

Mobile +20-1060226881
+966-545421239
E-mail emad@eng.aswu.edu.eg
emamahmoud@ju.edu.sa
emad.mahmoud@aswu.edu.eg
emad.elbakoury@gmail.com



Dr. Emad M. AHMED

PERSONAL INFORMATION

Name	Emad Mohamed Ahmed Mahmoud
Date of birth	24 th February 1979
Sex	Male
Nationality	Egypt
Marital Status	Married
Current Position	<u>Prementant:</u> Associate Professor in Departement of Electrical Engineering, Faculty of Engineering, Aswan University, EGYPT <u>Sabbatical Leave:</u> Departement of Electrical Engineering, Faculty of Engineering, Jouf University, Al Jouf, KSA from Nov. 2017 till now
Work Address	<u>Permenant:</u> Departement of Electrical Engineering, Faculty of Engineering, Abou-Elresh kebli, Aswan, EGYPT, P.O. 81542 <u>Sabbatical Leave:</u> Room 1140, 2 nd floor, Dept. of Electrical Engineering, Faculty of engineering, Jouf University, Al Jouf, P.O. 2014, KSA
Contacts	00966545421239 (WhatsApp) Skype ID: emad.elbakoury

POSITIONS

- ❖ **Teaching Assistant** from March 2002 to January 2006
- ❖ **Assistant Lecturer** from January 2006 up till Oct. 2012
- ❖ **Assistant Professor** from Oct. 2012 till December 2017
- ❖ **Associate Professor** in Departement of Electrical Engineering, Faculty of Engineering, Aswan University, EGYPT from December 2017 till now. Also, he is working in Faculty of Engineering, Jouf University, Sakaka 2014, Aljouf, KSA from Nov. 2017 till now

SOCIETIES

- **IEEE Senior Member 2018- Now**
- **IEEE Member 2012-2018**
- **IEEJ Member**
- **IEICE Member**
- **Egyptian Engineering Syndicates**

RESEARCH INTERESTS AND ACTIVITIES

DC-DC Converters, Switched mode power supplies Switched Mode Power Supplies (SMPS), DC-AC Inverters, Digital control applications and Hardware implementation, Power Electronics Applications in Renewable Energy, Multi-level converters, Matrix converters, Fault tolerant control,

Reliability analysis, Electrical vehicles, AC and DC drives, LED drivers, Battery chargers, Battery Management Systems (BMS),

ACADEMIC QUALIFICATIONS

- **B.Sc. “Electrical Engineering”, power and machines sections**, with accumulative average grade **“Distinguished with Honor Degree (87.98%)”**, Aswan Faculty of Engineering, Aswan University, EGYPT, May 2001.
- **M.Sc. in “Power System Control and Stability”, Electrical Engineering**, awarded in January-2006, Electrical Eng. Department, Aswan University. EGYPT The thesis entitled **“Power Systems Stabilizers Design Techniques”**.
- **Ph.D. in power Electronics, Electrical Engineering**. Awarded in Oct. 2012, Faculty of information Science and Electrical Engineering, Kyushu University, JAPAN. The thesis entitled **“New Maximum Power Point Trackers Using Digital Control Techniques in Photovoltaic Systems”**.

TEACHING EXPERIENCE & ACTIVITIES

Teaching: I have teaching and assisting in teaching the following courses:

Power System Analysis, Control, and Stability, Power System Protection, Power System Power Quality, Components of Industrial control system, Advanced Control system, DC and AC drives, Digital Control systems control, Process Control, Energy Conversion, Power System Analysis, Automatic control system, AC Machines Fundamentals, Fundamentals of Power Electronics, Electromagnetic Fields, Electrical and Electronic Measurements, DC Machines Fundamentals, Circuit Analysis, Digital circuits and Boolean algebra, Circuit Analysis, Electrostatic Fields, Electric and Electronic Materials, Industrial Power Electronics, Machine Drive, Digital Control, Smart Grid Technologies, Power System Planning, High Voltage Engineering.

