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Current Title: Professor, Electrical Engineering Department, Mansoura University,
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DEGREES

- **Ph. D.** in Electrical Engineering, November 1997, Faculty of Electrical Engineering, Warsaw University of Technology, Poland. Dissertation Title: A Method for Economic Operation of Hydro-Thermal and Photovoltaic Systems
- **M. Sc.** in Electrical Power Engineering, October 1988, Department of Electrical Engineering, Faculty of Engineering, Mansoura University, Egypt. Thesis Title: Optimum Operation of Photovoltaic Cells and Energy Storage with Conventional Power System.
- **B.Sc.** in Electrical Power Engineering, May 1982, Grade: Excellent with Honor Degree, Electrical Power and Machines Department, Faculty of Engineering, Mansoura University, Egypt.

ACADEMIC AND INDUSTRIAL POSITIONS

- 1983 – 1988, Demonstrator, Electrical Power and Machines Dept., Faculty of Engineering, Mansoura University
- 1988 – 1997, Lecturer Assistant, Electrical Power and Machines Dept., Faculty of Engineering, Mansoura University
- 1998 – 2005, Lecturer, Electrical Power and Machines Dept., Faculty of Engineering, Mansoura University.
- 2005– 2011, Associate Professor, Electrical Engineering Dept., Faculty of Engineering, Mansoura University.
- 2011- 2012, Head of Electrical Engineering Dept.
- 2011 –2019, Professor, Electrical Engineering Dept., Faculty of Engineering, Mansoura University
- 2019 – now, Professor emeritus, Electrical Engineering Dept., Faculty of Engineering, Mansoura University

RESEARCH PROJECTS

- 2021, Project (Smart Generation Interconnection with Distribution Grids), Mansoura University.
- 2021, Project (Modeling and operation of Multiple Energy Carrier Systems), Mansoura University.
- 2013, Project (Smart Generation Interconnection with Distribution Grids), Faculty of Eng., Mansoura University.

CONSULTANT

- 2019 – now, Director of Electrical Power and Machines Program, Faculty of Engineering, Mansoura University
- 2020-2023, Member of the Scientific Research Ethics Committee

PATENTS, PUBLICATIONS

Journal papers for Last Five years:

- 1) Mohamed F. Kotb, Magdi El-Saadawi and Eman H. El-Desouky, "Protection Coordination Optimization for FREEDM (Future Renewable Electric Energy Delivery and Management) System", Journal of Electrical Engineering, Volume 6, Number 3, May-June 2018, pp. 161-176. <http://www.davidpublisher.org/Public/uploads/Contribute/5b0cae606a720.pdf>
- 2) A. El-Sadat, M. M. El-Saadawi, S. S. Kaddah, N. M. Ayad, "Environmentally Constrained Optimal Energy Mix Planning for the Egyptian Electric Grid", Mansoura Engineering Journal, Vol. 43, No. 2, June 2018.
- 3) Mohamed F. Kotb, Magdi El-Saadawi and Eman H. El-Desouky, "Over Current Protection Relay using Arduino Uno for Future Renewable Electric Energy Delivery and Management (FREEDM) System", European Journal of Electrical and Computer Engineering (EJECE), Volume-2, No.5, August 2018, pp. 38-44, <http://www.ejece.org/index.php/ejece/article/download/39/30>
- 4) Ahmed M. M. Nour, Ahmed Y. Hatata, Ahmed A. Helal, and Magdi M. El-Saadawi, "Rooftop PV systems with distributed batteries for voltage unbalance mitigation in low voltage radial feeders", Journal of Renewable and Sustainable Energy, Vol. 10, No. 5, Sep.2018, <https://aip.scitation.org/doi/10.1063/1.5034000>
- 5) S. Saad, A. Y. Hatata, M. M. El-Saadawi, "Assessment of Small-Scale Hydro Power Energy Potentiality for Selected Locations in Egypt", Mansoura Engineering Journal (MEJ), Vol. 43, No. 3, September 2018.
- 6) E. A. Gouda, A. A. Abd Alaziz, M. M. El-Saadawi, "Dynamic Modeling and Feasibility Analysis of Li-ion Battery for PV Applications in Egypt", International Journal Advance Research in Engineering Technology and Sciences (IJARETS), Volume-5, Issue-10, Oct. 2018. <http://www.ijarets.org/publication/52/IJARETS%20V-5-10-1.pdf>
- 7) Mohamed F. Kotb, Magdi El-Saadawi, and Eman H. El-Desouky, "Design of Over/Under Voltage Protection Relay using Arduino Uno for FREEDM System", European Journal of Electrical and Computer Engineering (EJECE), Vol. 2, No. 7, October 2018. <http://www.ejece.org/index.php/ejece/article/view/44>
- 8) Mohammed Saeed, Samaa Fawzy, and Magdi El-Saadawi, "Modeling and Simulation of Biogas-Fuelled Power System", International Journal of Green Energy, Vol. 15 issue 14, Nov. 2018. <https://www.tandfonline.com/eprint/Z34xBeHxf9Sjg32wrrHc/full>
- 9) Ahmed Y. Hatata, Ahmed S. Ebeid, Magdi M. Saadawi, "Application of Resistive Super Conductor Fault Current Limiter for Protection of Grid-connected DGs", Alexandria Engineering Journal, Volume 57, Issue 4, Dec. 2018, pp. 4229-4241, <https://www.sciencedirect.com/science/article/pii/S1110016818302163?via%3Dihub>
- 10) Mohammed Saeed, Magdi El- Saadawi, "Practical Implementation and Testing of RNN Based Synchronous Generator Internal Fault Protection", Recent Advances in Electrical & Electronic Engineering, Vol. 12, Issue 2, pp. 181-198, 2019. <http://www.eurekaselect.com/162795/article>
- 11) B. E. Sedhom, M. M. El-Saadawi, E. E. Abd-Raboh, "Advanced Control Technique for Islanded Microgrid based on H-Infinity Controller", Journal of Electrical Engineering (JEE), Vol. 19 (1), March 2019, pp. 335-347, <http://jee.ro/articles/WK1526047054W5af5a14e64815.pdf>
- 12) Mohamed F. Kotb, Magdi El-Saadawi and Eman H. El-Desouky, "Over Current Protection Relay Based Arduino Uno for FREEDM System" International Transactions on Electrical Energy Systems, March 2019. <https://onlinelibrary.wiley.com/doi/full/10.1002/2050-7038.12017>
- 13) S. Saad, A. Y. Hatata, M. M. El-Saadawi, " A Feasibility study of Small Hydro Power for Selected Locations in Egypt ", Energy Strategy Reviews, Vol. 24, April 2019, pp. 300–313
- 14) <https://www.sciencedirect.com/science/article/pii/S2211467X19300409>
- 15) B. E. Sedhom, M. M. El-Saadawi, A. Y. Hatata, E-E. Abd-Raboh, "Review on Control Schemes for Grid Connected and Islanded Microgrid", Journal of Electrical Engineering (JEE), Vol. 19 (3), May 2019, pp. 557-572. <http://www.jee.ro/covers/editions.php?act=art&art=WA1540568183W5bd33477f3374>

