Curriculum Vitae of Prof. Dr. Eng.
Mohamed EL-Shimy Mahmoud Bekhet

Acting head, and
Professor of electric energy systems
Electrical Power and Machines department
Faculty of Engineering
Ain Shams University
Dec. 22, 2025

السيرة الذاتية الخاصة بالأستاذ الدكتور المهندس
محمد الشيمى محمود بخيت

قائم بعمل رئيس مجلس قسم
استاذ دكتور نظم القوى الكهربية
قسم هندسة القوى والآلات الكهربية
كلية الهندسة – جامعة عين شمس

MAILING ADDRESS AND CONTACT INFO

Electrical Power and Machines Department
Faculty of Engineering
Ain Shams University
1 EL-Sarayat Rd., Abdo Basha Sq., Abbassia,
Cairo, Egypt. P.O. Box: 11517
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mohamed_bekhet@eng.asu.edu.eg; ShimyMB@yahoo.com
ShimyMB@gmail.com

Websites:
http://shimymb.tripod.com

CURRENT POSITIONS

Acring Head of the Electrical Power and Machines department, Ain Shams University, Cairo, Egypt, (Full time, since Apr. 1, 2025)

Professor of Electric Power and Energy Systems (tenure), Ain Shams University, Cairo, Egypt, (Full time, since Mar. 2016)

Arbitrator with the scientific committee of the electrical power and machines for promoting professors and associate professors.

Academy supervisor, Publons Academy, since Dec. 12, 2017

Freelance Consultant and Technical Trainer (Part time, since 2005).

SHORT BIOGRAPHY

Prof. Dr. Mohamed EL-Shimy Mahmoud Bekhet (M. EL-Shimy) was born in Cairo, Egypt in 1974. He is currently the acting head of the electrical power and machines department, and a professor of electrical power systems with the Department of Electrical Power and Machines – Faculty of Engineering - Ain Shams University. He is also an electromechanical specialist, a freelance trainer, a technical advisor, and a member of many associations and professional networks. He is a technical reviewer and editor with some major journals and conferences. He also served as a keynote speaker and TCP at many international conferences. His fields of interest include electric power system: analysis, stability, economics, optimization, distribution, renewable energy integration, and reliability. *For more information, please visit:*

My official webpage: https://eng.asu.edu.eg/staff/mohamed_bekhet
My personal website: http://shimymb.tripod.com
Google Scholar page: http://goo.gl/tCNBLU
Scopus Profile: http://www.scopus.com/authid/detail.url?authorId=24780301200
ORCID: https://orcid.org/0000-0003-2061-8652
Thomson Reuters: http://www.researcherid.com/rid/G-6194-2012
Research gate: https://www.researchgate.net/profile/Mohamed_EL-Shimy
Academia: https://shams.academia.edu/MELShimy
LinkedIn group: https://goo.gl/9bVXtN

Miniature biography: Prof. Dr. Mohamed EL-Shimy is currently a professor of the electrical power system. He is also an electromechanical specialist, a freelance trainer, technical advisor, and a member of many associations and professional networks. For more information, please visit: http://shimymb.tripod.com

Review activities

Review lists on publons
Publons Profile: https://publons.com/author/1343399/prof-dr-mohamed-el-shimy-m-b-el-shimy#profile
Publon stats: https://publons.com/author/1343399/prof-dr-mohamed-el-shimy-m-b-el-shimy#stats
Review lists and recognition as an outstanding reviewer by the Elsevier

Journals (include)

1. IET Generation, Transmission & Distribution
2. Computers & Electrical Engineering
3. International Transactions on Electrical Energy Systems
4. International Journal of Electrical Power & Energy Systems
5. Renewable and Sustainable Energy Reviews
6. Energy
7. Applied Energy
8. Measurement
9. Energy Conversion and Management
10. Solar Energy
11. IEEE Transactions on Smart Grid
12. IEEE Transactions on Power Delivery
13. Ain Shams Engineering Journal
14. Sustainable Energy Technologies and Assessments

15. Renewable Energy
16. International Journal of Energy Sector Management
17. The Journal of Engineering
18. AEJ - Alexandria Engineering Journal
19. IET Renewable Power Generation
20. International Journal of Electrical Power & Energy Systems
21. International Journal of Sustainable Energy