Computer Languages and Skills

- ❖ Field Programming Gate Arrays (FPGAs), Digital Signal Processor (DSP).
- ❖ Power System Simulation using ETAP 5.5 Power Station, Power World Simulator
- ❖ Circuits Analysis using, Pspice, Orcad, PSIM, Switchcad, Circuit Maker and Workbench
- ❖ Programming with Matlab, Fortran, C++, VHDL and Basic languages
- ❖ Hardware implementation FPGA, DSP
- ❖ OS Windows Xp, Win 7, Win 10 and some other software Packages.
- ❖ Using MS-Office and Other software Packages

Languages

- Arabic Language – Mother tongue.
- English – fluent speaking and writing.

Monograph

“Intelligent Power Systems Stabilizers Design”

ISBN: 3639242254, Binding: Paperback, Publishing Date: Mar 2010, Number of Pages: 232, Publisher: Vdm Verlag Dr. Muller Aktiengesellschaft & Co. Kg

Honors and Awards

- Baekhyun Award for the Journal of Power Electronics (*JPE*) – July 2011.
- Egyptian Government full scholarship for PhD study from 2008/2012.
- Top of the Master Preliminary Year (South Valley University) in the academic year 2002/2003

with a grade of Distinct (There are only five courses year for the master thesis in Egypt and is called Master Preliminary Year, However the thesis itself has no grade in Egypt).

- Top of the B.S. graduating class (Cumulative Grade) of the Electrical Engineering Department, Faculty of Engineering, South Valley University in the academic year 2000/2001.
- Top of (1996/1997), (1997/1998), (1998/1999), (1999/2000), and graduation (2000/2001) years of The Electrical Engineering Department, Faculty of Engineering, Aswan University with a grade of Distinct and honor degree.
- 2 years Internship from Kyushu University for PhD students 2010/2011.
- Scientific Publication Award from Aswan University, Egypt, 2016.
- Scientific Publication Award from Aswan University, Egypt, 2017.
- Aswan University Encouragement Award from Aswan University, Egypt, 2017.
- The best paper award from Journal of Power Electronics (JPE) 2018.
- Scientific Publication Award from Aswan University, Egypt, 2018.
- Distinguished Scientific Publication from Jouf University, KSA, 2018

Projects

- Co-PI of the Collaborated Egyptian-Tunisian project entitled “***Design and control of high performances multilevel converter for Grid connected PV systems***” with a budget of EGP 100,000. (Egyptian Ministry of Scientific Research), from May 2012 to April 2014.
- PI of the Collaborated project with Germany entitled “***Predictive Control Design for Z-Source Inverter in Grid-Connected Photovoltaic Arrays***” with a fund of EUR 18,500. Funded from Science and Technology Developing Fund (STDF), EGYPT in the period from Jan 2014 to Dec. 2015
- PI of the Collaborated project with Tunisia entitled “***Smart PV Micro-Grid System with Advanced Energy Management Control***” with a fund of EGP 625,000 for three years starting from July 2014. (Egyptian Ministry of Scientific Research), from July 2014 to June 2017.
- Co-PI in the Research project entitled “***Development of Three-Phase Micro-Inverter for Photovoltaic in Desert Environments***” with a budget of EGP 720,000. Funded from STDF in the period from March 2016 to Feb. 2018
- PI member of the research project entitled “***High-Reliable Battery Management System for Electrical Vehicles***” with a budget 30,000 SAR in the period from June 2018 to May 2019
- Co-PI in the research project entitled “***Developing a reliable micro-inverter for PV systems***” with a budget 55,000 SAR in the period from June 2018 to July 2019.
- Consultant in the research project entitled “***LiGig: Li-Fi/WiGig/Wi-Fi Integration for Massive Indoor Data Transmissions For 5G and Beyond***” with a budget 3 million EGP from The National Telecom Regulatory Authority (NTRA) for two years started from April 2019 to March 2020, Egypt.
- Co-PI in the research project entitled “***Developing Multifunctional Distributed MPPT Controller for Grid-Connected PV systems in Distribution Network with Unbalanced Loads***” with a budget 42,000 SAR in the period from June 2019 to July 2020.

