

Dr. Mahmoud Mohamed Othman Ahmed



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- **Age:** 33 years old
- **Birth Date:** 1/10/1983
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Curriculum Vitae

Career objective

To establish the basis of successful career in the power system research that will enhance my professional development and assist me in reaching my long-term goal of becoming a professor of electrical power system. Keen to join a successful team in an international university or institute to improve my research skills and improve my publication record.

Summary

- Postdoctoral fellow, University of Waterloo.
- Ph.D (2015) Electrical Power and Machines Department, Ain Shams University, Cairo, Egypt.
- M.Sc (2010) Electrical Power and Machines Department, Ain Shams University, Cairo, Egypt.
- 10 years of university level teaching experience.
- 8 top ranked journal publications and over 8 conference publications.

Education

2010-2015

Doctor of Philosophy (Ph.D)

- Institute: Ain Shams University, Faculty of engineering.
- Discipline: Electrical power system engineering.
- Thesis: Electrical Energy Management in Power Delivery Systems Using Virtual Power Plant Concept

2005-2010

Master of Science (M.Sc.)

- Institute: Ain Shams University, Faculty of engineering.
- Discipline: Electrical power system engineering.
- Thesis: Impact of Distributed Generation Penetration on Distribution System Operation.

2000-2005

Bachelor of Science (B.Sc)

- Institute: Ain Shams University, Faculty of engineering.
- Discipline: Electrical power and machines engineering.
- Project: Electrical Distribution System Planning.
- Graduation Grade: Distinction with honors (Rank # 1)

Work experience

- Jan 2016-Present **Postdoctoral fellow, University of Waterloo, Ontario, Canada.**
- Working with Prof. Magdy M. A. Salama research group.
- Feb. 2015-Dec. 2016 **Assistant Professor, Ain Shams University-Faculty of engineering**
- Published high quality technical papers.
 - Conducting department regular meeting.
 - Taught in lectures the following courses:
 - Power system analysis.
 - Transmission and distribution of electrical power.
 - Power system control.
 - Energy conversion.
 - Technical report writing.
 - Human resources management.
- Feb. 2015-Present **Part time lecturer, German University in Cairo , British University in Cairo, and Misr International University.**
- Taught in lectures the following courses:
 - Electric machines.
 - Electric circuits.
 - Mathematics.
- 2005-Feb. 2015 **Lecturer assistant, Ain Shams University-Faculty of engineering**
- Published high quality technical papers.
 - Taught in tutorials the following courses:
 - Power system analysis.
 - Protection and switch gear of electrical power system.
 - Application of protection.
 - Electrical machines (1) (DC machines).
 - Electrical machines (2) (Transformers).
 - Transmission lines.
 - Power Electronics.
 - Protection for mechanical engineering.
- 2008-2015 **Lecturer assistant, German university in Cairo**
- Taught in tutorials the following courses:
 - Calculus.
 - Linear Algebra.
 - Advanced Engineering Mathematics.
 - Mathematics for Management.
- 2007-2008 **Teacher assistant , Arab academy for science and maritime and technology**
- Taught in tutorials the following courses:
 - Dc machines.
 - Machine lab.

2006-2007

Teacher assistant, El-Shourok academy

- Taught in tutorials the following courses:
 - Protection and Switch gear.
 - Advanced Matlab.

Skills

Engineering Tools

- MATLAB & SIMULINK.
- PSCAD.
- AutoCAD.
- Power world simulator.

Language Skills

- Arabic: Mother tongue/ Native.
- English: Very Good Spoken and Written.

Computer Skills

- Matlab.
- MS office (excel, word, power point, internet).
- Advanced Internet user.
- Fast Typing Skill

Interpersonal Skill

- Punctual and very organized.
- Patient and customer service oriented.
- Very creative and a fast learner.
- Team player and can also work independently.
- Work well under pressure and able to meet deadlines.
- Willing to learn and be trained.
- Hard worker and committed to accomplish given tasks.
- Able to handle multi tasks simultaneously.
- Problem solving oriented.
- Ambitious and self-confident.
- Good communication and negotiation skills

Research interests

- Electrical power system analysis.
- Probabilistic modeling of renewable energy sources.
- Stochastic analysis of wind and photovoltaic energy.
- Distribution system planning.
- Data analysis and simulation of micro grids.
- Economic analysis of virtual power plants and micro grids.
- Demand side management.

List of publications

Books

1. Mahmoud M. Othman, Electrical Energy Management in Power Delivery Systems: Virtual Power Plant Concept. LAP LAMBERT_Academic_Publishing, Dec. 2015.

