Name: Sahar S. Kaddah
Current Title: Professor. Electrical Engineering Dept. Mansoura University
Phone: 012 111 34 75
Email: skaddah@mans.edu.eg

DEGREES

- **Ph.D.** Electrical Engineering, Howard University, Washington DC, USA, "Cost Effective Damage Control Analysis for Shipboard Power System", Dec. 2002.
- **Master of Science.,** Electrical Engineering, Mansoura University, Mansoura, Egypt, "Reliability Analysis of Electrical Power Systems with Photovoltaic and Wind Turbines", Dec. 1992.
- **Bachelor of Science**, Electrical Engineering, Mansoura University, Mansoura, Egypt, May 1988

ACADEMIC AND INDUSTRIAL POSITIONS

- **Oct. 2020 – till now: Vice Dean for Community Service and Environmental Affairs, Faculty of Engineering, Mansoura University**
- **Sept 22- Now: Director of Renewable and Sustainable Energy Engineering Program**
- **August 2018- Oct 2020: Head of Electrical Engineering Dept., Faculty of Engineering, Mansoura University**
- **Feb. 2017- Now: Professor, Electrical Engineering Department, Mansoura University.**
- **Nov 2011-Jan 2017: Associate Professor, Electrical Engineering Department, Mansoura University.**
- **June 2004-Oct 2011: Assistant Professor, Electrical Engineering Department, Mansoura University.**
- **June 2003-June 2004: Planning Engineer, Florida Municipal Power Agency, Orlando, Florida, USA**
- **October 2002-June 2003: Post Doc, Motion and Control Lab and Instructor, Howard University, Washington DC, USA**
- **August 1997-October 2002: Graduate Research Associate, Center for Energy Systems and Control (CESaC), Howard University, Washington DC, USA**
  - Published many papers in different power system topics, and
  - Attended workshops and conferences.
- **January 93-July 97: Assistant Lecturer, Electrical Engineering Dept, Mansoura University**
  - Published 3 papers.
- **June 88-Dec 92: Research Assistant, Electrical Engineering Dept, Mansoura University**

Attended Workshops to Defend Sponsored Projects such as:

- Renewable Energy Academic Partnership (REAP), National Renewable Energy Lab (NREL), August 2002 held at Howard University,
- Renewable Energy Academic Partnership (REAP), National Renewable Energy Lab (NREL), August 2000 held at Golden Colorado,
- Office of Naval Research (ONR) Review meeting, Texas A&M University, Texas, Feb 1999,

- Commonwealth Edison (ComEd), Chicago, Illinois, lectured with a group from Howard university, the field engineers a crush course in different power optimization techniques.

Projects

- Photovoltaic, Project sponsored by the National Renewable Energy Laboratory
- Naval Shipboard Project sponsored from Office of Naval Research
- Reconfiguration of the Egyptian electrical grid for large penetration level of renewable energy systems (solar and wind energy) and energy storage, sponsored by Mansoura University.

