

PERSONAL

Name: Ali Mohamed Eltamaly
Occupation: Professor, Sustainable Energy Technology Center, College of Engineering, King Saud University
Nationality: Egyptian
Current Address: Sustainable Energy Technology Center, King Saud University, P.O.Box 800, Riyadh 11421, Saudi Arabia
Date of Birth: 28/06/1969

EDUCATION

PhD.	Electrical Engineering Power Electronics & Power Quality Laboratory, Texas A&M University, College Station, Texas, USA. Title of Ph.D. Thesis: " Power Quality Consideration for Interconnecting Renewable Energy Power Converter Systems to Electric Utility "	Sept. 2000
MSc.	Electrical Engineering Elminia University, Egypt. Title of M.Sc. Thesis: " Study on the Interconnection of Wind Turbine Generators with Utility Grid "	Feb. 1996
BSc.	Electrical Engineering (Excellent with Honor Degree) Elminia University, Egypt.	May. 1992

AWARDS

- **Professor Award for Distinguished Scientific Excellence**, Egyptian supreme council of Universities, Egypt, June, 2017.
- **The World Energy Best Book in Year 2022** by bookauthority, CNN, and Forbs. ([Link](#))
- **Scientific distinction award**, College of engineering, Minia University, Egypt, May, 2005.
- **Honoring for teaching a workshop** Titled: "Adjustable Frequency Drives" Feb. 2002, Saudi Aramco Chair in Electrical Power

GRADUATE THESIS SUPERVISED

- MSc. "**Modeling and Performance of Wind Turbine Generator Systems**" Elmansoura University 2005.
- Ph.D. "**Interconnection of Photovoltaic/Wind Hybrid Electric Power System to Electric Utility using Artificial Intelligence**" Alminia University, Alminia, Egypt, 2006.
- MSc. "**Applications of Power Electronics on Interfacing WTG with PV to Build Hybrid Electric Power System.**" Alminia University, Alminia, Egypt, 2006.
- MSc. "**Maximum Power Extraction from Electric Utility Interfaced Wind Turbine System**", King Saud University, KSA, 2011.
- MSc. "**Wind Energy use in Agricultural in Saudi Arabia**", King Saud University, KSA, 2011.
- Ph.D. "**Modeling and Simulation of Smart Grid Integrated with Hybrid Renewable Energy System**" King Saud University, 2015.
- Ph.D. "**Photovoltaic partial shading mitigation using interleaved boost converter and hybrid intelligent techniques**" UNIVERSITI TEKNOLOGI MALAYSIA UNIVERSITI TEKNOLOGI MALAYSIA, Feb 2019.
- Ph.D "**Renewable Distributed Generation for Quality and Reliability Improvement of Power Distribution Systems**" King Saud University, KSA, 2020.
- Ph.D. "**Enhancement of Power System Quality Using Advanced Control Techniques**" Alminia University, Alminia, Egypt, 2020.
- MSc. "**Economical study of Load Shifting & Load shaving of PV Implementation using Dynamic Tariff in Riyadh**" King Saud University, KSA, 2020.
- MSc. "**Optimal Size and Location of PV Distributed Generation in Transmission System Using Particle Swarm Optimization**" King Saud University, KSA, 2020.
- Msc. "**Efficient Power Point Tracking (MPPT) for Photovoltaic Systems (PV) having Partial Shading Conditions by Applying Enhanced Cuckoo Search (CS) Algorithm using Matlab Simulation**" King Saud University, KSA, 2020.

PUBLICATIONS:

Prof. Eltamaly has published:

- More than **35 books** and book chapters
- Two **patents**
- More than **200 Journal Papers**
- More than **50 Conferences papers**

A list of his publications is shown in the following:

PATENTS:

1. U.S.A Patent # 9,548,680. **"Self Power SSHI Circuit for Piezoelectric Energy Harvester"**, 2017.
Eltamaly, A.M. and Addoweesh, K., King Saud University, 2017. **Self power SSHI circuit for piezoelectric energy harvester**. U.S. Patent 9,548,680.
2. U.S.A Patent # 9,752,556 **"Multi-rotor vertical axis wind turbine"**, 2017
Al-Saud, M.S.T., **Eltamaly, Ali.M.A.** and Al-Ahmari, A.M.A., King Saud University, 2017. **Multi-rotor vertical axis wind turbine**. U.S. Patent 9,752,556.