Fellowships and internships

- 6 months’ postdoctoral fellowship in Kyushu University, Japan.
- 1-month fellowship in Munich university regarding the co-operative project
- 1 month fellowship in LSE- Laboratoire des Systèmes électriques regarding the co-operative project.

Community Services

- Manager of the consultation center and engineering studies for 1 year starting from April 2015 till March 2016
- One of the Electricity designer team of building classes of tourism faculty in new campus.
- One of the Electricity designer team of the university hospital fens and cafeteria.

- One of the Electricity designer team of electricity network of the new campus in new Aswan.
- One of the Electricity designer team of building classes of agriculture faculty in Sahary city.
- One of the Electricity designer team of the Traffic building in new Aswan.
- Developing yearly curriculum for Power and Machines program for “Aswan Higher Engineering Institute”.
- One of the supervising team of the Traffic Building in New Aswan.

Master Thesis Supervision

- 1- Ahmed Salem, “Development of Three-phase Multi-Level Inverters”, Jan. 2016.
- 2- Ahmed Sheir, “Design and Comparative Study of Single Phase Multilevel Inverters”, Sept. 2016.
- 3- Mahmoud Nassary, “Design of PFC converter for LED Lighting Application”, March 2017.
- 4- Mohamed Zaery, “Design of Distributed Control System for DC Microgrids Based Power Converters”, May 2017.
- 5- Fatma Selim Hassan, “Design of small wind energy conversion system for stand-alone applications”, April 2019.
- 6- Ahmed El-Melegi, "Development of Multi-level Inverter System for Photovoltaics Applications", July 2019.

Publications

ISI Journals

1. **Emad M. Ahmed**, Masahito Shoyama, “Variable Step Size Maximum Power Point Tracker Using Single Variable for Stand-alone Battery Storage PV Systems”, *Journal of Power Electronics, JPE*, vol. 11, no. 2, pp. 218-227, March 2011. (Awarded Baekhyun Award from KIPE)
2. **Emad M. Ahmed**, Masahito Shoyama, “Scaling Factor Design Issues in Variable Step Size Incremental Resistance Maximum Power Point Tracker for PV Systems”, *Journal of Power Electronics, JPE*, vol. 12, no. 1, pp. 164-171, January 2012.
3. Ahmed Salem, **Emad M. Ahmed**, Mohamed Orabi, Mahrous Ahmed, "New Three-Phase Symmetrical Multilevel Voltage Source Inverter", *IEEE Journal of Emerging and Selected Topics in Circuits and Systems*, vol. 5, no. 3, pp. 430-442, Sept. 2015.
4. Ahmed Salem, **Emad M. Ahmed**, Mohamed Orabi, Mahrous Ahmed, “Study and Analysis of New Three-phase Modular Multi-Level Inverter”, *IEEE Transaction on Industrial Electronics*, vol. 63, no. 12, pp. 7804-7813. Dec. 2016.
5. M. A. Gaafar, **Emad M. Ahmed**, Masahito Shoyama, "Two States Feedback Active Damping Strategy for LCL Filter Resonance in Grid-Connected Converters", *Journal of Power Electronics, JPE*, vol. 16, no. 4, pp. 1578-1597, July 2016.
6. Mokhtar Ali, **Emad M. Ahmed**, Masahito Shoyama, “Thermal and Reliability Assessment for Wind Energy Systems with DSTATCOM Functionality in Resilient Microgrids”, *IEEE Transaction on Sustainable Energy*, vol. 8, no. 3, pp. 953-965, July 2017.
7. Mokhtar Ali, **Emad M. Ahmed**, Masahito Shoyama, “Thermal Stresses Relief Carrier-Based PWM Strategy for Single Phase Multilevel Inverters”, *IEEE Transaction on Power Electronics*, vol. 32, no. 12, pp. 9376 - 9388 Dec. 2017.
8. Mokhtar Ali, **Emad M. Ahmed**, Masahito Shoyama, “Developing New Lifetime Prolongation SVM Algorithm for Multilevel Inverters with Thermally-Aged Power Devices”, *Journal of IET on Power Electronics*, vol. 10, no.15, pp. 2248-2256, 2017.
9. Mokhtar Ali, **Emad M. Ahmed**, Masahito Shoyama, “A New Single-Phase Five-Level Inverter Topology for Single and Multiple Switches Fault Tolerance”, *IEEE Transaction on Power Electronics*, vol. 33, no. 11, pp. 9198-9208, 2018.
10. M. A. Gaafar, Gamal Dousky, **Emad M. Ahmed**, Masahito Shoyama, Mohamed Orabi "New Design Approach for Grid-current-based Active Damping of the LCL Filter Resonance in Grid-Connected Converters", *Journal of Power Electronics, JPE*, vol. 18, no. 4, pp. 1165-1177, 2018. (Awarded Best Paper Award of JPE 2018)

