

# MAHMOUD ABDALLAH ATTIA

Associate professor – FACULTY OF ENGINEERING - AIN SHAMS UNIVERSITY

✉ Address: 127-A, 6<sup>th</sup> Zone, 1<sup>st</sup> District, EL-Obour City, Egypt;

☎ Mobile: +2012 24624428, +201143257184, 📧 E-mail : Mahmoud.Abdullah@eng.asu.edu.eg

## ➡ PERSONAL INFORMATION

▪ **Nationality** : Egyptian    ▪ **Military Service Status** : Exempted    ▪ **Marital Status** : Married

## ➡ EDUCATION

**PhD Degree - Electrical Engineering** – (2011–2015) Ain-Shams University, Cairo, EG

**Research Subject:** Application of FACTS to Enhance the Performance of Power System with Growing Wind Power Penetration

**M.Sc. Degree - Electrical Engineering** – (2007–2010) Ain-Shams University, Cairo, EG

**Research Subject:** Allocation of FACTS Devices Using New Optimization Techniques

**B.Sc. Degree - Electrical Engineering** – (2000–2005) Ain-Shams University, Cairo, EG

**Graduation Project:** Design of interior wiring and distribution networks for a large housing complex

**Special Achievements:** - **B.Sc. Grade - Rank - %** : Distinction - 2 - 93.93 %

- **Cumulative Grade- Rank - %** : Distinction with Honor - 4 - 89.14 %

## ➡ WORK EXPERIENCE

### ▪ Faculty of Engineering – Ain Shams University, EG (July 2007 – Present)

Job Title : Teaching Assistant (July 2007 – June 2015),  
Assistant professor (June 2015 – June 2020)  
Associate professor (June 2020 – Present)

Job Responsibilities : Researches & Teaching in the electrical engineering field  
Participating in the preparation of quality requirements  
Participating in the ASU consultancy office activities

### ▪ National Institute of Standards, EG ( July 2006 – July 2007)

Job Title : Research Assistant

Job Responsibilities : - Researches in the electrical metrology field  
- Calibration of Electrical equipment

### ▪ Hassan Allam Sons, EG ( October 2005 – July 2006 )

Job Title : Electrical Engineer (full time)

Job Responsibilities : - Technical study of projects  
- Cost estimate analysis  
- Preparation of technical and commercial offers

## ➔ Awards

- **State Incentive Award** (Academy of Scientific Research) in Engineering sciences, 2022.
- **Ain Shams Incentive Award** in Engineering sciences, 2022.

## ➔ PUBLICATIONS

### Most Recent and Relevant Research Publications (2021-2023):

- Diaaeldin, Ibrahim Mohamed, **Mahmoud A. Attia**, Amr K. Khamees, Othman AM Omar, and Ahmed O. Badr. "A Novel Multiobjective Formulation for Optimal Wind Speed Modeling via a Mixture Probability Density Function." *Mathematics* 11, no. 6 (2023): 1463.
- Omar, Othman AM, Mostafa I. Marei, and **Mahmoud A. Attia**. "Comparative Study of AVR Control Systems Considering a Novel Optimized PID-Based Model Reference Fractional Adaptive Controller." *Energies* 16, no. 2 (2023): 830.
- Khamees, Amr Khaled, Almoataz Y. Abdelaziz, Makram R. Eskaros, **Mahmoud A. Attia**, and Mariam A. Sameh. "Optimal Power Flow with Stochastic Renewable Energy Using Three Mixture Component Distribution Functions." *Sustainability* 15, no. 1 (2023): 334.
- Fanos, Beshoy Nabil Fahmy, Mohammad H. Soliman, Hossam EA Talaat, and **Mahmoud A. Attia**. "Modern Active Voltage Control in Distribution Networks, including Distributed Generation, Using the Hardware-in-the-Loop Technique." *Symmetry* 15, no. 1 (2022): 90.
- Badr, Ahmed O., Abdulsalam A. Aloukili, Metwally A. El-Sharkawy, Mariam A. Sameh, and **Mahmoud A. Attia**. "Compensation of Distributed Generations Outage Using Controlled Switched Capacitors." *Sustainability* 14, no. 23 (2022): 16094.
- Badr, Ahmed O., Soha Mansour, Mariam A. Sameh, and **Mahmoud A. Attia**. "Seamless Transition and Fault-Ride-Through by Using a Fuzzy EO PID Controller in AVR System." *Energies* 15, no. 22 (2022): 8475.
- Khamees, Amr Khaled, Almoataz Y. Abdelaziz, Makram R. Eskaros, **Mahmoud A. Attia** and Ahmed O. Badr, "The Mixture of Probability Distribution Functions for Wind and Photovoltaic Power Systems Using a Metaheuristic Method", *Processes* 10, no. 11(2022).
- Ellithy, Hazem Hassan, Adel M. Taha, Hany M. Hasanien, **Mahmoud A. Attia**, Adel El-Shahat, and Shady HE Abdel Aleem. "Estimation of Parameters of Triple Diode Photovoltaic Models Using Hybrid Particle Swarm and Grey Wolf Optimization." *Sustainability* 14, no. 15 (2022): 9046.
- Mansour, Soha, Ahmed O. Badr, **Mahmoud A. Attia**, Mariam A. Sameh, Hossam Kotb, Elmazeg Elgamli, and Mokhtar Shouran. "Fuzzy logic controller equilibrium base to enhance

AGC system performance with renewable energy disturbances." *Energies* 15, no. 18 (2022): 6709.

