and Osama A. Mohammed "Fuzzy Predictive DTC of Induction Machines with reduced Torque Ripple and High Performance Operation", in Applied Power Electronics Conference March 20 2016
 79. A. S. Mohamed, Alberto Berzoy, and Osama Mohammed, "Physics-based FE Model and Analytical Verification of Bi-directional Inductive Wireless Power Transfer System", ACES 2016, March 13, 2016.
 80. Christopher R. Lashway; Ahmed Elsayed; Tarek Yousef and Osama A. Mohammed "Voltage Analysis for Flywheel-Battery Based Energy Storage System", 31st Annual IEEE Applied Power Electronics Conference (APEC) March 2016.
 81. Luis Garcia Antonio, Ferdinand Brasser, Mehmet Hazar Cintuglu, Osama Mohammed, Ahmad-Reza Sadeghi, Saman Zonouz "Harvey: How to Backstab Your Industrial Control System with a Man-in-the-PLC" USENIX Security '16 HotCRP , February 2016
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 84. A. Hariri, A. Elsayed and O. A. Mohammad, "An integrated characterization model for the magnetic design of an EV charger's circular wireless power transfer pads," 2016 IEEE Conference on Electromagnetic Field Computation (CEFC), Miami, FL, 2016, pp. 1-1. doi: 10.1109/CEFC.2016.7816427
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88. A. A. S. Mohamed, A. Berzoy, F. G. N. de Almeida, and O. Mohammed, "Steady-state performance assessment of different compensation topologies in two-way IWPT system for EV ancillary services," in 2016 IEEE Industry Applications Society Annual Meeting, 2016, pp. 1–8.
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104. Ahmed Elsayed; Tarek Yousef and Osama Mohammed, “Modelling and control of a Low Speed Flywheel Driving System for Pulsed Load Mitigation in DC Distribution Networks” 2015 IEEE IAS Meeting, October 2015
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