RECENT JOURNAL PUBLICATIONS

- [J1] Ali M Eltamaly, et al. **"Simulation and experimental validation of fast adaptive particle swarm optimization strategy for photovoltaic global peak tracker under dynamic partial shading."** Renewable & Sustainable Energy Reviews 124 (2020): 109719. [Q1\[IF: 16.799\]](#)
- [J2] Ali M. Eltamaly et. al **"A Novel Bat Algorithm Strategy for Maximum Power Point Tracker of Photovoltaic Energy Systems Under Dynamic Partial Shading,"** in IEEE Access, vol. 8, pp. 10048-10060, 2020. [Q2\[IF: 3.476\]](#)
- [J3] Ali M. Eltamaly, et al. **"Sensorless Active and Reactive Control for DFIG Wind Turbines Using Opposition-Based Learning Technique"**, Sustainability 2020, 12, 3583; doi:10.3390/su12093583 [Q2 \[IF:3.889\]](#)
- [J4] Ali M. Eltamaly, et al. **"Wireless Network Architecture for Cyber Physical Wind Energy System."** IEEE Access 8,2020: pp. 40180-40197. [Q2\[IF: 3.476\]](#)
- [J5] Ali M. Eltamaly, et al **"Dynamic Control of a DFIG Wind Power Generation System to Mitigate Unbalanced Grid Voltage."** IEEE Access 8 (2020): 39091-39103. [Q2\[IF: 3.476\]](#)
- [J6] Ali M. Eltamaly, et al. **"A Novel Crow Search Algorithm Auto-Drive PSO for Optimal Allocation and Sizing of Renewable Distributed Generation."** IEEE Access 8 (2020): 27807-27820. [Q2\[IF: 3.476\]](#)
- [J7] Ali M Eltamaly, et al. **"Performance Improvement of PV Systems' Maximum Power Point Tracker Based on a Scanning PSO Particle Strategy."** Sustainability 12, no. 3 (2020): 1185. [Q2 \[IF:3.889\]](#)
- [J8] Abo-Khalil, Ahmed G., Ali M. Eltamaly, Praveen RP, Ali S. Alghamdi, and Iskander Tlili. **"A Sensorless Wind Speed and Rotor Position Control of PMSG in Wind Power Generation Systems."** Sustainability 12.20 (2020): 8481. [Q2 \[IF:3.889\]](#)
- [J9] Ali M Eltamaly, et al. **"Condition Monitoring of DC-Link Electrolytic Capacitors in PWM Power Converters Using OBL Method"**, Sustainability, 2020 [Q2 \[IF:3.889\]](#)
- [J10] Praveen, R. P., Vishnu Keloth, Ahmed G. Abo-Khalil, Ali S. Alghamdi, Ali M. Eltamaly, and Iskander Tlili. **"An insight to the energy policy of GCC countries to meet renewable energy targets of 2030."** Energy Policy 147 (2020): 111864. [Q1 \[IF:7.576\]](#)
- [J11] Farh, Hassan MH, Abdullah M. Al-Shaalan, Ali M. Eltamaly, and Abdullrahman A. Al-Shamma'a. **"A novel severity performance index for optimal allocation and sizing of photovoltaic distributed generations."** Energy Reports 6 (2020): 2180-2190. [Q2 \[IF:4.937\]](#)
- [J12] Eltamaly, A.M., 2021. **Optimal control parameters for bat algorithm in maximum power point tracker of photovoltaic energy systems.** International Transactions on Electrical Energy Systems, 31(4), p.e12839. [Q2\[IF: 2.860\]](#)
- [J13] Ali M Eltamaly **Recent Developments of MPPT Techniques for PV Systems under Partial Shading Conditions: A Critical Evaluation Recent Developments of MPPT Techniques for PV Systems under Partial Shading Conditions** IET Renewable Power Generation, 2020. [Q2.\[IF:3.034\]](#)
- [J14] Ali M. Eltamaly, et al. **"A New Algorithm to Detect Islanding Condition of a Grid-Connected PV System"**, Sustainability, 2020. [Q2 \[IF:3.889\]](#)
- [J15] Abo-Khalil, Ahmed G., Ali M. Eltamaly, et. al **"Sensorless control for PMSM using model reference adaptive system."** International Transactions on Electrical Energy Systems (2020): e12733. [Q2 \[IF:2.860\]](#)
- [J16] Kermadi, Mostefa, Zainal Salam, Ali M. Eltamaly, Jubaer Ahmed, Saad Mekhilef, Cherif Larbes, and El Madjid Berkouk. **"Recent Developments of MPPT Techniques for PV Systems under Partial Shading Conditions: A Critical Review and Performance Evaluation."**, IET Power and generation, 2020. [Q1.\[IF:3.605\]](#)
- [J17] Eltamaly, A.M., 2021. **"A novel musical chairs algorithm applied for MPPT of PV systems"**. Renewable & Sustainable Energy Reviews, 146, p.111135. [Q1\[IF: 16.942\]](#)
- [J18] Eltamaly, A.M. and Alotaibi, M.A., 2021. **Novel Fuzzy-Swarm Optimization for Sizing of Hybrid Energy Systems Applying Smart Grid Concepts.** IEEE Access. [Q2\[IF: 3.476\]](#)
- [J19] Farh, H.M., Eltamaly, A.M., Al-Shaalan, A.M. and Al-Shamma'a, A.A., 2021. **A novel sizing inherits allocation strategy of renewable distributed generations using crow search combined with particle swarm optimization algorithm.** IET Renewable Power Generation, 15(7), pp.1436-1450. [Q2.\[IF:3.034\]](#)
- [J20] Eltamaly, A.M., et al, 2021. **Optimal Design of Hybrid Renewable Energy System for a Reverse Osmosis Desalination System in Arar, Saudi Arabia.** Arabian Journal for Science and Engineering, pp.1-19. [Q2 \[IF:2.807\]](#)
- [J21] Eltamaly, A.M., **"A novel particle swarm optimization optimal control parameter determination strategy for maximum**