11. Mahmoud Nassary, Mohamed Orabi, Manuel Arias, **Emad M. Ahmed**, and El-Sayed Hasaneen "Analysis and Control of Electrolytic Capacitor-Less LED Driver Based on Harmonic Injection Technique", *Energies*, 11(11), 3030; <https://doi.org/10.3390/en11113030>, 2018.
12. Omer Abdalla, Hegazy Rezk, **Emad M Ahmed**, "Wind Driven Optimization Algorithm Based Global MPPT for PV System under Non-Uniform Solar Irradiance", *Solar Energy*, vol. 180, pp. 429-444, March 2019.
13. Mokhtar Ali, **Emad M. Ahmed**, Masahito Shoyama, " Modulation Method for Improving Reliability of T-type Multilevel Inverters in PV Systems", *IEEE Journal of Emerging and Selected Topics in Power Electronics*, 10.1109/JESTPE.2019.2898105, 2019
14. Mohamed Zaery, **Emad M. Ahmed**, Mohamed Orabi, "Low Operational Cost Distributed Prioritized Coordinated Control for DC Microgrids", *IET Smart grid*, Vol. 2, No. 2, p. 233 – 241, 2019
15. Ahmed Elmelegi, Mokhtar Ali, **Emad M Ahmed**, Abdullah G. Alharbi, "A Simplified Phase-Shift PWM-Based Feedforward Distributed MPPT Method for Grid-Connected Cascaded PV Inverters", *Solar Energy*, <https://doi.org/10.1016/j.solener.2019.05.021>. 2019
16. Eltaib Abdeen, Mahmoud Gaafar, Mohamed Orabi, **Emad M. Ahmed**, Abdelali El Aroudi, "Multi-Input Ćuk-Derived Buck-Boost Voltage Source Inverter for Photovoltaic Systems in Microgrid Applications", *Energies* 2019, 12, 2007; doi:10.3390/en12102007, 2019.
17. Sayed M. Said, Mokhtar Aly, Member, Bálint Hartmann, Abdullah G. Alharbi, **Emad M. Ahmed**, "SMES-Based Fuzzy Logic Approach for Enhancing the Reliability of Microgrids Equipped with PV Generators", *IEEE Access*, Doi: 10.1109/ACCESS.2019.2927902, 2019
18. **Emad M. Ahmed**, Mokhtar Aly, Ahmed Elmelegi, Abdullah G. Alharbi, Ziad M. Ali "Multifunctional Distributed MPPT Controller for 3P4W Grid-Connected PV systems in Distribution Network with Unbalanced Loads", *Energies*, 2019, 12(24), 4799.
19. Mohammed M. Alhaider, **Emad M. Ahmed**, Mokhtar Aly, Hany A. Serhan, Emad A. Mohamed, Ziad M. Ali," New Temperature-Compensated Multi-Step Constant-Current Charging Method for Reliable Operation of Battery Energy Storage Systems", *IEEE Access*, vol. 8, pp. 27961- 2972. 2020

