PERSONAL DETAILS

Name	**Mohammad H. Moradi**
Date of Birth	25th, June 1967
Nationality	Iranian
Language Expertise	Persian and English

Address	Electrical Engineering Group,
	Department of Engineering
	Bu Ali Sina University,
	Hamedan,Iran
	Tel: 0811-8257409
	mh_moradi@yahoo.co.uk
	mhmoradi@basu.ac.ir

http://profs.basu.ac.ir/mh-moradi/index.php?i14&low45
http://scholar.google.com/citations?user=ZQ98M1EAAAAJ&hl=en

RESEARCH INTERESTS

Micro Grid Modelling, Simulation and Control
DG Location and Sizing in Power System
Combined Heat and Power Plant
New and Green Energy
photovoltaic systems and power electronics
Power Quality
Small Scale Green Energy Production
Industrial Process Modelling and Simulation and control
Large Scale System modelling, simulation and control
Multivariable PID controller
Supervisory Control
Generalized Predictive Control
Fuzzy Control
Automation and Robotics
IT and its role in Education and Training

<u>Project</u>

Managing different project in Electrical Engineering Field:

More than 10 projects

Conducting Students Projects:

BSC: More than 100 students

MSC: More than 30 students

PhD: 5 students

AWARD

[1] Student award in engineering: The 9th Annual Iranian Student Seminar, Birmingham, UK, 29th –30th June 2002.

[2] Student Award, the 27th Annual Conference of the IEEE Industrial Electronics Society, Denver, Colorado, USA, Nov (29) to Dec 2 (Sun) 2001

[3] Most cited paper published in IJEPES from 2013 till now, 'A combination of genetic algorithm and particle swarm optimization for optimal DG location and sizing in distribution systems' by M.H.Morad and M. Abedini.

[4] Selected researcher in Faculty of Engineering, Bu Ali Sina University from 2011 till Now

PUBLICATIONS
Book

[1] Johnson, M A and M H Moradi: "PID Controller Design", Springer-Verlag London, (2005).

[2] Moradi, M.H. and S. H. Farhoud, IT and E- Government, Noor Elm , In Persian, 2005

[3] Moradi, M.H. and E Ghasemi and H.B Tolabi, Principal of Electrical Engineering, Bu-Ali Sina University, 2010

ISI Journal Papers

2015

[1] MH Moradi, M Abedini, SM Hosseinian, Improving Operation Constraints of Microgrid Using PHEVs and Renewable Energy Sources ,, Renewable Energy, 2015 (In press).

[2] MR Tousi, MH Moradi, NS Basir, M Nemati, A Function Based Maximum Power Point Tracking Method for Photovoltaic Systems, IEEE Transactions on Power Electronics DOI: 10.1109/TPEL.2015.2426652, 2015

[3] MH Moradi, M Abedini, SM Hosseinian, A Combination of Evolutionary Algorithm and Game Theory for Optimal Location and Operation of DG from DG Owner Standpoints, IEEE Transaction on Smart Grid DOI: 10.1109/TSG.2015.2422995, 2015

[4] M.H.Moradi, M. Eskandari, S.M Hosseinian, Operational Strategy Optimization in an Optimal Sized Smart Microgrid, IEEE Transactions on Smart Grid in press

[5] A Zeinalzadeh, Y Mohammadi, MH Moradi, Optimal multi objective placement and sizing of multiple DGs and shunt capacitor banks simultaneously considering load uncertainty via MOPSO approach, Int. J. of Elec. Power and Energy Systems, Vol 67, May 2015, Pages 336–349

2014
[1] M.H.Moradi, M. Eskandari, A Hybrid method for Simultaneous optimization of DG capacity and Operational Strategy in Microgrids considering uncertainty in electricity price forecasting, Renewable Energy 68 (2014) 697-714

[2] M.H.Moradi, M. Eskandari, H. Showkati, Hybrid Method for simultaneous Optimization of DG Capacity and Operational Strategy in Microgrids utilizing Renewable energy resources, Int. J. of Elec. Power and Energy Systems, , (56), March 2014, PP 241 - 258.