- EL-Ebiary, Ahmed H., **Mahmoud A. Attia**, Mostafa I. Marei, and Mariam A. Sameh. "An Integrated Seamless Control Strategy for Distributed Generators Based on a Deep Learning Artificial Neural Network." *Sustainability* 14, no. 20 (2022): 13506.
- Shawqran, Ahmed M., Abdallah El-Marhomy, **Mahmoud A. Attia**, and Mohamed Z. Kamh. "Novel blade angle controllers techniques based on heuristics algorithms." *Ain Shams Engineering Journal* 13, no. 6 (2022): 101782.
- Kotb, Hossam, Ahmed H. Yakout, **Mahmoud A. Attia**, Rania A. Turky, and Kareem M. AboRas. "Speed control and torque ripple minimization of SRM using local unimodal sampling and spotted hyena algorithms based cascaded PID controller." *Ain Shams Engineering Journal* 13, no. 4 (2022): 101719.
- Khamees, Amr Khaled, Almoataz Y. Abdelaziz, Makram R. Eskaros, and **Mahmoud A. Attia**. "Investigation of Different Probability Distribution Functions for Wind Speed Modelling Using Classical and Novel Metaheuristic Methods." In *2021 22nd International Middle East Power Systems Conference (MEPCON)*, pp. 26-31. IEEE, 2021.
- Mokhtar, Mohamed, Mostafa I. Marei, Mariam A. Sameh, and **Mahmoud A. Attia**. "An Adaptive Load Frequency Control for Power Systems with Renewable Energy Sources." *Energies* 15, no. 2 (2022): 573.
- El-Sharkawy, Mahmoud M., **Mahmoud A. Attia**, and Almoataz Y. Abdelaziz. "Optimized Blade Angle Controller to Enhance Wind Speed Variability Impacts." *Electric Power Components and Systems* 49, no. 6-7 (2022): 612-623.
- Shawqran, Ahmed M., Abdallah El-Marhomy, **Mahmoud A. Attia**, Almoataz Y. Abdelaziz, Aanchal Singh S. Vardhan, Akanksha Singh S. Vardhan, R. K. Saxena, and R. K. Saket. "Experimental and Analytical Studies of Blade Angle Influences Under Normal and Faulty Conditions." In *Proceedings of the 2nd International Conference on Recent Trends in Machine Learning, IoT, Smart Cities and Applications*, pp. 211-227. Springer, Singapore, 2022.
- Kamel, Bassem Khaled, Walid Atef Omran, and **Mahmoud A. Attia**. "Enhancement of Wind Energy Conversion System Voltage Stability by Using STATCOM with Different Controllers." In *2021 16th International Conference on Computer Engineering and Systems (ICCES)*, pp. 1-6. IEEE, 2021.
- Sayed, Eman A., Mariam A. Sameh, Ahmed O. Badr, and **Mahmoud A. Attia**. "Hybrid Optimization of PV system for enhanced performance using Teaching Learning Based Optimization (TLBO) and Equilibrium Optimizer (EO)." In *2021 16th International Conference on Computer Engineering and Systems (ICCES)*, pp. 1-6. IEEE, 2021.
- Shawqran, Ahmed M., Abdallah El-Marhomy, Mariam A. Sameh, and **Mahmoud A. Attia**. "Reduction of Total Harmonic Distortion of Wind Turbine Active Power Using Blade Angle Adaptive PI Controller." *Energies* 14, no. 20 (2021): 6798.