- 16) B. E. Sedhom, A. Y. Hatata, M. M. El-Saadawi, E. E. Abd-Raboh, "Robust Adaptive H-infinity Based Controller for Islanded Microgrid Supplying Non-Linear and Unbalanced Loads", IET Smart Grid, Available online: 20 May 2019. <https://digital-library.theiet.org/content/journals/10.1049/iet-stg.2019.0024>
- 17) B. E. Sedhom, M. M. El-Saadawi, A. Y. Hatata, E. E. Abd-Raboh, "H-Infinity Versus Model Predictive Control Methods for Seamless Transition Between Islanded and Grid-Connected Modes of Microgrid", IET Renewable Power Generation, Available online: 28 June 2019. <https://digital-library.theiet.org/content/journals/10.1049/iet-rpg.2019.0018>
- 18) Bishoy E. Sedhom, Magdi M. El-Saadawi, Ahmed Y. Hatata, Mostafa A. Elhosseini, Elhossaini E. Abd-Raboh, "Robust Control Technique in an Autonomous Microgrid: A Multi-stage H_{∞} Controller Based on Harmony Search Algorithm", Iranian Journal of Science and Technology, Transactions of Electrical Engineering, June 2019, pp 1–26. <https://link.springer.com/content/pdf/10.1007%2Fs40998-019-00221-7.pdf>
- 19) Bishoy E. Sedhom, Magdi M. El-Saadawi, Ahmed Y. Hatata, Elhossaini E. Abd-Raboh, "A multistage H-infinity-based controller for adjusting voltage and frequency and improving power quality in islanded microgrids", International Transactions on Electrical Energy Systems, July 2019 <https://onlinelibrary.wiley.com/doi/full/10.1002/2050-7038.12143>
- 20) Iman F. Elzemeity, Mohamed F. Kotb, Sahar S. Kaddah and Magdi El-Saadawi, "Improving Voltage Stability of Doubly Fed Induction Generator – based Wind Farm using STATCOM", Mansoura Engineering Journal (MEJ), Vol. 44, No. 3, Sep. 2019.
- 21) Ahmed Nour ; Ahmed Hatata ; Ahmed Helal ; Magdi El-Saadawi, "A Review on Voltage Violation Mitigation Techniques of Distribution Networks with Distributed Rooftop Photovoltaic Systems", IET Generation, Transmission & Distribution, DOI: Online ISSN 1751-8695, Available online: 28 Nov. 2019. <https://digital-library.theiet.org/content/journals/10.1049/iet-gtd.2019.0851>
- 22) Magdi M. El-Saadawi, Eid Abdelbaqi Gouda, Mostafa A. Elhosseini, Mohamed Said Essa, "Identification and Speed Control of DC Motor Using Fractional Order PID: Microcontroller", EJECE, European Journal of Electrical and Computer Science, Vol. 4, No. 1, January 2020, <https://www.ejece.org/index.php/ejece/article/view/170/102>
- 23) Bishoy E. Sedhom, Magdi M. El-Saadawi, Ahmed Y. Hatata, Abdulaziz S. Alsayyari, " Hierarchical control technique-based harmony search optimization algorithm versus model predictive control for autonomous smart microgrids", International Journal of Electrical Power & Energy Systems, Vol. 115, Feb. 2020. <https://www.sciencedirect.com/science/article/pii/S0142061519306684?via%3Dihub>
- 24) Ahmed M. M. Nour, Ahmed A. Helal, Magdi M. El- Saadawi, and Ahmed Y. Hatata, "Review on Voltage-Violation Mitigation Techniques of Distribution Networks with Distributed Rooftop PV Systems," IET Generation, Transmission & Distribution, vol. 14, no. 3, pp. 349-361, 2020. <https://digital-library.theiet.org/content/journals/10.1049/iet-gtd.2019.0851>
- 25) Abdelfattah A. Eladl, Magda I. El-Afifi, Mohammed A. Saeed, Magdi M. El-Saadawi, "Optimal operation of energy hubs integrated with renewable energy sources and storage devices considering CO2 emissions", International Journal of Electrical Power & Energy Systems, Volume 117, May 2020, Article 105719. <https://www.sciencedirect.com/science/article/abs/pii/S0142061519314917>
- 26) Eid Abdelbaki Gouda, Ahmed Abd-Alaziz, Magdi El-Saadawi, "Design modeling, and control of multi-stage SMES integrated with PV system", Journal of Energy Storage, Volume 29, June 2020 <https://www.sciencedirect.com/science/article/abs/pii/S2352152X19311958>
- 27) Ahmed M. M. Nour, Ahmed A. Helal, Magdi M. El- Saadawi, and Ahmed Y. Hatata, "Voltage Violation in Four-Wire Distribution Networks Integrated with Rooftop PV Systems," IET Renewable Power Generation, Volume 14, Issue 13, 05 October 2020, p. 2395 – 2405. <https://digital-library.theiet.org/content/journals/10.1049/iet-rpg.2020.0174>
- 28) Mahmoud Abdo, Mohammed Saeed, Magdi El-Saadawi, "Impact of Virtual Flow Rate Meter on Brushless DC Motor Based Photovoltaic Water Pumping System", Mansoura Engineering Journal