None Ranked Journals

20. **Emad M. Ahmed**, Abou-Hashema Ahmed, "Design and Simulation of Marine and Tidal Current Converters Using DC-DC Boost Converter", *Journal of Engineering Sciences*, Faculty of Engineering, Assuit University, *JES*, vol. 37, no. 5, pp. 939-948, Sep 2009.
21. **Emad M. Ahmed**, Masahito Shoyama, "Enhancing the Performance of Marine and Tidal Current Converters Using DC-DC Boost Converters", *Journal of Energy and Power Engineering*, *JEPE*, vol. 6, no. 3, pp. 478-484, March 2012.
22. Mahmoud Nassary, Mohamed Orabi, **Emad M. Ahmed**, El-Sayed Hasaneen "Electrolytic Capacitor-Less Converter Techniques and the Effect on LED chromaticity Lighting - Review", *Aswan Journal of Engineering*, under publication.
23. Mohamed Zaery, **Emad M. Ahmed**, Mohamed Orabi, "Cost Reduction Based Adaptive Droop Control in DC Microgrids", *Aswan Journal of Engineering*, under publication.

Related Conferences

24. **Emad M. Ahmed**, M. Z. El-Sadek, Abdel-Magid M. A. Mahmoud, "New Technique for Conventional Power System Stabilizer Design", *In Proc. Middle East Power and Energy Conference, MEPCON- 2005, IEEE*, pp. 645-653. Egypt.
25. **Emad M. Ahmed**, Noriyuki Hayashi, Masahito Shoyama, "Performance Analysis of Marine and Tidal Current Converter Using DC-DC Boost Converter", *In Proc. 7th International Engineering Conference, IEC 7-2010*, Egypt.
26. **Emad M. Ahmed**, Masahito Shoyama, "Highly Efficient Variable-Step-Size Maximum Power Point Tracker for PV Systems", *In Proc. 3rd International Symposium on Electrical and Electronics Engineering, IEEE, ISEEE-2010, IEEE*, pp. 112-117, Romania.
27. **Emad M. Ahmed**, Masahito Shoyama, "Modified Adaptive Variable Step Size MPPT Based-on Single Current Sensor", *In Proc. International Technical Conference of IEEE region 10, TENCON-2010*, IEEE, pp.1235- 1240, Japan.