- Amr Khaled Khamees, Almoataz Y. Abdelaziz, Ziad M. Ali, Mosleh M. Alharthi, Sherif S.M. Ghoneim, Makram R. Eskaros, **Mahmoud A. Attia**, Mixture probability distribution functions using novel metaheuristic method in wind speed modeling, *Ain Shams Engineering Journal*, 2021.
- Khamees, Amr Khaled, Almoataz Y. Abdelaziz, Makram Roshdy Eskaros, Hassan Haes Alhelou, and **Mahmoud Abdallah Attia**. "Stochastic Modeling for Wind Energy and Multi-Objective Optimal Power Flow by Novel Meta-Heuristic Method." *IEEE Access* 9 (2021): 158353-158366.
- Shawqran, Ahmed M., Abdallah El-Marhomy, **Mahmoud A. Attia**, Almoataz Y. Abdelaziz, and Hassan Haes Alhelou. "Enhancement of wind energy conversion system performance using adaptive fractional order PI blade angle controller." *Heliyon* 7, no. 10 (2021): e08239.
- Khamees, Amr Khaled, Almoataz Y. Abdelaziz, Makram R. Eskaros, Adel El-Shahat, and **Mahmoud A. Attia**. "Optimal Power Flow Solution of Wind-Integrated Power System Using Novel Metaheuristic Method." *Energies* 14, no. 19 (2021): 6117.
- Shawqran, Ahmed M., Abdallah El-Marhomy, Mariam A. Sameh, and **Mahmoud A. Attia**. "Comparative study of blade angle controllers with different optimization algorithms." *Alexandria Engineering Journal* 61, no. 5 (2022): 3897-3912.
- Yakout, Ahmed H., **Mahmoud A. Attia**, and Hossam Kotb. "Marine Predator Algorithm based Cascaded PIDA Load Frequency Controller for Electric Power Systems with Wave Energy Conversion Systems." *Alexandria Engineering Journal* 60, no. 4 (2021): 4213-4222.
- Sameh, Mariam A., Mostafa I. Marei, M. A. Badr, and **Mahmoud A. Attia**. "An Optimized PV Control System Based on the Emperor Penguin Optimizer." *Energies* 14, no. 3 (2021): 751.
- Shawqran, Ahmed M., Abdallah El-Marhomy, and **Mahmoud A. Attia**. "Pitch Angle Adaptive PI Controller Based on Heuristics Optimization Algorithms." In *Advanced Machine Learning Technologies and Applications: Proceedings of AMLTA 2021*, pp. 674-687. Springer International Publishing, 2021.
- Hamdy, Mohamed, **Mahmoud A. Attia**, Almoataz Y. Abdelaziz, Sachin Kumar, Kumari Sarita, and R. K. Saket. "Performance Enhancement of STATCOM Integrated Wind Farm for Harmonics Mitigation Using Optimization Techniques." In *ICT Analysis and Applications*, pp. 507-516. Springer, Singapore, 2021.
- Hendam, Mohamed, Mohamed Abdel-Rahman, **Mahmoud A. Attia**, and Mohamed Zakaria Kamh. "Maximizing public welfare for the net-metering scheme using prosumer charges—vertically integrated utility case." *Ain Shams Engineering Journal* (2021).
- Mokhtar, Mohamed, Loai S. Nasrat, and **Mahmoud A. Attia**. "Mathematical modeling of polymer dielectric strength considering filling concentration." *International Journal of Emerging Electric Power Systems* (2021).
- Hamdy, Mohamed, Almoataz Y. Abdelaziz, Papia Ray, and **Mahmoud A. Attia**. "Comparison between flexible AC transmission systems (FACTS) and filters regarding renewable energy systems harmonics mitigation." *International Journal of Emerging Electric Power Systems* (2021).

- Soliman, Mohammad H., Hossam EA Talaat, and **Mahmoud A. Attia**. "Power system frequency control enhancement by optimization of wind energy control system." *Ain Shams Engineering Journal* (2021).
- **Attia, Mahmoud A.**, Mohamed Mokhtar, Almoataz Y. Abdelaziz, Suchetan Sasis, Sachin Kumar, and R. K. Saket. "Optimal Controller Design for Automatic Generation Control Under Renewable Energy Disturbance." In *Advances in Smart Grid Automation and Industry 4.0*, pp. 121-132. Springer, Singapore, 2021.
- Mokhtar, Mohamed, Mostafa I. Marei, and **Mahmoud A. Attia**. "Hybrid SCA and adaptive controller to enhance the performance of grid-connected PV system." *Ain Shams Engineering Journal* (2021).