Journal papers

1. M. M. Othman, W. El-Khattam, Y. G. Hegazy and A. Y. Abdelaziz, 'Optimal Placement and Sizing of Distributed Generators in Unbalanced Distribution Systems Using Supervised Big Bang Big Crunch Method', **IEEE Transactions on Power Systems**, Vol.30,no.2, March 2015, pp.911-919.
2. A. Y. Abdelaziz, Y. G. Hegazy, W. El-Khattam and M. M. Othman, 'Optimal Allocation of Stochastically Dependent Renewable Energy Based Distributed Generators in Unbalanced Distribution Networks', **Electric Power Systems Research**, Vol. 119, February 2015, pp. 34-44.
3. A. Y. Abdelaziz, Y. G. Hegazy, W. El-Khattam and Mahmoud M. Othman, 'A Multiobjective Optimization for Sizing and Placement of Voltage Controlled Distributed Generation Using Supervised Big Bang Big Crunch Method' **Electric Power Components and Systems**, vol. 43, no.1 pp.105–117, Jan. 2015.
4. A. Y. Abdelaziz, Y. G. Hegazy, W. El-Khattam and Mahmoud M. Othman, 'Optimal Planning of Distributed Generators in Distribution Networks Using Modified Firefly Method', **Electric Power Components and Systems**, vol. 43, no.3 pp.320-333, Jan. 2015.
5. M.M. Othman, A. Y. Abdelaziz, Y.G. Hegazy, Walid El-Khattam, , 'Approach for Modeling Stochastically Dependent Renewable Energy Based Generators using Diagonal Band Copula', **IET Renewable Power Generation**, vol.9, no.8, pp.809 -820,Sep. 2015.
6. M. M. Othman, A.Y.Abelaziz, and Y. G. Hegazy, 'A Review of Virtual power plant Definitions, Components, Framework and Optimization, **International Electrical Engineering Journal (IEEJ)**, vol. 6, pp. 2010-2024, 2015.
7. A. Y. Abdelaziz, Y.G. Hegazy, Walid El-Khattam, M.M. Othman, 'Optimal Placement and Sizing of Voltage Controlled Distributed Generators in Unbalanced Distribution Networks Using Supervised Firefly Algorithm" **International Journal of Electrical Power and Energy Systems**, Vol. 82, pp. 105-113, Nov. 2016 ,.
8. Mahmoud M, Othman, Yasser G. Hegazy, and A. Y. Abelaziz 'Optimal Operation of Virtual Power Plant in unbalanced Distribution Networks, **Electric power components and systems**, Vol. 44, No. 14, pp. 1620-1630, Aug. 2016.
9. Engy A. Mohamed, Mahmoud M. Othman ,and Yasser G Hegazy 'A Novel Probabilistic Technique for Optimal Allocation of Photovoltaic Based Distributed Generators to Decrease System Losses', **Periodica Polytechnica Electrical Engineering and Computer Science**, Vol.60, no.4, pp.247-253, Sep. 2016.
10. Mahmoud M, Othman, Yasser G. Hegazy, and A. Y. Abelaziz 'Electrical Energy Management in Unbalanced Distribution Networks using Virtual Power Plant Concept, accepted, **Electric power system research and systems**.

Conferences

11. A. Y. Abdelaziz, Y. G. Hegazy, Walid El-Khattam and M.M.Othman, ' Virtual Power Plant: The Future of Power Delivery Systems', Proceedings of the Second European Conference and Workshop on Renewable Energy Systems, 20-30 September 2013, Antalya, Turkey.
12. Y. G. Hegazy, M. M. Othman, W. El-Khattam and A. Y. Abdelaziz, 'Optimal sizing and siting of distributed generators using Big Bang Big Crunch method', Proceedings of 49th International Universities' Power Engineering Conference, 2-5 September 2014, Cluj-Napoca, Romania.
13. M. M. Othman, W. El-Khattam A. Y. Abdelaziz and Y. G. Hegazy, 'A Firefly Based Optimization Algorithm for Optimal Planning of Voltage Controlled Distributed Generators', Proceedings of the 4th International Conference of Engineering Optimization, Lisbon, Portugal, 8-11 September, 2014.
14. M. M. Othman, Walid El-Khattam, A.Y.Abdelaziz, and Y. G. Hegazy, 'Multiple voltage controlled distributed energy resources sizing and allocation for virtual power plant realization', Proceedings of the 16th International Middle East Power Systems Conference, Ain Shams University, Cairo, Egypt, December 23-25, 2014 (MEPCON'14).
15. Engy A. Mohamed, Mahmoud M. Othman, and Y. G. Hegazy "Optimal Sizing and Placement of Distributed Generators for Profit Maximization Using Firefly Algorithm" Int'l Conference on Artificial Intelligence, Energy and Manufacturing Engineering (ICAEME'2014), June 9-10, 2014 Kuala Lumpur (Malaysia).
16. Mahmoud M. Othman, Y.G.Hegazy, and A. Y. Abdelaziz "Optimal Planning of Dispatchable Distributed Generators for Power Loss Reduction in Unbalanced Distribution Networks" ICEPE 2015 : 17th International Conference on Electrical and Power Engineering, Venice, Italy, 13-14 August 2015.
17. M. M. Nagib, Mahmoud M Othman, Adel A. Naiem, Y. G. Hegazy, ' Invasive weed optimization algorithm for solving economic load dispatch', IEEE 16th International Conferences on Environment and Electrical Engineering (EEEIC), 7-10 June 2016, Florence, Italy.

References

Prof. Dr. Magdy A. M. Salama
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