 [3] M.H.Moradi, Mohammad Reza Tousi, M. Abedini, Multi-Objective PFDE Algorithm for Solving the Optimal Sitting and Sizing Problem of Multiple DG Sources, Int. J. of Elec. Power and Energy Systems, (56), March 2014, PP 117 - 126.

[4] M.H.Moradi, Ali Khandani, Evaluation economic and reliability issues for an autonomous independent network of distributed energy resources, Int. J. of Elec. Power and Energy Systems, (56), March 2014, PP 75- 82.

 [5] M.H.Moradi, A. Zeinalzadeh Y Mohammadi, M. Abedini, An efficient hybrid method for solving the optimal sitting and sizing problem of DG and shunt capacitor banks simultaneously based on imperialist competitive algorithm and genetic algorithm, Int. J. of Elec. Power and Energy Systems, (54), 2014, PP 101- 111.

[6] H. Bagheri Tolabi, M. H. Moradi, S. M. Ayob, A review on classification and comparison of different models in solar radiation estimation, International Journal of Energy Research, 38 (6), 2014, PP 689–701.

2013
[1] H. Bagheri Tolabi, S. M. Ayob, M. H. Moradi, and M.Shakarami, "New Technique for Estimating the Monthly Average Daily Global Solar Radiation using Bees Algorithm and Empirical Equations", Environmental Progress & Sustainable Energy, 33 (3), 1042–1050, 2013.

[2] M.H.Moradi, SMR Tousi, M Nemati, N Sadat Basr, N Shalavi, A Robust Hybrid Method for Maximum Power Point Tracking in Photovoltaic Systems, Solar Energy, Vol 94, 2013,PP 266-276.

[3] H. Bagheri Tolabi, M.H.Moradi, A New Combination of Simulated Annealing, Genetic Algorithm, and Graph Theory Techniques for Multi-Objective Reconfiguration of Distribution System, Journal of Basic and Applied Scientific Research, Vol 3, No4, 505- 514, 2013

[4] A.R Reisi, M.H.Moradi, H. Showkati, Combined photovoltaic and unified power quality controller to improve power quality, Solar Energy, Vol 88, Feb 2013, PP 154- 162.

[5] H. Bagheri Tolabi, M.H.Moradi, S. Bin Md Ayob, M.R. Zandebasiri, New technique for global solar radiation prediction using Imperialist Competitive Algorithm, Journal of Basic and Applied Scientific Research, Vol 3, No 3, 958- 964, 2013

[6] A.R Reisi, M.H.Moradi, S.Jamasb, Classification and comparison of maximum power point tracking techniques for photovoltaic system: A review, Renewable & Sustainable Energy Reviews, Vol 19, March 2013, PP 433-443.

[7] M.H.Moradi, M Hajinazari, S.Jamasb, M. Paripour, An Energy Management System (EMS) Strategy for Combined Heat and Power Systems based on a Hybrid Optimization Method Employing Fuzzy Programming, Energy, 49 (2013) PP. 86-101.

[8] M.H.Moradi, Y. Mohammadi, A New Current Based Method for Voltage Sag Source Location Using Directional Overcurrent Relay Information, European Transactions on Electrical Power, 23, pp 270- 281, 2013.

2012
[1] F. Samaie, M.H.Moradi, Technical and Economic Allocation of Combined Cooling, Heating and Power (CCHP) To Powering Sensitive Loads in Power System, Journal of Basic and Applied Scientific Research, 2(12) 12101-12114, 2012

[2] M.H.Moradi, E Hadadi, Active and Reactive Power Control of Grid Connected Micro Grid by PI-NN Hybrid Controller, Journal of American Science 2012;8(8), PP 442-449

[3] M.H.Moradi, E Hadadi, Hybrid performance of fuel cell and wind turbine in islanding operation mode, life science journal 2012, 9 (3), PP 2053-60.

[4] M.H.Moradi, Y. Mohammadi, Voltage sag source location: A review with introduction of a new method, International Journal of Electrical Power and Energy Systems, (43) 2012, PP 29-39.