#### **Other Research Publications (2010-2020):**

- A. Y. Abdelaziz, M. A. El-Sharkawy and **M. A. Attia**, 'Optimal Allocation of TCSC Devices Using Genetic Algorithms', Proceedings of the Fourteenth International Middle-East Power Systems Conference MEPCON'10, Cairo University, Cairo, Egypt, December 2010, pp. 428-432.
- A. Y. Abdelaziz, M. A. El-Sharkawy and **M. A. Attia**, 'Optimal Location of TCSC in Power Systems for Increasing Loadability by Genetic Algorithm', *Electric Power Components and Systems Journal*, Vol. 39, No. 13, August 2011, pp. 1373-1387.
- A. Y. Abdelaziz, M. A. El-Sharkawy and **M. A. Attia**, 'A Genetic Algorithm Based Approach for Optimal Location of TCSC Devices Considering System Loadability', *International Journal on Power System Optimization*, Vol. 3, No. 1, January-June 2011, pp. 27-32.
- A. Y. Abdelaziz, M. A. El-Sharkawy, **M. A. Attia**, and B. K. Panigrahi, 'Genetic Algorithm Based Approach for Optimal Allocation of TCSC for Power System Loadability Enhancement', Proceedings of Swarm, Evolutionary and Memetic Computing Conference (SEMCCO 2012), December 20 –22, 2012, Institute of Technical Education and Research, SOA University, Bhubaneswar, Odisha, India.
- A. Y. Abdelaziz, M. A. Elsharkawy and **M. A. Attia**, 'Comparison of Series and Shunt FACTS to Improve the Performance of Power System with Wind Penetration', *International Journal of Advances in Power Systems (IJAPS)*, Vol. 1, No. 2, September 2013.
- A. Y. Abdelaziz, M. A. El-Sharkawy, **M. A. Attia**, and E. F. El-Saadany, 'Optimal Location of Series FACTS to Improve the Performance of Power System with Wind Penetration', Proceedings of the 2014 IEEE PES General Meeting, July 27 - 31, 2014, National Harbor, MD (Washington, DC Metro Area), USA.
- A. Y. Abdelaziz, M. A. El-Sharkawy, **M. A. Attia**, Y.G. Hegazy, 'A Genetic Algorithm for Optimal Allocation of FACTS to enhance power system performance with wind penetration', 2nd International Conference on Engineering and Technology ICET 2014, German University in Cairo, Cairo, Egypt, 19-20 April 2014.
- A. Y. Abdelaziz, M. A. Elsharkawy and **M. A. Attia**, 'TCSC and SVC Optimal Location to Improve the Performance of Power System with Wind Penetration', *Emerging Trends in Electrical, Electronics & Instrumentation Engineering: An international Journal (EEIEJ)*, Vol. 1. No. 1, February 2014, pp. 1-17.

- A. Y. Abdelaziz, M. A. El-Sharkawy, **M. A. Attia**, ‘Optimal Location of FACTS Devices to Reduce Wind Variation Effect on Power System’, Accepted for publication in Proceedings of the Sixteenth International Middle East Power Systems Conference, Ain Shams University, Cairo, Egypt, December 23-25, 2014 (MEPCON'14).
- Almoataz Youssef Abdelaziz, Metwally Awd El-Sharkawy and **Mahmoud Abdallah Attia**, ‘Optimal Location of TCSC Devices to Assist Wind Penetration & Operation’, Journal of Energy and Power Sources, , www.ethanpublishing.com, Vol. 2, No. 5, 2015.
- Almoataz Y. Abdelaziz, Metwally A. El-Sharkawy & **Mahmoud A. Attia**, “Optimal Location of Thyristor-Controlled Series Compensation and Static VAR Compensator to Enhance Steady-state Performance of Power System with Wind Penetration”, Electric Power Components and Systems Journal, Vol. 43, September 2015, pp. 1999-2009.
- **Mahmoud A. Attia**, Hany M. Hasanien, A.Y. Abdelaziz “Performance enhancement of power systems with wave energy using gravitational search algorithm based TCSC devices”, issue. 4, Vol. 19, Engineering Science and Technology, an International Journal, ELSEVIER 2016.
- Ibrahim M. Diao, Niveen M. Badra, **Mahmoud A. Attia**, “Harmony Search and Nonlinear Programming Based Hybrid Approach to Enhance Power System Performance with Wind Penetration” issue 7, vol 7, International Electrical Engineering Journal (IEEJ), 2016.
- Ibrahim M. Diao, Niveen M. Badra and **Mahmoud A. Attia**, “Harmony Search Algorithm and Teaching-Learning-Based Optimization Approaches to Enhance Power System Performance” issue 10, vol. 34 , World Applied Sciences Journal (WASJ), 2016.
- Almoataz Y. Abdelaziz, Metwally A. El-Sharkawy & **Mahmoud A. Attia**, “Reactive Power Control to Assist Wind Penetration without Effect on System Operation”, Vol. 7, International Electrical Engineering Journal (IEEJ), 2016.
- AHMED M. MOSAAD, **MAHMOUD A. ATTIA** & ALMOATAZ Y. ABDELAZIZ “Optimization techniques to tune the PID and PIDA controllers for AVR performance enhancement” accepted for November 2016 – January 2017 issue of i-manager's Journal on Instrumentation and Control Engineering.
- Almoataz Y. Abdelaziz, M. A. Elsharkawy, **M. A. Attia**, “Reactive Power Control to Assist Wind Penetration without Effect on System Operation”, International Electrical Engineering Journal (IEEJ), Vol. 7 (2016) No.1, pp. 2124-2129.
- A. Sanad Ahmed, **Mahmoud A. Attia**, Nabil M. Hamed, Almoataz Y. Abdelaziz, “Comparison between genetic algorithm and whale optimization algorithm in fault location estimation in power systems”, Power Systems Conference (MEPCON), 2017 Nineteenth International Middle East, 19-21 Dec. 2017, cairo , Egypt, IEEE.
- Mohamed. M. Elsaied; M. A. Mostafa; Said. F. Mekhamer; **Mahmoud. A. Attia**, “Application of different optimization techniques to load frequency control in a multi-area system“, 2017 Nineteenth International Middle East Power Systems Conference (MEPCON), 19-21 Dec. 2017, cairo , Egypt, IEEE.
- Mohamed EL-Shimy, **Mahmoud A. Attia**, N. Mostafa, A.N. Afandi, “Performance of grid-connected wind power plants as affected by load models: a comparative study”, The 5th