Conferences

1. IEEE PES Asia-Pacific Power and Energy Engineering Conference (APPEEC)
2. Nineteenth International Middle East Power Systems Conference (MEPCON)
3. IEEE Conference on Energy Conversion
4. IEEE International Conference on Power and Energy
5. IEEE International Conference on Power and Energy (PECon)
6. International Conference On Engineering Education
7. IEEE Conference on Energy Conversion
8. IEEE Conference on Clean Energy and Technology (CEAT)
9. Fifteenth International Middle East Power Systems Conference (MEPCON)
10. International Middle-East Power System Conference
11. IEEE Symposium on Business, Engineering and Industrial Applications (ISBEIA)
12. IEEE Jordan Conference on Applied Electrical Engineering and Computing Technologies (AEECT)
13. IEEE International Multi-Conference on Systems, Signals and Devices

Editorial Board Membership

1. International Journal of Applied Power Engineering (IJAPE). Website: https://ijape.iaescore.com/index.php/IJAPE
1. International Journal of Advances in Applied Sciences (IJAAS). Website: https://ijaas.iaescore.com
2. Bulletin of Electrical Engineering and Informatics (BEEI). Website: https://www.beei.org/index.php/EEI
3. Advanced Engineering Forum (AEF). ISSN: 2234-991X. Website: https://www.scientific.net/AEF/Details
4. International Journal of Applied Power Engineering (IJAPE). Website: https://ijape.iaescore.com/index.php/IJAPE
5. Transactions on Applied Science, Engineering and Technology (TASET). Website: https://lanashscience.com/aim_scope/transactions-on-applied-science-engineering-and-technology

DETAILED FIELDS OF INTEREST

- Electric power system analysis and enhancement
    - Load flow analysis
    - Static voltage stability and load stability
    - Short circuit analysis
    - Dynamic voltage stability and load stability
    - Transient stability
    - Frequency stability
    - Performance analysis of power systems
        - Reactive power compensators/voltage control

        - Stability enhancement and stabilization
        - FACTS based control of power systems
- Electric power system economics
    - Economic dispatch
    - Unit commitment
    - Optimal power flow
    - Design optimization of distribution and transmission systems
- Power system reliability, availability, and maintainability
- Renewable energy systems
    - Solar photovoltaics
    - Wind energy systems
    - Impact analysis on the grid
    - Isolated mode
    - Sizing optimization
    - Advanced standalone renewable energy systems
    - Green hydrogen energy storage
- Energy saving and energy management
- Electricity to gas systems and 100% renewable energy sources

EDUCATION

Ph.D. Electric power systems, Apr. 24, 2004
Ain Shams University, Egypt
Thesis Title: "*Electromechanical System Equivalent and Dynamic Load Aggregation for Transient Stability of Electric Power System*"

M.S.c Electric power systems, May 31, 2001
Ain Shams University, Egypt
Thesis Title: "*Effect of Recent Equipment on Load Reliability*"

B.S.c Electrical Power and Machines, 1997
Ain Shams University, Egypt
Graduation Project title: "*Design of primary distribution networks"*

COMPUTER SKILLS

Microsoft Office; MATLAB; ETAP; PSAT; VisSim; EDSA; MATPOWER; PSAT; PW-Simulator; EMDC; AutoCAD; Windographer; RETScreen.

OTHER SKILLS

Electrical Power Systems, Stability, Energy Systems, Electrical Power Engineering, Power Systems Simulation, Power Systems Modelling, Power System Studies, Dynamics, Renewable Energy Technologies, Distributed Generation, Energy Management, Power Generation, Electrical Engineering, MATLAB Simulation, Engineering Education, Power Production, Power Systems Analysis, Power Electronics, Power Quality, Power System Stability, Power Transmission, Power System Protection, Grid Integration, Wind Energy, Power Systems, Photovoltaics, Power System Reliability, Transformers, Microgrids Optimization, Education, Nuclear Energy, Scientific Research, Electric Machines, Psychology, Economics, Irrigation and Water Management, Sustainability, Wind, Electricity, Power Distribution System

SELF-PACED COURSES (ONLINE)

1. ***Alternative Power Generation Technologies***. Energy University by Schneider Electric, Effective as of Oct 12, 2011.