[5] M. Firuzfar, M. Abedini, M.H.Moradi, S.S. Karimi Madahi, Optimal Multi Distributed Generation Location and Capacity by Genetic Algorithm, Journal Basic and Applied Scientific Research 2 (2) 2012, pp 1649-1654.

[6] M. Firuzfar, M. Abedini, M.H.Moradi, S.S. Karimi Madahi, Optimal Load Shedding Approach in Distribution System for Improved Voltage Stability and Profile, J. Basic and Applied Scientific Research 2 (2) 2012, pp 1933-40

[7] M.H.Moradi, M. Abedini, A Combination of Genetic Algorithm and Particle Swarm Optimization for Optimal DG location and Sizing in Distribution Systems, Int. J. of Elec. Power and Energy Systems 34(1) 2012, pp 66-74.

[8] M.H.Moradi, M. Abedini , A Combination of GA and PSO for Optimal DG location and Sizing in Distribution Systems with Fuzzy Optimal Theory, International Journal of Green Energy, 9:7 pp 1-20, 2012.

[9] M.H.Moradi, M. Asadi, H. R. Faridi, Demand Side Management Program for Residences in Iran, Electrical Review Journal (Przeglad Elektrotechniczny), R. 88 NR 5b/2012, 179-182.

[10] M.H. Moradi, Y. Mohammadi, M. Hoseyni Tayyebi, A Novel Method to Locate the Voltage Sag Source: a Case Study in the Brazilian Power Network (Mato Grosso), Electrical Review Journal (Przeglad Elektrotechniczny), R. 88 NR 3b/2012, 112-116.

2011 and Before

[1] M.H.Moradi, S. Dehghan; A. Mirzaei Improving Congestion Relief Management as Ancillary service in operation Planning Phase with Demand Side's Presence ,IREE No 4, Vol 6, May – June 2011.

[2] M.H.Moradi, A. R. Reisi, A Hybrid Maximum Power Point Tracking Method for Photovoltaic Systems, Solar Energy, Vol 85, Sep 2011, pp: 2965- 2976.

[3] M.H.Moradi, Y. Mohammadi, H. Showkati, Voltage Sag Source Location Based on Current Information only, International Review of Elec. Engineering (IREE), Vol 6, No 5, Aug. 2011, 2522-29.

[4] Moradi M.H., M.R. Katebi and M.A. Johnson, 2002a, '*The MIMO Predictive PID Controller Design*', "Advanced in PID Control" Special Issue of Asian Journal of Control, Vol.4, No. 4, 2002.

[5] Katebi M R and M.H. Moradi, 2001, '*Predictive PID Controllers'*, IEE Proceeding of Control Theory Application, Vol. 148, No. 6, November 2001, pp. 478-487.

Other Papers

H. Bagheri Tolabi, M.H Moradi and F. Bagheri Tolabi, "New Technique for global solar radiation forcast using bees algorithm (RESEARCH NOTE)", International Journal of engineering, Transactions B: Applications, Volume 26 umber 11, November 2013, pp. 1104-1114

M.H.Moradi, F. Samaie, "Combined Heat and Power (CHP) Allocation and Capacity Determination According to Fuzzy Bus Thermal Coefficient and Nodal Pricing Method using Cooperative Game Theory", MAJLESI JOURNAL OF ELECTRICAL ENGINEERING, Vol. 7, No. 3, September 2013

H. Bagheri Tolabi and M.H.Moradi, Multi-objective reconfiguration of distribution systems using imperialist competitive algorithm and graph theory, Technical Journal of Engineering and Applied Sciences, vol.3, No.6, 2013.

H. Bagheri Tolabi and M.H.Moradi, New technique for global solar radiation estimation by ICA (Imperialist competitive algorithm) and GA (Genetic Algorithm) combination, Technical Journal of Engineering and Applied Sciences, vol.3 (8), 703- 708, 2013.

Mohammad Daliri, Amin Beiranvandand, M.H.Moradi, The survey of qualitative and economic analysis of the penetration level of FACTS device installation on network congestion management, Technical Journal of Engineering and Applied Sciences, vol.3 (8), 747- 753, 2013.