International Conference on Electrical, Electronics, and Information Engineering (ICEEIE 2017) At: Malang, Indonesia

- Ann Hesham Ahmed, Ahmed M. Asim, **Mahmoud A. Attia** (2017), “Effect of Stochastic Nature Of Wind Energy On Power System.”, i-manager’s Journal on Electrical Engineering, 11(1), 1-9. <https://doi.org/10.26634/jee.11.1.13671>
  
- Osman Ahmed, Niveen Badra, **Mahmoud A. Attia**, (2017). “Optimization Technique for Dynamic Voltage Response Improvement in a Fixed Speed Wind Farm With PIA Controller.” i-manager’s Journal on Instrumentation and Control Engineering, 5(2), 1-7. <https://doi.org/10.26634/jic.5.2.13497>.
  
- A. Sanad Ahmed, **Mahmoud A. Attia**, NABIL M. HAMED, Almoataz Y. Abdelaziz, (2017). “Fault Location Estimation Systems: A Critical Review.” i-manager’s Journal on Circuits and Systems, 5(3), 17-30. <https://doi.org/10.26634/jcir.5.3.13813>.
  
- **Mahmoud A. Attia**, A. M. Hussien (2017). “Comparison between HS and TLBO to Optimize PIA Speed Controller and Current Controller for Switched Reluctance Motor.”, i-manager’s Journal on Circuits and Systems, 5(1), 1-10. <https://doi.org/10.26634/jcir.5.1.13542>.
  
- Ahmed M. Ibrahim, **Mahmoud A. Attia**, Mahmoud M. Othman, Almoataz Y. Abdelaziz, (2017). A Survey on Demand Side Management In Electrical Power Systems. i-manager’s Journal on Power Systems Engineering, 5(1), 40-50. <https://doi.org/10.26634/jps.5.1.13536>.
  
- Almoataz Y. Abdelaziz, Metwally A. El-Sharkawy, **Mahmoud A. Attia** (2017). Effect of System Topology on Wind Generators Penetration Maximization with TCSCs Insertion. i-manager’s Journal on Power Systems Engineering, 5(1), 1-9. <https://doi.org/10.26634/jps.5.1.13532>.
  
- **Mahmoud A. Attia**, Marwa F. Fathi, Ibrahim M. Diao (2017). Optimal Sizing of Distributed Generations using Heuristic Optimization Techniques. i-manager’s Journal on Instrumentation and Control Engineering, 5(3), 10-24. <https://doi.org/10.26634/jic.5.3.13678>.
  
- Mohsmed M. Elsaied, **Mahmoud A. Attia**, M. A. Mostafa, Said F. Mekhamer (2017). The Load Frequency Control Techniques in Interconnected Power Systems critical survey. i-manager’s Journal on Instrumentation and Control Engineering, 5(4), 41-54. <https://doi.org/10.26634/jic.5.4.13844>.
  
- Almoataz Y. Abdelaziz, **M. A. Attia**, M. A. Elsharkawy, “Enhancement of Power System Performance under Wind Generator Penetration with Considering Cost Saving”, MASK International Journal of Science and Technology, Vol. 2, No. 1, Jan 2017.
  
- Ibrahim M Diao, Niveen M Badra, **Mahmoud A. Attia**, CLASSICAL AND ARTIFICIAL OPTIMIZATION TECHNIQUES TO ENHANCE POWER SYSTEM OPERATION, International Journal of Engineering Applied Sciences and Technology, Vol 2, issue 5, p.p. 221-226, 2017.
  
- A. Sanad Ahmed, **Mahmoud A. Attia**, Nabil M. Hamed , AlMoataz Y. Abdelaziz, “Fault Location Estimation in Power Systems Using the Whale Optimization Algorithm”, International Journal on Power Engineering and Energy (IJPEE) Vol. (8) , No. (4), October 2017.

- M.EL-Shimy, N.Mostafa, A.N.Afandi, A.M.Sharaf, **Mahmoud A. Attia** “Impact of load models on the static and dynamic performances of grid-connected wind power plants: A comparative analysis”, *Mathematics and Computers in Simulation* Volume 149, July 2018, Pages 91-108, ELSEVIER, <https://doi.org/10.1016/j.matcom.2018.02.003>
  
- **Mahmoud A. Attia**, Optimized controllers for enhancing dynamic performance of PV interface system, *Journal of Electrical Systems and Information Technology* Available online 21 February 2018, ELSEVIER, <https://doi.org/10.1016/j.jesit.2018.01.003>
  
- Abdulsalam A. Aloukili, ; Metwally A. El-Sharkawy; **Mahmoud A. Attia**, “Optimum Sizing and Siting for DG Units using Hybrid 2/3 Rule and Harmony Search Algorithm”, *International Journal of Engineering Works*, Kambohwel Publisher Enterprises ISSN: 2409-2770 Vol. 5, Issue 1, PP. 1-9, January 2018.
  