- (MEJ), Vol. 45, Issue 4, December 2020 E: 9
https://bfemu.journals.ekb.eg/article_123899_ebde45cf742c4e67869e86c80e461889.pdf
- 29) Heba Beder, Baraa Al Mohands, Mohammed Shawky, Ebrahim Badran, Magdi El Saadawi, "A New Communication-Free Dual Setting Protection Coordination of Microgrid", IEEE Transactions on Power Delivery, Dec. 2020m DOI: [10.1109/TPWRD.2020.3041753](https://doi.org/10.1109/TPWRD.2020.3041753)
 - 30) Shymaa Eid, Mohammed Saeed, and Magdi El-Saadawi, "Optimal Location of EV-PV Charging Stations in a Radial Distribution System", Mansoura Engineering Journal (MEJ), Volume 45, Issue 4, Autumn 2020, Page 45-52, https://bfemu.journals.ekb.eg/article_127211.html
 - 31) Ahmed M. M. Nour, Ahmed A. Helal, Magdi M. El- Saadawi, and Ahmed Y. Hatata, "A Control Scheme for Voltage Unbalance Mitigation in Distribution Network with Rooftop PV Systems based on Distributed Batteries", International Journal of Electrical Power & Energy Systems, Volume 124, January 2021.,
<https://www.sciencedirect.com/science/article/pii/S014206152031293X?via%3Dihub>
 - 32) Bishoy E. Sedhom, Magdi M. El-Saadawi, M. S. El Moursi, Mohamed. A. Hassan and Abdelfattah A. Eladl, "IoT-based Optimal Demand Side Management and Control Scheme for Smart Microgrid", International Journal of Electrical Power and Energy Systems, Volume 127, May 2021, 106674, <https://doi.org/10.1016/j.ijepes.2020.106674>
 - 33) Eid A. Gouda, Ahmed Abd-Alaziz, Magdi El-Saadaw, "Economical and Experimental Study of Hybrid Power System of Compressed Air Energy Storage with Photovoltaic Array and Wind Turbine Generator", Mansoura Engineering Journal, (MEJ), Vol. 46, Issue 2, June 2021, pp. E: 32 – E: 40, https://bfemu.journals.ekb.eg/article_180698_6b9671a62b811c13464fa75703da2eb2.pdf
 - 34) H. Beder, E. Badran, A. Hatata, M. El-Saadawi, "Inrush Current Detection Enhancement for Legacy Overcurrent Relays in North Delta Electric Distribution Company", Electric Power Systems Research, Volume 201, Dec. 2021, 107517
<https://www.sciencedirect.com/science/article/pii/S0378779621004983>
 - 35) A.Y. Hatata, A. S. Ebeid, M. M. Saadawi, "Optimal Restoration of Directional Overcurrent Protection Coordination for Meshed Distribution System Integrated with DGs Based on Fault Current Limiters and Adaptive Relays", Electric Power Systems Research, Volume 205, April 2022, 107738
<https://www.sciencedirect.com/science/article/pii/S0378779621007197>
 - 36) M. Frahat, A. Y. Hatata, S. S. Kaddah, M. M. Saadawi, "Grasshopper Optimization-based Optimal Sizing of DG/DSTATCOM in Distribution Networks", Mansoura Engineering Journal (MEJ), Volume 47, Issue 2, March and April 2022, pp. 6-16, https://journals.ekb.eg/article_238659_0.html
 - 37) Afaf Rabie, Abdelhady Ghanem, Sahar S. Kaddah, Magdi M. El-Saadawi, "Electric vehicles based electric power grid support: a review", International Journal of Power Electronics and Drive Systems (IJPEDS), Vol. 14, No. 1, March 2023, pp. 589~605
<https://ijpeds.iaescore.com/index.php/IJPEDS/article/view/22314/14119>
 - 38) Abdelfattah A. Eladl; Magda El-Afifi; Magdi El-Saadawi; Bishoy Sedhom;" A review on energy hubs: Models, methods, classification, applications, and future trends", Alexandria Engineering Journal, Vol. 68, 1 April 2023, Pages 315-342,
<https://www.sciencedirect.com/science/article/pii/S110016823000364>

Conference publications for Last Five years:

- 1) Ahmed M. Nour, Ahmed Y. Hatata, Ahmed A. Helal and Magdi M. El- Saadawi, "Distribution Network Line Power Loss Evaluation with Grid Connected Rooftop Photovoltaic Systems Utilizing over Voltage Mitigation Techniques", IEEE 7th International Conference on Power and Energy (PECon), Kuala Lumpur, Malaysia, 3-4 Dec. 2018
<https://ieeexplore.ieee.org/abstract/document/8684086>
- 2) Abdelfattah A. Eladl, Magda E. El-Afifi, Magdi M. El-Saadawi, "Communication technologies Requirement for Energy Hubs: A survey", 21st International Middle East Power Systems

- Conference (MEPCON 2019), Cairo, 17-19 December 2019.
<https://ieeexplore.ieee.org/document/9008006>
- 3) A.A. Rabie, A.T. Ghanem, S. S. Kaddah, M. M. El-Saadawi, "Frequency Stability in Weak Grids Using Independent Electric Vehicle", 21st International Middle East Power Systems Conference (MEPCON 2019), Cairo, 17-19 December 2019.<https://ieeexplore.ieee.org/document/9007917/>
 - 4) Asmaa M. Aboelezz, Bishoy E. Sedhom, Magdi M. El-Saadawi, "Pilot DC Distance Scheme for MVDC Zonal Shipboard Microgrid", 4th International Symposium on Advanced Electrical and Communication Technologies (ISAECT 2021), Khobar, Saudi Arabia, 6 - 8 Dec. 2021.
 - 5) 120- Asmaa M. Aboelezz, Bishoy E. Sedhom, Magdi M. El-Saadawi, " Intelligent Distance Relay based on IEC 61850 for DC Zonal Shipboard Microgrid Protection", IEEE Second International Conference on Power, Control and Computing Technologies (ICPC²T 2022), Raipur, India, 01-03 March 2022. <https://ieeexplore.ieee.org/document/9776712>