28. **Emad M. Ahmed**, Masahito Shoyama, "Single Variable Based Variable Step Size Maximum Power Point Tracker for Stand-alone Battery Storage PV systems", *In Proc. International Conference on Industrial Electronics, ICIT-SSST, IEEE*, pp.208- 212, USA.
29. **Emad M. Ahmed**, Masahito Shoyama, "New Single Current Sensor Based Variable Step Size MPPT for Stand-alone Battery Storage PV Systems", *In Proc. Power Conversion and Intelligent Motion, PCIM-2011*, pp.381-387, Germany.
30. **Emad M. Ahmed**, Masahito Shoyama, "Stability Study of Variable Step Size Incremental Conductance/Impedance MPPT for PV Systems", *In Proc. International Conference of Power Electronics, ICPE-ECCE-2011, IEEE*, pp.386-392, Korea.
31. **Emad M. Ahmed**, Masahito Shoyama, "Novel Stability Investigation of Variable Step Size Incremental Resistance MPPT for PV Systems", *In Proc. Annual Conference on Industrial Electronics Society, IECON-2011, IEEE*, pp.889-894, Australia.
32. **Emad M. Ahmed**, Masahito Shoyama, "Scaling Factor Design Issues in Variable Step Size Incremental Resistance MPPT in PV systems", *In Proc. International Conference on Power Electronics and Drive Systems, PEDS-2011, IEEE*, pp. 3761-3766, Singapore.
33. **Emad M. Ahmed**, Gamal M. Dousoky, Masahito Shoyama, "On the Behaviour of Marine and Tidal Current Converters with DC-DC Boost Converter", *In Proc. International Power Electronics and Motion Control Conference, IPEMC-2012, IEEE*, pp. 2250-2254, China.
34. Gamal M. Dousoky, **Emad M. Ahmed**, Masahito Shoyama, "An Adaptive Frequency Hopping Technique for Conducted-Noise Reduction in DC-DC Converters", *In Proc. International Power Electronics and Motion Control Conference, IPEMC-2012, IEEE*, pp.2250-2254, China.
35. **Emad M. Ahmed**, Gamal M. Dousoky, Masahito Shoyama, "Simple Current-Sensorless MPPT with DC-DC Boost Converter for Photovoltaic Battery Chargers", *In Proc. Energy Conversion Congress & Exposition, ECCE-2012, IEEE*, pp. 1607-1614, USA
36. Gamal M. Dousoky, **Emad M. Ahmed**, Masahito Shoyama, "MPPT Schemes for Single-Stage Three-Phase Grid-Connected Photovoltaic Voltage-Source Inverters", *In Proc. International Conference on Industrial Electronics, ICIT-2013, IEEE*, pp. 600-605, South Africa.
37. **Emad M. Ahmed**, M. Orabi, Masahito Shoyama, "High Efficient Variable Step Size Incremental Resistance Maximum Power Point Tracker for PV Battery Charging Applications", *In Proc. Energy Conversion Congress & Exposition, ECCE-2013, IEEE*, pp. 2435-2439, USA.
38. Mohamed Saad, Yasser Nour, Ahmed Shawky, M. Orabi, **Emad M. Ahmed**, "A Two-Stage Boost-Buck Converter with Intermediate Bus Voltage Control Scheme for Li-Ion Battery Powered Applications", *In Proc. International Telecommunications Energy Conference, INTELEC- 2013, IEEE*, pp. 290-295, Germany.
39. Ahmed Shawky, Fatma Hilmy, M. Orabi, **Emad M. Ahmed**, Japer Abu-Qahouq "A Single Cell Integrated Photovoltaic Converter based on Buck-Boost Topology with RCC MPPT Control", *In Proc. International Telecommunications Energy Conference, INTELEC- 2013, IEEE*, pp. 720-725, Germany.
40. Fatma Selim, **Emad M. Ahmed**, M. Orabi, Mahmoud A. Sayed, "Stand-alone Small Wind Energy System with Reduced Sensors Control", *In Proc. International Telecommunications Energy Conference, INTELEC- 2013, IEEE*, Germany.
41. Mahmoud A. Sayed, Maha Gamal, **Emad M. Ahmed**, M. Orabi, " Low-Cost Single-Phase Multi-Level Inverter for Grid-Tie PV System Applications", *In Proc. International Telecommunications Energy Conference, INTELEC- 2013, IEEE*, pp. 609-613, Germany.
42. Maha Gamal, **Emad M. Ahmed**, Mahmoud A. Sayed, M. Orabi, " Grid-connected Single-phase Multi-level Inverter", *In Proc. Applied Power Electronics and Application Conference, APEC- 2014, IEEE*, pp. 2312-2317, USA.
43. Ahmed Salem, **Emad M. Ahmed**, M. Orabi, Afef Ben Abdelghani, "Novel Three-Phase Multilevel Voltage Source Inverter with Reduced No. of Switches", *In Proc. International Renewable Energy Conference, IEEE, IREC-2014*, pp.443-447, Tunis.
44. M. A. Ismeil, M. Orabi, **Emad M. Ahmed**, Ralph Kennel, "Transient Modeling and State Feedback Control Strategy of Switched Inductor Qusi Z-Source Inverter", *In Proc. International Renewable*