- Mohamed Magdy, Abdallah El Marhomy, **Mahmoud A. Attia** “Comparison between DC motor, Universal Motor and Switched Reluctance Motor performance on PID Controlled Inverted Pendulum system tuned by hybrid GSA-GA Algorithm “ April 2018 4th International Conference of Engineering Division, National Research Center, Cairo, Egypt.
  
- Osman Ahmed, Niveen Badra, **Mahmoud A. Attia** “Curve Fitting Models of Doubly Fed Wind Turbine Operation Characteristics” Steps Towards Innovative Sustainable Development (Conference NRC-ICED 2018, May 6-8, 2018 National Research Center, Cairo, Egypt.
  
- Othman A.M.Omar, Niveen M. Badra, **Mahmoud A. Attia** “ Enhancement of On-grid PV System under Irradiance and Temperature Variations Using New Optimized Adaptive Controller “ *International Journal of Electrical and Computer Engineering (IJECE)* Vol. 8, No. 5, October 2018, pp. 2650~2660 ISSN: 2088-8708, DOI: 10.11591/ijece.v8i5.2650-2660
  
- Mohamed Magdy, Abdallah El Marhomy, **Mahmoud A Attia** “Modeling of inverted pendulum system with gravitational search algorithm optimized controller” *Ain Shams Engineering Journal* Available online 3 January 2019, Elsevier <https://doi.org/10.1016/j.asej.2018.11.001>.
  
- Mariam A. Sameh ; M. A. Badr ; M. A. L. Badr ; Mostafa I. Marei ; **Mahmoud A. Attia** “Optimized PIA Controller for Photovoltaic System Using Hybrid Particle Swarm optimization and Cuttlefish Algorithms” 2018 7th International Conference on Renewable Energy Research and Applications (ICRERA) , 14-17 Oct. 2018 Paris, France, IEEE. DOI: 10.1109/ICRERA.2018.8566889.
  
- Mohamed Mostafa Elsaied, **Mahmoud Abdallah Attia**, Mahmoud Abdelhamed Mostafa, and Said Fouad Mekhamer (2018) Application of Different Optimization Techniques to Load Frequency Control with WECS in a Multi-Area System, *Electric Power Components and Systems*, DOI: 10.1080/15325008.2018.1509913.
  
- Ahmed M. Mosaad, **Mahmoud A. Attia** & Almoataz Y. Abdelaziz (2018) Comparative Performance Analysis of AVR Controllers Using Modern Optimization Techniques, *Electric Power Components and Systems*, DOI: 10.1080/15325008.2018.1532471
  
- Ahmed M. Mosaad, **Mahmoud A. Attia** & Almoataz Y. Abdelaziz “Whale optimization algorithm to tune PID and PIDA controllers on AVR system”, *Ain Shams Engineering Journal* Available online 30 July 2019, <https://doi.org/10.1016/j.asej.2019.07.004> .

- Ahmed H. Yakout and **Mahmoud A. Attia**, “Damping Inter-Area Oscillations Via Weighted Area Signals to PSSs Using TLBO & HS Algorithm”, Power Systems Conference (MEPCON), 2019 21<sup>st</sup> International Middle East, 17-19 Dec. 2019, cairo , Egypt, IEEE.
- Nasrat, L. S., Othman AM Omar, and **Mahmoud A. Attia**. "Experimental and numerical investigation of alumina trihydrate effect for improvement of polymer flashover voltage strength." *Engineering Science and Technology, an International Journal* (2019).
- Ibrahim, Ahmed M., **Mahmoud A. Attia**, and Almoataz Y. Abdelaziz. "A DSM Approach for Distribution Systems with High Wind Power Penetration." *Electric Power Components and Systems* 48, no. 1-2 (2020): 56-69.
- Mohamed, Mariam, **Mahmoud A. Attia**, Ahmed M. Asim, Almoataz Y. Abdelaziz, and Neeraj Kanwar. "Optimization of cleaning frequency and dust accumulation effect on photovoltaic panels." *Journal of Interdisciplinary Mathematics* 23, no. 1 (2020): 53-68.
- Omar, Othman A., Niveen M. Badra, **Mahmoud A. Attia**, and Ahmed Gad. "Optimized Dynamic Operation of Fixed-Speed Wind Farms Using Classical and Advanced Controllers." *International Journal of Emerging Electric Power Systems* 21, no. 2 (2020).
- Shawqran, Ahmed M., Abdallah El-Marhomy, and **Mahmoud A. Attia**. "Blade Angle Control Using TLBO Based Modified Adaptive Controller." In *2020 15th International Conference on Computer Engineering and Systems (ICCES)*, pp. 1-6. IEEE, 2020.