2. ***Demand Response and the Smart Grid***. Energy University by Schneider Electric, Effective as of Oct. 14, 2011.

ATTENDED HUMAN RESOURCES (HR) TRAINING COURSES & OTHER EDUCATION

[1] *Habiliation of Deperatment Heads, and Leading Jobs*, Faculty of Education, ASU, Oct. 30-31, 2018.
[2] *Strategic Planning*, Training and Development (TD) center, 20-21 Mar, 2016.
[3] *Data management and statistics*, Training and Development (TD) center, 15-16, Mar, 2016.
[4] *Learning Outcomes and Curriculum Maps for Higher Education Institutions*, NAQAAE**, Feb 26 – March 1, 2012.
[5] *Organizing Scientific Conference*, FLDC, Feb. 12-14, 2011.
[6] Management of research teams, FLDC, July 31 – Aug. 2, 2010.
[7] *Credit hour systems*, FLDC, Oct. 10 – Oct. 12, 2009.
[8] *Quality standards of the educational process*, FLDF, Sept. 29 – Oct. 1, 2009.
[9] *Financial and legality issues in universities*, FLDC, Jan. 24-26, 2009.
[10] *Education Technology*, FLDC, Sept. 13-15, 2008.
[11] *Scientific Writing and Publishing*, FLDC, July 5-7, 2008
[12] *Evaluation and Examinations Methods*, FLDC*, Aug. 25-27, 2007.
[13] *Preparation of Academic Lecturers*, Aug. 29 – Sept. 18, 2004.

* FLDC: Faculty and Leadership Development Center.
** NAQAAE: National Authority for Quality Assurance and Accreditation of Education.

LANGUAGES

Arabic (Native level)
English (Excellent, TOEFL; score 557)
Germany (Starter level)

MAIN SCIENTIFIC INTERESTS

Electric power system: analysis, stability, control, economics, optimization, distribution, reliability, and Renewable energy resources and systems.

ATTENDANCE & PARTICIPATION OF CONFERENCES

[1] Participated at the CIRED 2025 Conference. 16-19 June 2025. Geneva, Switzerland.
[2] 2025 International Conference on Energy Engineering and Electrical Technology (EEET 2025), March 28-30, 2025 Guangzhou, China. (***General Chair & Keynote Speaker***)
[3] 2024 7th International Conference on Power Electronics and Control Engineering (ICPECE 2024), Oct. 18-20, 2024, Benxi, China. (***Technical Program Committee Chair***)

[4] 2024 International Conference on Power Electronics and Electrical Engineering (P3E 2024), Aug. 23-25, 2024, Zhuhai, China. (***Technical Program Committee Chair & Keynote Speaker***)
[5] 2024 International Conference on Smart Grid and Artificial Intelligence (SGAI 2024), Jan 12-14, 2024, Guangzhou, China. (***Technical Program Committee Chair & Keynote Speaker***)
[6] 2023, 2nd International Conference on Energy Internet and Power Systems (ICEIPS 2023), August 04-06, 2023 in Chengdu, China. (***Keynote speaker***)
[7] 2023, 3rd International Conference on Control Science and Electric Power Systems (CSEPS 2023), June 30 to July 2, 2023 in Wuhan, China. (***Keynote speaker***)
[8] MEPCON 2022, Cairo, Egypt
[9] "Policies to Improve the Feasibility of Residential Solar Energy Usage", The alternative policy solutions workshop, school of humanities and social sciences, American University in Cairo (AUC), Dec. 13, 2018.
[10] The 2nd International Conference on New Trends for Sustainable Energy (ICNTSE 2018), Faculty of Engineering, Pharos University in Alexandria (PUA) Royal Institute of Technology (KTH), Stockholm, Sweden 5 – 7 November 2018 - Alexandria – Egypt.
[11] The 3rd IUGRC International Undergraduate Research Conference, Military Technical College, Cairo, Egypt, July 30-August 2, 2018.
[12] The 5th International Conference on Electrical, Electronics, and Information Engineering (ICEEIE 2017), Oct. 6-8, 2017, Malang, Indonesia.
[13] MEPCON 2017, Cairo, Egypt, Dec. 19-21, 2017.
[14] Schneider Electric – consultants day/workshop, 'solar battery based & grid tie solutions', Cairo, Egypt, Dec. 12, 2016.
[15] The international congress of energy and environment 2016, Opatija, Croatia; Oct., 2016.
[16] Industry and Academia Collaboration (IAC) Conference, IAC 2015, Cairo, Egypt.
[17] Solar Energy Conf Workshops, 'Renewable energy and energy efficiency', Cairo, Egypt, Dec 4-7, 2014.
[18] Regional Center for Renewable Energy and Energy Efficiency (RCREEE).
[19] Egyptian Engineering Day (EED), 2014.
[20] MEPCON'12 (15th International Middle East Power Systems Conference), Dec. 23-25, 2012, Alexandria University, Alexandria, Egypt.
[21] PV Insider, 3rd utility scale PV plant optimization summit USA, Pre-event webinar, Aug. 1, 2012 (for the San Jose Conf, Oct. 17-18, 2012).
[22] Information & Communication Technology Project (ICTP) – Microsoft Egypt for Universities and MIS, July 18, 2012, Ain Shams University, Cairo, Egypt.
[23] MEPCON'10 IEEE International Conference, Dec. 19-21, 2010, Cairo, Egypt.
[24] ETAP – Advanced workshop, April 10-14, 2010, Khobar, Saudi Arabia.
[25] International workshop on wind energy development, March 22-24, 2010, Cairo, Egypt.
[26] MEPCON'08 IEEE International Conference, 12 – 15 March, 2008, Aswan, Egypt.
[27] First Minia International Conference on Investment In Technology, 7-8 May 2007, Minia, Egypt.
[28] MEPCON'2006 IEEE International Conference, 19 – 21 December 2006, Minia, Egypt.