- power point trackers of partially shaded photovoltaic systems”** Engineering Optimization, pp.1-17,2021 [Q2 \[IF:2.5\]](#)
- [J22] Ali, E., Bumazza, M., Eltamaly, A., Mulyono, S. and Yasin, M., 2021. **Optimization of wind driven RO plant for brackish water desalination during wind speed fluctuation with and without battery.** Membranes, 11(2), p.77. [Q1 \[IF:4.562\]](#)
- [J23] Eltamaly, A.M., Alotaibi, M.A., Alolah, A.I. and Ahmed, M.A., 2021. **A novel demand response strategy for sizing of hybrid energy system with smart grid concepts.** IEEE Access, 9, pp.20277-20294. [Q2\[IF: 3.476\]](#)
- [J24] Eltamaly, A.M., 2021. **A novel strategy for optimal PSO control parameters determination for PV energy systems.** Sustainability, 13(2), p.1008. [Q2 \[IF:3.889\]](#)
- [J25] Abo-Khalil, A.G., Eltamaly, A.M., Alharbi, W., Al-Qawasmi, A.R., Alobaid, M. and Alarifi, I.M., 2021. **A modified active frequency islanding detection method based on load frequency and chopping fraction changes.** International Transactions on Electrical Energy Systems, 31(11), p.e13033. [Q2 \[IF:2.860\]](#)
- [J26] Ramadan, A., Kamel, S., Hassan, M.H., Tostado-Véliz, M. and Eltamaly, A.M., 2021. **Parameter Estimation of Static/Dynamic Photovoltaic Models Using a Developed Version of Eagle Strategy Gradient-Based Optimizer.** Sustainability, 13(23), p.13053. [Q2 \[IF:3.889\]](#)
- [J27] El-Sattar, H.A., Kamel, S., Sultan, H., Tostado-Véliz, M., Eltamaly, A.M. and Jurado, F., 2021. **Performance Analysis of a Stand-Alone PV/WT/Biomass/Bat System in Alrashda Village in Egypt.** Applied Sciences, 11(21), p.10191. [Q2 \[IF:2.838\]](#)
- [J28] Alotaibi, M.A. and Eltamaly, A.M., 2021. **A Smart Strategy for Sizing of Hybrid Renewable Energy System to Supply Remote Loads in Saudi Arabia.** Energies, 14(21), p.7069. [Q3.\[IF:3.252\]](#)
- [J29] Eltamaly, A.M., Alotaibi, M.A., Alolah, A.I. and Ahmed, M.A., 2021. **IoT-Based Hybrid Renewable Energy System for Smart Campus.** Sustainability, 13(15), p.8555. [Q2 \[IF:3.889\]](#)
- [J30] Eltamaly, A.M., 2022. **Musical chairs algorithm for parameters estimation of PV cells.** Solar Energy, 241, pp.601-620. [Q1 \[IF:7.130\]](#)
- [J31] Alotaibi, M.A. and Eltamaly, A.M., 2022. **Upgrading Conventional Power System for Accommodating Electric Vehicle through Demand Side Management and V2G Concepts.** Energies, 15(18), p.6541. [Q3.\[IF:3.252\]](#)
- [J32] Eltamaly, A.M. and Elghaffar, A.N.A., 2022. **A Smart Strategy for Blocking the Distance Protection Function during VT Fuse Failure. Intelligent Control and Automation,** 13(3), pp.25-37. [Q2 \[IF:2.124\]](#)
- [J33] Dabour, S.M., Alotaibi, M.A., Abd-Elaziz, A.A., Alshahat, M.A., Abdallah, M., Eltamaly, A.M., Abdel-Khalik, A.S., Massoud, A.M. and Ahmed, S., 2022. **Modeling and Control of Single-Stage Quadratic-Boost Split Source Inverters.** IEEE Access, 10, pp.24162-24180. [Q2\[IF: 3.476\]](#)