## ➤ Books

- The author of book 'Optimal Allocation of FACTS Devices in Electrical Power Systems: A Genetic Algorithm Based Approach', LAP LAMBERT Academic Publishing, April 2013.
- The author of book 'Enhancing Power System Performance with Growing Wind Power Penetration: optimal Allocation of FACTS', LAP LAMBERT Academic Publishing, July 2015.
- Mohamed EL-Shimy, **Mahmoud A. Attia**, M.H. Soliman “Mechatronics” August 2018, Egyptian Ministry of Health & Population (MOHP), Health Communication Capacity Collaborative (HC3) Project in Egypt, and United States Agency of International Development (USAID).
- Mohamed EL-Shimy, **Mahmoud A. Attia** “ Control and electric circuits” August 2018, Egyptian Ministry of Health & Population (MOHP), Health Communication Capacity Collaborative (HC3) Project in Egypt, and United States Agency of International Development (USAID).

## ➤ Contribution in Thesis Supervision:

- " Optimal Design of Controller for AVR Performance Enhancement", Ahmed Magdy Mosaad , Msc., Ain Shams University, Cairo, 2017.

- " Fault Location Estimation in Smart Grid", Ahmed Sanad Ahmed, Msc., Ain Shams University, Cairo, 2017.
- " Use of Optimization Techniques to Enhance Power System Performance", Ibrahim Mohamed Diaa El-Din Ibrahim Elsayed , Msc., Ain Shams University, Cairo, 2017.
- " Impact of defective DG on distribution system performance ", Abdulsalam Aref Ali ALOKILI, Msc., Ain Shams University, Cairo, 2018.
- “Application of Different Optimization Techniques to Load Frequency Control in a Multi-Area System”, Mohamed Mostafa Elsaied Mohamed, Msc., Ain Shams University, Cairo, 2018.
- “Enhancement of Renewable Energy Operation by Optimization Techniques”, Othman Ahmed Mohamed Omar, Msc., Ain Shams University, Cairo, 2018.
- “Stability and Control of an Inverted Pendulum Motion ", Mohamed Magdy Mohamed Abdo, Msc., Ain Shams University, Cairo, 2019. (Best Thesis Award Faculty of Engineering Ain Shams University)
- “Optimum Control of PV System Under Partial Shading Conditions”, Mariam Ahmad Sameh Mohamad Ahmad Abbadi, Ph.D, Ain Shams University, Cairo, 2020. (Best Thesis Award Faculty of Engineering Ain Shams University)
- “Effect of Blade Pitch Angle Control on Wind Turbine Power Generation”, Ahmed Mohamed Hamed El desoukie Shawqran, Ph.D, Ain Shams University, Cairo, 2022.
- “Optimized Controller For Converter Based Distributed Generator (DG) ”Ahmed hitham , Cairo, 2020
- “Impact of Wind Farm Disturbance on Power System Performance”, Mahmoud Maged , Cairo, 2019
- “Demand Side Management with Renewable Energy Sources”, Ahmed mokhtar, Cairo, 2019
- "Optimizing the Effect of the Distributed Energy Generation on the Tariff of Electrical" Mohamed Fayez, Cairo, 2021. (Best Thesis Award Faculty of Engineering Ain Shams University)
- “Optimum solutions to power quality problems caused by connecting renewable energy resources to power system “Mohamed Hamdy, Cairo, 2021
- “Mechanical parameters optimization to enhance the wave energy conversion system performance”, Omar Mohamed Saber, Cairo, 2022

- “Enhancing PV System Performance Using Optimization Techniques” Eman Adel, Cairo, 2022
- “Mechanisms and Auto-classification of Partial Discharges and Associated Faults in Oil Immersed Transformers. “ Walied Sameh Salah, Cairo, 2022
- “Stochastics Modelling of Renewable Energy”, Amr Khaled, Cairo, 2022

## ➔ ATTENDED CONFERENCES

- Technical committee in: Third Ain Shams university international conference on environmental engineering (ASCEE-3)- Egypt (14/4/2009-16/4/2009).
- Attended: The 16<sup>th</sup> International Middle East Power Systems Conference MEPCON’14, Ain Shams University, Cairo, EGYPT December 23-25, 2014.
- Attended: The 19<sup>th</sup> International Middle East Power Systems Conference MEPCON’2017, Cairo, EGYPT December 19-21, 2017.
- The second International Conference on Engineering and Technology (ICET 2014), the German University in Cairo (GUC), Cairo, EGYPT, April 19 -20, 2014.
- Attended: The IEEE 2022, 23<sup>rd</sup> International Middle East Power Systems Conference, MEPCON’2022, Cairo, Egypt, December 13-15, 2022

## ➔ SPECIAL ACTIVITIES

- Reviewer in Electric Power Components and Systems Journal
- Reviewer in Ain Shams Engineering Journal
- Reviewer in Sustainable Energy Technologies and Assessments
- Reviewer in Energies journal.
- Reviewer in Alexandria Engineering Journal
- Reviewer in International Transactions on Electrical Energy Systems
- Reviewer in SEMCCO 2011 conference
- Editor-in-Chief of i-manager’s Journal on Instrumentation and Control Engineering (JIC) till 2022.
- Editorial member of i-manager's Journal on Circuits and Systems (JCIR)
- Reviewer in Energies Journal
- Guest Editor of Special Issue "Sustainable Microgrid Systems: Technologies, Applications and Trends" , Processes journal.