- Energy Conference*, IREC-2014, IEEE, pp. 1108-1112, Tunis.
45. Ahmed Salem, **Emad M. Ahmed**, M. Orabi, Afef Ben Abdelghani, "Reduced Switches Based Three-Phase Multi-Level Inverter for Grid Integration", *In Proc. International Renewable Energy Conference*, IEEE, IREC-2015, pp. 1-6, Tunis
 46. Mohamed Zaery, **Emad M. Ahmed**, M. Orabi, Afef Ben Abdelghani, "Distributed Cooperative Control with Lower Generation Cost for DC Microgrid", *In Proc. International conference in Smart Grid and Renewable Energy*, SGRE-2015, IEEE, pp. 1-6, Qatar.
 47. Ahmed Salem, **Emad M. Ahmed**, M. Orabi, Mahrous Ahmed, "Stand-Alone Three-Phase Symmetrical Multi-Level Inverter", *IEEE, In Proc. International Telecommunications Energy Conference*, INTELEC-2015, pp. 549-545, Japan.
 48. Mohamed Zeary, **Emad M. Ahmed**, M. Orabi, "Distributed Dynamic Consensus for Reliable and Economic Operation of Standalone DC Microgrids", *In Proc. International Telecommunications Energy Conference*, INTELEC-2015, IEEE, pp. 209-214, Japan.
 49. Mohamed Zaery, **Emad M. Ahmed**, M. Orabi, "Agent-Based Consensus Algorithm for Distributed Generation Cost Reduction in Islanded DC Microgrids", *In Proc. Mepcon-2015*, Mansoura.
 50. Mohamed Zaery, **Emad M. Ahmed**, M. Orabi, "Distributed Economic Dispatch for Islanded DC Microgrids", *In Proc. Mepcon-2015*, Mansoura.
 51. A. Melegi, **Emad M. Ahmed**, "Study of Different PV Systems Configurations Case Study: Aswan Utility Company", *In Proc. Mepcon-2015*, Mansoura.
 52. Ahmed Salem, **Emad M. Ahmed**, M. Orabi, Mahrous Ahmed, "Novel Three Phase Multi-Level Inverter Topology with Symmetrical DC-Voltage Sources", *In Proc. Applied Power Electronics and Application Conference*, APEC- 2016, IEEE, pp. 1505-1511.
 53. Mokhtar Ali, Gamal M. Dousoky, **Emad M. Ahmed**, Masahito Shoyama, "A Unified SVM Algorithm for Lifetime Prolongation of Thermally-Overheated Power Devices in Multi-Level Inverters", *In Proc. Energy Conversion Congress and Exposition*, ECCE-2016, IEEE, DOI: [10.1109/ECCE.2016.7854801](https://doi.org/10.1109/ECCE.2016.7854801)
 54. Mohamed Zeary, **Emad M. Ahmed**, M. Orabi, "Generation Cost Minimization Based Distributed Coordination Control in DC Microgrids", *In Proc. Applied Power Electronics and Application Conference*, APEC- 2017, IEEE, pp. 2816-2821.
 55. Mohamed Zaery, **Emad M. Ahmed**, M. Orabi, "Consensus Algorithm Based Distributed Control for Economic Operation of Islanded DC Microgrids", *In Proc. Middle East Power Systems Conference (MEPCON-2016)*, IEEE. DOI: [10.1109/MEPCON.2016.7836995](https://doi.org/10.1109/MEPCON.2016.7836995)
 56. Mohamed Zeary, **Emad M. Ahmed**, M. Orabi, "Operational Cost Reduction Based on Adaptive Droop Control Technique in DC Microgrids", *In Proc. Energy conversion Congress and Exposition*, ECCE-2017, IEEE, pp. 2638-2644.
 57. Mokhtar Ali, **Emad M. Ahmed**, Masahito Shoyama, "A New Real-Time Perfect Condition Monitoring for High-Power Converters", *in Proc. International Future Energy Electronics Conference*, IFEEC-2017, IEEE, pp. 1473 – 1477.
 58. Mahmoud G Sayed, Mokhtar Aly, **Emad M Ahmed**, Mohamed Orabi, "Power quality enhancement of variable frequency drive by PWM bridgeless dual boost converter", *In Proc. Middle East Power Systems Conference*, MEPCON-2017, IEEE, pp. 1281-1285.
 59. Mahmoud Nassary, Mohamed Orabi, **Emad M Ahmed**, El-Sayed Hasaneen, Mahmoud Gaafar, "Modified harmonic injection technique for electrolytic capacitor-less LED driver", *In Proc. Middle East Power Systems Conference*, MEPCON-2017, IEEE, pp. 1459-1464
 60. Fatma Selim, **Emad M Ahmed**, Mohammed Orabi, "Performance investigation of standalone WECS with and without battery energy storage system", *In Proc. On Innovative Trends in Computer Engineering*, ITCE-2018, IEEE, pp. 415-420.
 61. Hany A. Serhan, **Emad M Ahmed**, "Effect of the different charging techniques on battery life-time", *In Proc. On Innovative Trends in Computer Engineering*, ITCE-2018, IEEE, pp. 421-426.
 62. Mokhtar Aly, **Emad M Ahmed**, Mohamed Orabi, Masahito Shoyama, "An enhanced PWM method for loss balancing of five level T-type inverter in PV systems", *In Proc. Applied Power Electronics Conference and Exposition*, APEC-2018, IEEE, pp. 2530-2535.