- [J34] Ahmed, M.A., Chavez, S.A., Eltamaly, A.M., Garces, H.O., Rojas, A.J. and Kim, Y.C., 2022. **Toward an Intelligent Campus: IoT Platform for Remote Monitoring and Control of Smart Buildings.** Sensors, 22(23), p.9045. [Q1 \[IF: 3.847\]](#)
- [J35] Eltamaly, A.M., Al-Saud, M.S. and Abokhalil, A.G., 2020. **A novel bat algorithm strategy for maximum power point tracker of photovoltaic energy systems under dynamic partial shading.** IEEE Access, 8, pp.10048-10060. [Q2\[IF: 3.476\]](#)
- [J36] Eltamaly, A.M. and Rabie, A.H., 2023. **A Novel Musical Chairs Optimization Algorithm.** Arabian Journal for Science and Engineering, pp.1-33. [Q2\[IF: 2.807\]](#)
- [J37] Condon, F., Martínez, J.M., Eltamaly, A.M., Kim, Y.C. and Ahmed, M.A., 2022. **Design and Implementation of a Cloud-IoT-Based Home Energy Management System.** Sensors, 23(1), p.176. [Q1 \[IF: 3.847\]](#)
- [J38] Asmaa Rabie, Eltamaly A. M., **A new NEST-IGWO strategy for determining optimal IGWO control parameters,** Neural Computing and Applications, April 2023, DOI: 10.1007/s00521-023-08535-8 [Q1 \[IF: 5.6\]](#)
- [J39] Eltamaly, A.M., 2023. **Smart Decentralized Electric Vehicle Aggregators for Optimal Dispatch Technologies.** Energies, 16(24), p.8112. [Q3.\[IF:3.252\]](#)
- [J40] Eltamaly, A.M., 2023. **Optimal Dispatch Strategy for Electric Vehicles in V2G Applications.** Smart Cities, 6(6), pp.3161-3191. [Q3.\[IF:6.4\]](#)
- [J41] Eltamaly, A.M., 2023. **An Accurate Piecewise Aging Model for Li-ion Batteries in Hybrid Renewable Energy System Applications.** Arabian Journal for Science and Engineering, pp.1-25. [Q2\[IF: 2.807\]](#)
- [J42] Eltamaly, A.M., 2023. **A novel benchmark shading pattern for PV maximum power point trackers evaluation.** Solar Energy, 263, p.111897. [Q1 \[IF:7.130\]](#)
- [J43] Baatiah, A.O., Eltamaly, A.M. and Alotaibi, M.A., 2023. **Improving Photovoltaic MPPT Performance through PSO Dynamic Swarm Size Reduction.** Energies, 16(18), p.6433. [Q3.\[IF:3.252\]](#)
- [J44] Condon, F., Franco, P., Martínez, J.M., Eltamaly, A.M., Kim, Y.C. and Ahmed, M.A., 2023. **EnergyAuction: IoT-Blockchain Architecture for Local Peer-to-Peer Energy Trading in a Microgrid.** Sustainability, 15(17), p.13203. [Q2 \[IF:3.889\]](#)
- [J45] Eltamaly, A.M., 2023. **A novel energy storage and demand side management for entire green smart grid system for NEOM city in Saudi Arabia.** Energy Storage, p.e515. [Q3\[IF: 3.207\]](#)
- [J46] Eltamaly, A.M., Almutairi, Z.A. and Abdelhamid, M.A., 2023. **Modern optimization algorithm for improved performance of maximum power point tracker of partially shaded PV systems.** Energies, 16(13), p.5228. [Q3.\[IF:3.252\]](#)
- [J47] Eltamaly, A.M. and Ahmed, M.A., 2023. **Performance Evaluation of Communication Infrastructure for Peer-to-Peer Energy Trading in Community Microgrids.** Energies, 16(13), p.5116. [Q3.\[IF:3.252\]](#)