## ➔ TRAINING COURSES

- International computer Driving License (ICDL) preparation course: Center for Advanced Software and Biomedical Engineering Consultation (CASBEC) – Faculty of Engineering, Cairo University – Egypt (November 2006 –December 2006).
- Traceability in measurement and Uncertainty in measurement result : National Institute of Standards (NIS) – Egypt ( 15/4/2007 - 17/4/2007 )

- Quality standards in the teaching process :Faculty And Leadership Development center (FLDC) –Ain shams university-Egypt (19/7/2008-21/7/2008)
- Management of time and meetings :Faculty And Leadership Development center (FLDC) – Ain shams university-Egypt (30/8/2008-1/9/2008)
- Using technology in teaching :Faculty And Leadership Development center (FLDC) –Ain shams university-Egypt (3/1/2009-5/1/2009)
- Credit hours :Faculty And Leadership Development center (FLDC) –Ain shams university-Egypt (16/5/2009-18/5/2009)
- Ethics of scientific research: Faculty And Leadership Development center (FLDC) – Ain shams university-Egypt (5/9/2009-7/9/2009)
- Communication skills: Faculty And Leadership Development center (FLDC) – Ain shams university-Egypt (10/4/2010-12/4/2010)
- International publication: Faculty And Leadership Development center (FLDC) – Ain shams university-Egypt (12/2/2011-14/2/2011)
- Ain shams leadership day workshop “Team dynamics, Meeting skills & Time Management “ : project development external relations and copy rights center – Ain shams university – Egypt 25/12/2010
- Institutional Self-Evaluation For Higher Education : National Authority for Quality Assurance and Accreditation of Education (NAQAAE)– Egypt (22/1/2011- 27/1/2011)
- Exams systems and student evaluation: Faculty and Leadership Development center (FLDC) – Ain shams university-Egypt (19/7/2011-21/7/2011)
- Organizing scientific conferences: Faculty and Leadership Development center (FLDC) – Ain shams university-Egypt (14/7/2012 - 16/7/2012)
- Legal and financial aspects of the faculty member: Faculty and Leadership Development center (FLDC) – Ain shams university-Egypt (19/7/2013-21/7/2013)
- Competitive research projects: Faculty And Leadership Development center (FLDC) – Ain shams university-Egypt (30/8/2014-31/8/2014)
- Strategic Planning: Quality Assurance and Accreditation Center- Ain Shams University- Egypt (11,18/3/2015)
- Credit hours and academic advising : Quality Assurance and Accreditation Center- Ain Shams University- Egypt (27-28/6/2021)
- Scientific Writing :Faculty and Leadership Development center (FLDC) –Ain shams university-Egypt (24/2/2022-25/2/2022)
- Scholarly publishing in indexed journals: Faculty and Leadership Development center (FLDC) –Ain shams university-Egypt (27/2/2022-28/2/2022)
- Preparation of self-study in the program accreditation system, Quality Assurance and Accreditation Center- Ain Shams University- Egypt (18/1/2023 -19/1/2023)

## ➔ UNDER-GRADUATE SUMMER TRAINING

- Syrian Arab republic: (3/7/2004 - 3/8/2004)
  - 1- Electric Power Station
  - 2- Faculty of Engineering – El Baas University
- GASCO: (29/8/2004 - 16/9/2004)
- ABB ARAB: (3/8/2003 - 7/8/2003)
- North Cairo Station Training Center: (5/7/2003 - 22/7/2003)

## ➔ COMPUTER SKILLS

- **Qualifications** : International computer Driving License (ICDL)
- **Operating Systems** : Windows
- **Office** : Word, Excel, Power Point
- **Engineering Programs** : Matlab, AutoCAD, Calculux, Dialux, Matpower

## ➔ Online Courses

- Course Certificate for **Essentials of Entrepreneurship: Thinking & Action**, Created by: University of California, Irvine, 2015, [www.coursera.org](http://www.coursera.org).
- Course Certificate for **Work Smarter, Not Harder: Time Management for Personal & Professional Productivity**, Created by: University of California, Irvine, 2016, [www.coursera.org](http://www.coursera.org).
- Course Certificate for **Project Management: The Basics for Success**, Created by: University of California, Irvine, 2016, [www.coursera.org](http://www.coursera.org).

## ➔ Online contacts

- <https://orcid.org/0000-0002-6603-7434>
- [https://www.researchgate.net/profile/Mahmoud\\_Attia4](https://www.researchgate.net/profile/Mahmoud_Attia4)
- <https://scholar.google.com.eg/citations?user=ORcCwEgAAAAJ&hl=en>
- <https://www.scopus.com/authid/detail.uri?authorId=36681947000>