M.H. Moradi, M. Khaksar, "Robust Fuzzy Stabilizer Design for Power System", Technical Journal of Engineering and Applied Sciences, vol.3 (17), 2020- 2029, 2013.

M.Abedini, F.Samai, MH.Moradi , A.Ashrafi and M.Ajdardel, "Evolutionary Computation based Distributed Generation capacity and placement of Hamadan Power Networks in Iran", Technical Journal of Engineering and Applied Sciences, vol.3 (19), 2498- 2507, 2013.

M.H.Moradi, F. Samaie, Combined Heat and Power (CHP) Allocation and Capacity determination Based on Bus Thermal and Electrical coefficient using Game Theory, Canadian Journal on Electrical and Electronics Engineering, Vol. 2, No.1, Jan. 2011.

M.H.Moradi, P.G. Khorasani, New & Fast Simulation Method to Online Dynamic Security Assessment Using Matlab, International Review on Modelling and Simulations, Vol. 4, No.3B, June 2011.

M.H.Moradi, Asadi, H.R.Faridi, Investigating the Potentials of Implementing a Demand Side Management (DSM) program for a Residential Consumption Control Plan in Hamedan - Iran, International Review on Modelling and Simulations, Vol. 4, No.4B, August 2011.

[4] H. Showkati M.H.Moradi , Genetic Algorithm Optimized Predictive PID Controller, Int. Journal of Electronics, Electrical and Communication Eng., Vol. 2, No.2, July 2010

Book Review

Moradi M.H., 2002, *Book review: Advances in PID Control* by K.K. Tan, Q. Wang, C.C. Hang and T. Hagglund; Springer-Verlag London, ISBN: 1-85233-138-0, International Journal of Adaptive Control and Signal Processing, Vol 16, Issue 2, PP 175-176

Moradi M.H., 2003, *Book review: "Predictive Control with Constraints"* by J.M. Maciejowski; Prentice Hall London, ISBN: 0-201-39823-0, International Journal of Adaptive Control and Signal Processing, Vol 17, Issue 3, PP 261-262

Conference Papers

1. **M. H. Moradi**, M. Abedini,, "Optimal Multi- Distributed Generation Location and Capacity by Genetic Algorithms", The 9th International Power and Energy Conference, Oct 28, 2010, Singapore, Singapore.

2. **M. H. Moradi**, M. Abedini,, "A Combination of Genetic Algorithm and Particle Swarm Optimization for optimal DG Location and Sizing in Distribution Systems", The 9th International Power and Energy Conference, Oct 28, 2010, Singapore, Singapore.

3. S. Dehghan, A. Sedighi, **M.H. Moradi**, H.R.Mirjalili, "The New non-disciminatory strategy for cost allocation in restructured system", The International Conference on Power System Technology, Oct 24, 2010, Shah Alam, Malaysia.

4. **M. H. Moradi**, M. Abedini,, "Optimal Load Shedding Approach in Distribution Systems for Improved Voltage Stability", The 4th International Power Engineering and Optimization Conf. (PEOCO2010), June 23, 2010, Shah Alam, Malaysia.

5. **M.H.Moradi**, H. Showkati, "Control Input Constraint Handling Using GA Optimized Predictive PID Controller", The 35th Annual conference of the IEEE Industrial Electronics, Nov 3, 2009, Porto, Portugal.

6. **M. H. Moradi**, P. G. Khorasani, "A New Matlab Simulation of Induction Motor", Australasian University power Engineering Conference (AUPE'08), Dec 14, 2008, Sydney, Australia.

7. **M.H.Moradi**, S. Dehghan, H.R. Faridi, "Improving Zonal congestion Relief Management Using Economical and Technical Factors of the Demand Side", The 2ed IEEE International Conference on Power and Energy (PECon 08), Dec 1-3, 2008, Johor Baharu, Malaysia.

8. **M.H.Moradi**, G.Khorasani, "A Fast Matlab Toolbox for Electrical Machinery", International Conference on Electrical Machines and Systems, October 17-20, 2008, Wuhan, China.