PAST WORK EXPERIENCE

Deputed professor, Shorouk academy, Shorouk, Egypt, (Part time, teaching, duties; 2022)
Deputed professor, Heliopolis University, Cairo, Egypt, (Part time, teaching, duties; 2017).
Associate Professor (tenure), Ain Shams University, Cairo, Egypt, (Full time, teaching, research, and administrative duties; Oct. 26, 2009 – Mar. 28, 2016).

Deputed associate professor, Future University, Cairo, Egypt, (Part time, teaching, duties; 2013).

***Coordinator and Supervisor of the Management Information System* (*MIS*)**, Faculty of Engineering/Ain Shams University, Cairo, Egypt, (Part time, implementing the MIS, duties; Mar. 2009 – Jan. 2013).

Part-time Consultant, Project Integration for Electromechanical Consultation (PIFEC), Egypt/Saudi Arabia. (Part time, Modeling & Analysis of Electromechanical Systems; Supervision of the Electrical Engineering Group; Writing projects reports & proposals; ETAP Training Instructor; Dec. 2009 – Oct. 2010)

Part time freelance consultant & trainer, several national & international clients, (Part time, training & consultation; 2005 – now)

Assistant Professor, Ain Shams University, Cairo, Egypt, (Full time, teaching, research, and administrative duties; May 31, 2004 - Oct. 26, 2009).

Visiting Assistant Professor, University of Waterloo, Faculty of Engineering, Electrical & Computer Dept, Waterloo, Ontario, Canada, (Full time, scientific mission; 2005).

Deputed assistant Professor, Cairo University, Faculty of Engineering, Fayoom Branch, Electrical Power Dept, Egypt, (Part time, teaching; 2004 – 2005)

Assistant Lecturer, Ain Shams University, Cairo, Egypt, (Full time, teaching, research, and administrative duties; Aug. 5, 2001 – May 31, 2004).

Demonstrator, Ain Shams University, Cairo, Egypt, (Full time, teaching, research, and administrative duties; Sept. 17, 1997 - Aug. 5, 2001).

Alternate officer, Ministry of defense, Egypt, (Full time; Feb 1998 – Mar. 1999).

FIELD EXPERIENCE (*since year 2010*)

Afghanistan KTISPG USAID-funded project with the BETS Consulting Services Ltd., 2019

- Conceptual electromechanical design and cost estimations of the electromechanical subsystems in reservoir and run-of-river hydropower plants.
- Conceptual electromechanical designs and cost of large-scale photovoltaic irrigation water pumping stations.