PATENTS, PUBLICATIONS

International Referred Journals

1. 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.
2. Enhancing the performance of multi-microgrid with high penetration of renewable energy using modified droop control, Electric Power Systems Research vol. 201, August 2021.
3. VSC-HVDC system-based on model predictive control integrated with offshore wind farms, IET Renewable Power Generation, 2021, Vol. 15, Issue 6, pp, 1315-1330
4. Optimal economic–emission power scheduling of RERs in MGs with uncertainty, IET generation, transmission & distribution, vol. 14, issue 1, Jan. 2020, pp 37-52.
5. An enhanced moth-flame optimizer for solving non-smooth economic dispatch problems with emissions, Energy journal, Volume 157, 15 August 2018, Pages 1063-1078.
6. Demand response for indirect load control in smart grid using novel price modification algorithm, IET Renewable power generation, Volume13, Issue6, April 2019, pp. 877-886
7. Performance Analysis of Maximum Power Point Tracking (MPPT) for PV Systems under Real Meteorological Conditions, chapter in book: Modern Maximum Power Point Tracking Techniques for Photovoltaic Energy Systems, July 2019.
8. Optimal economic/emission power scheduling of renewable energy resources in microgrids with uncertainty, IET Generation, Transmission and Distribution, sept. 2019
9. Demand response for indirect load control in smart grid using novel price modification algorithm, IET Renewable power generation, vol 13, issue 6, April 2019, p. 877 – 886.
10. An enhancement moth-flame optimizer for solving non-smooth economic dispatch problems with emissions, Energy Journal, Elsevier, vol. 157,15 August 2018, page 1063- 1078.
11. Performance Deviation of PV Water Pumping System under Different Ambient Factors, Journal of Electrical Engineering, April 2018
12. A multistage voltage and power flow control of distribution systems in the presence of DG, Journal of Electrical Engineering, April 2018
13. Enhancing smart grid transient performance using storage device-based MPC controller, IET Renewable Power Generation, Vol.11, Issue10, Aug 2017, pp.1316-1324
14. Application of Nonlinear Model Predictive Control Based on Swarm Optimization in Power Systems Optimal Operation with Wind Resources, Electric Power System Research Journal, Elsevier, Vol.143, Feb.2017, pp. 415–430.
15. Probabilistic power quality indices for electric grids with increased penetration level of wind power generation, International Journal of Electrical Power and Energy Systems, Elsevier, Vol. 77, May 2016, pp. 50–58.
16. Influence of Distributed Generation on Distribution Networks during Faults, Electric Power Components and Systems, Taylor and Francis, Vol. 43, Issue 16, August 2015, pp. 1781-1792.

17. Overall Cost Minimization of Weakly Coupled Microgrids, International Transaction on Electrical Energy Systems (ETEP), John Wiley & Sons limited, Vol. 25, Issue 3, March 2015, pp. 471- 481.
18. Impact of Renewable Resources Forecasting on Unit Commitment Solution of Egyptian Electric Grid, International Journal of Scientific and Engineering Research Volume 6, Issue 8, August 2015, PP. 510-517.
19. A New Control Approach for PV-Diesel Autonomous Power System, Electric Power System Research Journal, Vol 78, Issue 6, June 2008, pp. 949-956
20. Maximum Power Control of Hybrid Wind-Diesel-Storage System, Advances in Fuzzy Systems Journal, Vol. 2008, pp. 1-9.
21. Optimal Load Shedding Study of Naval-Ship Power System Using Everett Optimization Technique, Electric Power System Research Journal, Vol. 60, No. 3, January 2002, pp. 145-152.
22. Assessment of the Economic Penetration Levels of Photovoltaic Panels, Wind turbine Generators and Storage Batteries, Electric Power System Research Journal, Vol 27, 1993, pp. 233-246.

National Referred Journals

1. Optimal Directional Overcurrent Relay Coordination Using Artificial Immune System (AIS), Mansoura Engineering Journal (MEJ), Vol. 39, No. 4, Dec. 2014, pp. E9 -E18.
2. Switching Analysis of Power Distribution Network Including Distributed Generations Using ATP, Mansoura Engineering Journal (MEJ), Vol. 37, No. 3, Sep. 2012, pp. E1-E17.
3. Transmission Network Cost Allocation Based on Superposition Theorem, Mansoura Engineering Journal, Vol.36, No. 2,june 2011, pp. E42-E50.
4. Grid Unified Power Quality Index with Wind Energy Conversion System, Al-Azhar University Engineering Journal, Vol. 5, No.3, Dec. 2010, PP. 357- 372
5. Harmonic Based Strategy for Location and Sizing of Distributed Generation Insertion, Mansoura Engineering Journal, Vol.34, No. ***2***, June 2009, pp. E10-19.
6. Impact of Wind Energy Conversion Systems on Power System Harmonics", Mansoura Engineering Journal, Vol.34, No. 1, March 2009, pp. 31-37.
7. Economical Insertion of Static Reactive compensators in Power Systems, Mansoura Engineering Journal, Vol.33, No.4, Dec. 2008, pp.1-8.
8. Impact of Wind Farms on Power System Voltage Stability", Mansoura Engineering Journal, Vol.32, No.3, Sept. 2007, pp. 36-45.
9. Optimal Operation for A Faulted PV System Using Genetic Algorithm, Mansoura Engineering Journal, Vol.31, No. 2, June 2006, pp.1 – 6.
10. Adaptive Fuzzy Logic Controller for DC/DC Converter", Mansoura Engineering Journal, Vol.30, No.3, Sept 2005, pp. 22-28.