63. Mokhtar Aly, **Emad M Ahmed**, Masahito Shoyama, "Ageing Mitigation Control Method for Power Devices in Multilevel Inverters in Standalone PV Systems", *In Proc. Energy Conversion Congress and Exposition, ECCE-2018, IEEE*, pp. 5737-5741.
64. A. Elmelegi, Mokhtar Aly, **Emad M. Ahmed**, "Developing Phase-Shift PWM-Based Distributed MPPT Technique for Photovoltaic Systems", *In Proc. International Conference on Innovative Trends in Computer Engineering, ITCE-2019, IEEE*, pp. 492-497.
65. Doaa Ramadan, Mokhtar Aly, **Emad M. Ahmed**, "Practical Performance Analysis and Device Selection for Photovoltaic Multilevel Inverters Installations", *In Proc. International Conference on Innovative Trends in Computer Engineering, ITCE-2019, IEEE*, pp. 559-563.
66. Anwaar M. Damerdash, Mokhtar Aly, **Emad M. Ahmed**, "Design and Analysis of Multi-Phase Buck DC-DC Converters for Li-Fi Attocell Drivers", *In Proc. International Conference on Innovative Trends in Computer Engineering, ITCE-2019, IEEE*, pp. 515-520.
67. **Emad M. Ahmed**, "Distributed MPPT for PV-Grid connected Distribution Networks", *In Proc. Conference on Power Electronics and Renewable Energy, CPERE-2019, IEEE*, pp. 349-354. Oct. 2019
68. Anwaar M. Damerdash, Mokhtar Aly, **Emad M. Ahmed**, "Power Losses Estimation of LED Lamps in Li-Fi Communication Systems", *In Proc. Conference on Power Electronics and Renewable Energy, CPERE-2019, IEEE*, under publication
69. Maha G. Elsheikh, Mokhtar Aly, **Emad M. Ahmed**, Ziad M. Ali, "Advanced Multi-disciplinary Modelling of Lithium-Ion Batteries for Outdoor Applications", *In Proc. Middle East Power Systems Conference, MEPCON-2017, IEEE*,
70. A. Elmelegi, Mokhtar Aly, **Emad M. Ahmed**, Mohammed M. Alhaider, "An Efficient Low-Cost Distributed MPPT Method for Energy Harvesting in Grid-Tied Three-Phase PV Power Optimizers",
71. Mokhtar Aly, Christian A. Rojas, **Emad M. Ahmed**, Samir Kouro, "Leakage Current Elimination PWM Method for Fault-Tolerant String H-NPC PV Inverter", *In Proc. Of the industrial Electronics Society, IECON-2019, IEEE*, under publication

References

1. **Prof. Masahito Shoyama**, Address: Dept. of Electrical Engineering, Faculty of Information Science and Electrical Engineering, Kyushu University, 744 Moto-oka, Nishi-ku, Fukuoka 819-0395, JAPAN. email: shoyama@ees.kyushu-u.ac.jp.
2. **Prof. Mohamed Orabi**, Address: 81542, Dept. of Electrical Engineering, Aswan University, EGYPT. email: orabi@ieee.org.
3. **Dr. Mokhtar Ali**, Address: 81542, Dept. of Electrical Engineering, Aswan University, EGYPT. email: engmaam@gmail.com
4. **Prof. Mahrous Ahmed**, Address: 81542, Dept. of Electrical Engineering, Aswan University, EGYPT. email: Mahrous Ahmed, email: meahmed7@ieee.org
5. **Prof. Mahmoud Abdelnaby Sayed Abdallah**, Address: Dept. of Electrical Engineering, Faculty of Engineering - Qena, South Valley University Egypt. email: Mahmoud_sayed@ieee.org
6. **Ass. Prof. Mohamed Ali Mohamed Ismaeil**, Address: Dept. of Electrical Engineering, Qena University, EGYPT. email: melzanaty@apearc.aswu.edu.eg.