Load measurements and analysis; July – Aug. 2016; Ain Shams University – Faculty of Engineering, Cairo, Egypt. (Detailed measurements of various loads and power flow on various circuits and boards in the faculty distribution system. The low and medium tension parts are considered. The measurements and analysis include active and reactive power flow, power factor, 11kV/400 V transformers' loadings, phase balance, and structural intactness of boards).

Case # 2844/2005 Commercial (2011); North Cairo Court. (Detailed investigation of some technical and legality related to earthing and lightning protection systems within the North-Cairo power station).

Modeling, analysis, and design of electromechanical systems; 2010; PIFEC, Saudi Arabia; Clients: YANSAB, KS; GPIC, Bahrain; Saudi Kayan; Saudi ARAMCO. (Modeling & Analysis of Electromechanical Systems; Supervision of the Electrical Engineering Group; Writing projects reports & proposals; ETAP Training Instructor).

Case # 2240 (2010); economic court, Egypt. (Detailed investigation of the causes of failure of communication cables and facilities owned by Telecom. In addition, estimating the fixed and running costs associated to the failure. The accused is Petro-jet Egypt).

Case 2844, Nov. 2011; North Cairo Court. (Detailed investigation for the dispute about the surge protection of the HRSG at north Cairo power station).

SWG project - Stage 1; SUCO/RWE; 2012. (Visits for all sites. For all the SUCO sites (R/B, Z/B, REB, and R/F): (a) Meetings appropriate technical staff for oral discussions, explaining the functions of the plants, the layout of the electrical systems, the reliability/power quality requirements, the current technical problems associated with the electrical supply systems, and determining the required system data. (b) Visiting various locations and installations as well as inspecting the available data, drawings, monitoring facilities, and precisely specifying the technical problems. (c) Setting set of solutions for troubleshooting the problems and discussing the suitability of various alternative solutions with the site engineers. (d) Visiting the available spaces for renewable energy projects and assessing their suitability (initial investigation). (e) Investigating the availability of meteorological station, their measurements, their historical records. In addition, available meteorological data from Over Seas are inspected for better understanding the potential of the renewable resources at various sites. (f) Inspecting available previous and/or ongoing studies in the field of renewable energy for the sites. (g) Inspecting and testing available new measuring and analysis devices).

Solar-PV system for the Zafarana palace. Ain Shams Univerity, 2014. (Review and evaluation of the design of a solar PV power plant for the Zafarana palace. The design is provided by the Egyptian Co. for Clean Electricity).

OTHERS

1. Teaching several undergraduate and postgraduate courses.
2. Supervisor of several postgraduate studies.
3. Writing several lecture notes for undergraduate students.
4. Writing and presenting numerous training courses in the field of electric/industrial engineering for local and international training centers.
5. Collaboration with several international training centers in the field of technical and industrial training.
6. Participation in a HEEPF project entitled, "MATLAB/SIMULINK package to enhance power system education courses"
7. Participation in many consultancy work with local and international organizations.
8. Participation in specifying the requirements of enhancing the supply reliability and upgrading Labs in Ain Shams Uni. - Faculty of Engineering.
9. Supervision of installing generating equipment in a new military Site.
10. Specifying the specifications and supervision of installing an integrated sound system for a chemistry laboratory in Ain Shams Uni. - Faculty of Engineering.
11. Participation in several works with the purchases department in Ain Shams Uni. – Faculty of Engineering (technical specifications, financial estimates, and commissioning).
12. Participation in several consultancy work.