9. **Moradi M.H**.," New techniques for PID Controller Design" , 23-25 June 2003, Istanbul, Turkey

10. **Moradi M.H**.," State Space Representation of MIMO predicate PID Controller" , 23-25 June 2003, Istanbul, Turkey

11. **Moradi M.H**, 2003, "Advance Methods for PID Controller Design", The 1st GCC Industrial Electrical & Electronics Conference Gulf International Convention & Exhibition Centre Bahrain, 13-14 May 2003.

12. **Moradi M.H**, 2003 , book reviews " Predictive Control with Constraints", j.m. Maciejowski; Pearson Education Limited, Prentice Hall, London, 2002,pp. IX+331, Price 35.99, ISBN 0201-39823-0

13. **Moradi M.H**, M.R. Katebi and M.A. Johnson, 2002b, *Robust Multi Input Multi Output PID Method*, IEEE Conference on Control Applications (CCA), 18th – 20th September 2002, Glasgow, Scotland.

14. **Moradi M.H**., M.R. Katebi, M.A. Johnson, 2002a, *MIMO Predictive PID Controls*, The 15th IFAC World Congress, 21st – 26th July 2002, Barcelona, Spain.

15. **Moradi M.H**., M.R. Katebi, M.A. Johnson, 2001, *Predictive PID control: A new algorithm*, The 27th Annual Conference of the IEEE Industrial Electronics Society, IECON'01, 29th Nov- 2nd Dec 2001, p.p. 764-769, Colorado, USA.

16. **Moradi M.H**., M.R. Katebi, 2001, *Predictive PID control design for ship autopilot*, IFAC Conference on Control Applications for Marine Systems, CAMS 2001, 18th -20th July 2001, Glasgow, UK.

17. Katebi M.R., **M.H. Moradi** and M A Johnson, 2000c, *Controller tuning methods for industrial boilers*, IEEE International Conference on Industrial Electronics, Control and Instrumentation, (IECON) 18th to 22nd Oct. 2000, Nagoya, Aichi, Japan.

18. **Moradi M.H**., M.R. Katebi, M A Johnson, 2000b, *Combined cycle power plant, modelling, simulation and control*, UKACC International Conference on Control 2000, 4th -7th Sept. 2000, Cambridge, England.

19. **Moradi M.H**., M.R. Katebi and M A Johnson, 2000b, *Modelling, simulation and control of power plant*, International Conference for Process Control and Instrumentation (PCI2000), 26th -28th July 2000, Glasgow, Scotland, pp. 123-128.

20. Katebi M.R., **M.H.Moradi** and M A Johnson, 2000a, *On the robustness of multivariable PID tuning methods*, The Eighth Iranian Conference on Electrical Engineering, 17th- 19th May 2000, Isfahan, Iran, pp. 31-38.

21. Katebi M.R., **M.H. Moradi**, M A Johnson, 2000a, *A comparison of stability and performance robustness of multivariable PID tuning method*s, IFAC Workshop on Digital Control, 5th - 7th April 2000, Terrassa, Spain, pp. 611-616.

22. **Moradi M.H**., M. A. Johnson and M.R. Katebi, 1999, *Power generation simulation and control*, Advanced Control Technologies for Power Generation and Distribution: An International Training Course September 20-23, 1999, University of Strathclyde, Glasgow, UK.

National Conference Papers

1. **Moradi M.H**., M.R. Katebi and M A Johnson, 2002c, *New Area of PID Control Design*, 9th Iranian Student Seminar in Europe ISS02, 29th –30th June 2002, Birmingham, UK.

2. **Moradi M.H**., 2001a, *Multi Input Multi Output robust PID controller*, The 8th Iranian Student Seminar in Europe ISS-2001 5th -8th May 2001, Manchester, UK.

3. **Moradi M.H**., M.R. Katebi and M A Johnson, 2000d, *Combined cycle power plant: modelling, simulation and control*, 7th Iranian Student Seminar in Europe ISS-2000, 20th -21st May 2000, Manchester, UK, pp. 73-78.

Others

- Papers reviewer for Many Journals