International Conferences

1) Probabilistic Unit Commitment in Multi-Area Grids with High Renewable Energy Penetration by Using Dynamic Programming and Neural Network, 4th renewable power generation conference (RPG 2015) – IET conference 17 - 18 October 2015 | north china electric power university, Beijing, China, pp. 1134-1139.
2) Comparative Study between Two Voltage Stability Methods for Integrated Shipboard Power System with DC Zonal, Proceeding of North American Power Symposium (NAPS), Arizona State University, USA, Oct 2002.
3) Naval-Ship Architecture Evaluation Using Analytical Hierarchy Processing, Proceeding of North American Power Symposium (NAPS), Texas A& M University, USA, Oct 2001, pp 444 – 449.
4) Security Assessment of DC Zonal Naval-Ship Power System, Proceeding of Large Engineering Systems Conference on power Engineering (LESCOPE), Nova Scotia, Canada, July 2001.

5) Optimal Load Shedding Strategy of Naval-Ship Power System Using Generalized Lagrange Multiplier, Proceeding of North American Power Symposium (NAPS), Waterloo, Canada, Oct 2000.
6) Strategy of Enhancing A Reliability Assessment Tool, Proceeding of Large Engineering Systems Conference on power Engineering (LESCOPE), Nova Scotia, Canada, June 1999.
7) Optimal Load Shedding Study of Space Station Power System Using Genetic Algorithm, Proceeding of North American Power Symposium (NAPS), San luis, California, USA, Oct. 1999.
8) Transmission System Reliability Enhancement by Optimal Power Flow, Proceeding of North American Power Symposium (NAPS), Cleveland, Ohio, USA, Oct. 1998.

National Conferences

1) Security Constrained Unit Commitment in Deregulated Power Systems by Seeker Optimization Algorithm, first International Conference of New Trends of Sustainable Energy, Pharos University, Alexandria1-3 October 2016.
2) A Multi-Phase Search Optimizer for Solving Profit Based Unit Commitment Problem, 17th Middle East Power Engineering Conference (MEPCON'15) Mansoura university, Egypt, December 15-17, 2015.
3) New Integrated Sectionalizing Approach for Power System Restoration Planning Based on PMUs," 17th Middle East Power Engineering Conference (MEPCON'15) Mansoura university, Egypt, December 15-17, 2015.
4) New Approach for Optimal Path Identification for Power System Restoration Based on PMUs," 17th Middle East Power Engineering Conference (MEPCON'15) Mansoura university, Egypt, December 15-17, 2015.
5) Improved MPPT Algorithm Using A Modified PV Model, 17th Middle East Power Engineering Conference (MEPCON'15) Mansoura University, Egypt, December 15-17, 2015.
6) Performance Analysis of Direct Coupled Photovoltaic-Water Pumping Systems, Proceeding of International Middle East Power System Conference, MEPCON 2009, Dec 2009.
7) Impact of Wind Farms on Contingent Power System Voltage Stability, Proceeding of International Middle East Power System Conference, 12th Middle East Power Engineering Conference, MEPCON'2008, South Valley University, Aswan, Egypt, 12-15 March 2008.
8) Managing Congestion in The New Deregulated Environment, Proceeding of 11th International Middle East Power System Conference (MEPCON 2006), Elminia University, Egypt, 19-21 Dec. 2006, 353-359.
9) Genetic Algorithm Based Optimal operation for Photovoltaic System under Different Fault Criteria, Proceeding of 11th International Middle East Power System Conference (MEPCON 2006), Elminia University, Egypt, 19-21 Dec. 2006, pp. 556-561