13. Participation in the university-level Quality Assurance and Accreditation Program (QAAP). [Electrical power programme: programme/course specs, reports, and workshops]
14. Participation in construction and upgrading the "Curriculum Plan for Undergraduate Program 2008-2013" for the Faculty of Engineering – Ain Shams University.
15. Participation in the university-level Continuous Improvement and Qualifying Accreditation Program (CIQAP) project.
16. Construction of several laboratory experiments for undergraduate and postgraduate labs.
17. Participation in the "Continuous Assessment of Education Effectiveness" committee, 2008.
18. Participation in preparing the Islamic Bank Prize files, 2008/2009.
19. Coordinator of the Faculty Research Capacity issues, 2009.
20. Participation in and coordination of the Faculty Library Improvement committee, 2009.
21. Participation in establishing the Faculty Management Information System (MIS) Unit, 2009.
22. Manager of the Management Information System (MIS) unit in the Faculty of Engineering, Ain Shams University, 2009.
23. Coordinator in the faculty intellectual property commercialization (IPR) scan, 2009.
24. Active membership in many professional associations, communities, and groups.
25. Participation in construction the 2010 EPM program specifications and report (Dept. Meeting 22/9/2010)
26. لجنة دراسة مقترح تطوير القوانين والتشريعات التي تحكم مؤسسات هيئة التعليم العالي – مارس 2012
27. Participation in constructing the Academic Reference Standard (ARS) for postgraduate studies in Electrical Power and Machines (EPM) engineering in Ain Shams University. March 2012.
28. Participation in updating and upgrading the postgraduate curriculum. Oct – Nov, 2013 and Feb. 2014

MEMBERSHIP OF ASSOCIATIONS AND SCIENTIFIC GROUPS (*includes*)

- CIRED Working Group 2024-2 (WG 2024-2), entitled "Empowering the Future: Inverter-Based Microgrids and Pioneering Power-To-X Innovations in Distribution Energy Systems - member.
  http://cired.net/cired-working-groups/inverter-based-microgrids-wg-2024-2
- International Society for Development and Sustainability (ISDS) – member
  https://isdsnet.com/
- IEC National Committee #23 circuit breakers, Ministry of Electricity and Renewable Energy, Egypt. Since 2023
- CIGRE National Committee – C6: solar & wind energy, Ministry of Electricity and Renewable Energy, Egypt. Since 2023
- Electric Power Research Institute (EPRI) – non-funding member
  http://www.epri.com/
- Institute of Natural Science and Advanced Technology (INSCIAT) - member
  http://www.insciat.org/about.html
- Egyptian Syndicate of Engineers – Member
  http://www.eea.org.eg/
- National Authority for Quality Assurance and Accreditation of Education (NAQAAE)

www.Naaqe.net
- Egyptian Wind Energy Association (EGWEA) - Board Member
  http://www.ewindea.org/
- African Wind Energy Association (AfriWEA) – Member
  http://www.afriwea.org/
- World Energy Council (WEC) – Member
  http://www.worldenergy.org/
- The Egyptian Organization of Wind Power Projects –member
  http://www.egwindpro.org/en/
- Elsevier SciTopics
  http://www.scitopics.com/
- American Association of Science and Technology (AACIT) - member
  http://www.aascit.org/membership/shimymb

TEACHING AND SUPERVISION ACTIVITIES

Teaching

Course(s)	Level
PV technology	5
Planning of electrical networks	5
Power System Analysis (2)	5
Planning of electrical networks	5
Laboratories	2, 3, 4& 5
Economics of Generation and Operation	4
Planning of electrical networks	5
Power System Analysis (1)	4
Graduation projects	5
1. Power System Control 2. Power System Operation 3. Planning of power netowrks	6 & 7
Postgrad laboratory	6
1. Power System Analysis 2. Electric Power Transmission	5
Several technical training courses. Topics are related to the electric power systems	Graduated Engineers

SAMPLE OF COMPLETED DISSERTATIONS UNDER MY SUPERVISION

[1] H. Yassen. Planning of electric distributions systems with reliability modeling. M.Sc thesis, Ain Shams University, 2008.

[2] O. Rassem. Impact of aggergare load models on voltage stability of electric power systems. M.Sc thesis, Ain Shams University, 2009.
[3] M. Abdelfatah. Outage data analysis and study of maintenance strategies for utility transformers. M.Sc thesis, Ain Shams University, 2012.
[4] N. Ghaly. Modeling and Simulation of DFIG for Power System Studies. M.Sc thesis, Ain Shams University, 2014.
[5] M. Ahmed. Reactive power management and voltage control in grid-connected wind farms. M.Sc thesis, Ain Shams University, 2015.
[6] M. Mandour. Design of FACTS Power Oscillation Damping (POD) Controllers in Power Systems with High Penetration of Wind Power. PhD thesis, Benha University, 2015.
[7] M. Said. Estimation of the Levelized Cost of Energy (LCOE) and Analysis of Grid Parity for Renewable Energy Technologies. M.Sc thesis, Ain Shams University, 2016.
[8] H. Girgis. Analysis of Power Systems for Static Security Evaluation and Corrective actions. M.Eng. applied research, Ain Shams University, 2016.
[9] T. Abdo. Design and performance analysis of PV-powered irrigation water pumping systems. M.Sc thesis, Ain Shams University, 2016.
[10] H. Khairy. Modeling and control of grid-connected PV generators and their impact on power system performance. M.Sc thesis, Ain Shams University, 2017.

SEVERAL DIPLOMA AND B.SC GRADUATION PROJECTS

PUBLICATIONS

Refereed Journals

[1] Belletreche M, Bailek N, Abotaleb M, Bouchouicha K, Zerouali B, Guermoui M, Kuriqi A, Alharbi AH, Khafaga DS, El-Shimy M, El-Kenawy ES. Hybrid attention-based deep neural networks for short-term wind power forecasting using meteorological data in desert regions. Scientific Reports. 2024 Sep 19;14(1):21842.
[2] Ramadan, S., Al-Gabalaw, M., EL-Shimy, M. *et al.* Solid oxide fuel cell (SOFC) control strategy enhancement by adaptive neuro-fuzzy inference system (ANFIS). *Sci Rep* 14, 17911 (2024). https://doi.org/10.1038/s41598-024-62414-3
[3] Selim A, El-Shimy M, Amer G, Ihoume I, Masrur H, Guerrero JM. Hybrid off-grid energy systems optimal sizing with integrated hydrogen storage based on deterministic balance approach. Scientific Reports. 2024 Mar 22;14(1):6888.
[4] Mostafa RA, Emary A, Sayed A, El-Shimy M. Impact of short-duration voltage variations on VSC-HVDC performance. Scientific Reports. 2023 Dec 27;13(1):23055.
[5] Mostafa RA, Salem AE, Abdelhamid AS, Mohamed EL. Performance analysis of voltage source converter based high voltage direct current line under small control perturbations. Indonesian Journal of Electrical Engineering and Computer Science. 2023 Dec;32(3):1224-35.
[6] Elsayed Y, Hamouda MR, Mohamed M, El-Shimy M. Energy Management of PV-based Parking Lots Considering Utility Satisfaction. In E3S Web of Conferences 2023 (Vol. 441, p. 01004). EDP Sciences.

[7] El-Metwally EA, Attia MA, El-Shimy M. A non-PMU-based WAN protection scheme for swing detection and stability enhancement in power systems. Electrical Engineering. 2023 Jun 4:1-8.

[8] El-Naggar M, Sayed A, Elshahed M, EL-Shimy M. Optimal maintenance strategy of wind turbine subassemblies to improve the overall availability. Ain Shams Engineering Journal. 2023 Jan 23:102177.

[9] M. F. El-Naggar, A. Sayed, M. A. Elshahed and M. EL-Shimy, "Dynamic Reliability and Availability Allocation of Wind Turbine Subassemblies through Importance Measures," in *IEEE Access*, 2022, doi: 10.1109/ACCESS.2022.3203423.

[10] M. F. El-Naggar, A. S. Abdelhamid, M. A. Elshahed and M. El-Shimy Mahmoud Bekhet, "Ranking Subassemblies of Wind Energy Conversion Systems Concerning Their Impact on the Overall Reliability," in *IEEE Access*, vol. 9, pp. 53754-53768, 2021, doi: 10.1109/ACCESS.2021.3070533.

[11] Bouchouicha, Kada, Nadjem Bailek, Abdelhak Razagui, EL-Shimy Mohamed, Mebrouk Bellaoui, and Nour El Islam Bachari. "Comparison of artificial intelligence and empirical models for energy production estimation of 20 MWp solar photovoltaic plant at the Saharan Medium of Algeria." *International Journal of Energy Sector Management* (2020).

[12] Bailek N, Bouchouicha K, Abdel-Hadi YA, El-Shimy M, Slimani A, Jamil B, Djaafari A. Developing a new model for predicting global solar radiation on a horizontal surface located in Southwest Region of Algeria. NRIAG Journal of Astronomy and Geophysics. 2020 Jan 1;9(1):341-9

[13] Emad A, Mohamed ES, Amer G. Sizing Methodology for Hybrid Solar photovoltaic/Hydrogen System Using Deterministic Balance Method (DBM)-Case Study in Egypt. Jurnal Nasional Teknik Elektro. 2020;9(1).

[14] Sayed, A., M. EL-Shimy, M. El-Metwally, and M. Elshahed. "Impact of subsystems on the overall system availability for the large scale grid-connected photovoltaic systems." *Reliability Engineering & System Safety* 196 (2020): 106742.

[15] EL-Bassiouny, Ahmed Adel, EL-Shimy Mohamed, and Rizk Hamouda. "Probabilistic Analysis of the Reliability Performance for Power Transformers in Egypt." *Renewable Energy and Sustainable Development* 5, no. 2 (2019): 46-56.

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INVITED TALKS & PRESENTED TRAINING COURSES (Since 2005**)**

[1] Electrical Transient Analysis Program (ETAP) – Basic Workshop. Cairo, Egypt.
[2] Electrical Transient Analysis Program (ETAP) – Basic Workshop. Saudi ARAMCO, KSA.
[3] Power System Quality, Earthing and Bonding. Saudi ARAMCO, KSA.
[4] Energy Saving in Integrated Buildings. GESCO, Egypt.
[5] Uninterruptable Power Supply (UPS): Operation, Maintenance & Troubleshooting. APEX Dubai, UAE.
[6] Uninterruptable Power Supply (UPS): Operation, Maintenance & Troubleshooting, DEWA, UAE.
[7] Electrical Earthing Systems. Public Course, Egypt.
[8] Troubleshooting and Maintenance of Electrical Equipment and Control Systems. Musrata Steel Factory, Libya.
[9] Power System Testing, Commissioning & Start Up. Public Couse, Totality, UAE.
[10] Introduction to Industrial Engineering. IDEAL, Egypt.
[11] Operating Strategies for the Competitive Power Industry. Saudi SCECO, KSA.
[12] Electric Power Distribution System Standard Design and Operation. Public Course, KSA.
[13] Modern Maintenance of Electrical Distribution Systems. Egypt Air, Egypt.
[14] Modern Maintenance of Electrical Distribution Systems. Public Course, Egypt.
[15] Batteries & UPS: Design, Operation, and Troubleshooting. Saudi SCECO, KSA.
[16] Distribution Overhead Lines. Saudi SCECO, KSA.
[17] Power Flow Analysis. Saudi SCECO, KSA.
[18] Modern Power System Protection: Applications & Performance Analysis. KSA.
[19] Power System Stability & Dynamics. KSA.
[20] High Voltage Substation Design & Testing. KSA.
[21] Transmission System Engineering. Egypt.
[22] Electrical Equipment and Control Systems. Saudi SCECO, KSA.
[23] Automatic Voltage Regulator (AVR): Operation and Maintenance. KSA.
[24] Motor Control Circuits and Systems. KSA.
[25] Monitoring Power Quality and Solving Problems. Public Course.
[26] Power Substation Safety. Public Course, KSA.
[27] Utility Capacitor Applications and Concerns. Saudi SCECO, KSA.
[28] Design, Testing And Maintenance of Industrial Substations. Saudi SCECO, KSA.
[29] Safety and Industrial Hygiene. Eastern Co., Egypt.
[30] Operation and Maintenance of Electric Control Systems. Eastern Co., Egypt.
[31] Energy Saving & Management. GESCO, Egypt.
[32] Electrical Load Forecasting. KSA.
[33] UPS & Battery Chargers. Muscat Electricity Dist. Co., Oman.
[34] Uninterruptable Power Supply (UPS): Operation, Maintenance & Troubleshooting. Qatar KaharMaa, Qatar.

HONORS AND AWARDS

1. Science Festival of Egypt – 1997
2. Science Festival of Egypt – 2002
3. Science Festival of Egypt - 2004
4. Prize of international publishing, Ain Shams University, since 2009 - Now

5. Included in ‘Marquis Who's Who’, 2010 and 2011
6. Included in the ‘2000 Outstanding Intellectuals Of The 21st Century’, International Biographical Center, Cambridge, England, 2011.
7. Included in the ‘Top 100 Educators’, International Biographical Center, Cambridge, England, 2011.
8. Ain Shams University Appreciation Award, 2024.