



S. Masoud Barakati

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Departments : Electrical Engineering

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Address : Dept.of Electrical Engineering, Faculty of Electrical and Computer Engineering, University of Sistan and Baluchestan, Daneshgah Ave., Zahedan, Iran.

Education

- ✓ B.Sc, Electrical Engineering - power, Ferdowsi University of Mashhad - 1994
- ✓ MS, Electrical Engineering - power, Tabriz University - 1996
- ✓ PhD, Electrical Engineering - power, University of Waterloo - 2008

Courses

- | | |
|---|------------------------------|
| 1. Neural Networks | 2. Soft Computing |
| 3. Engineering Optimization | 4. Power Electronics |
| 5. Flexible Systems Transmission Systems | 6. Renewable Energy Systems |
| 7. Power Electronic II | 8. Electrical Machines - I |
| 9. FACTS | 10. Relay and Protection |
| 11. Electric Machines Lab - II | 12. Mechatronics 2 |
| 13. Special Topics In Power Engineering | 14. Electrical Machines - II |
| 15. Technical English Language | 16. Neuro - Fuzzy Networks |
| 17. Mekateroneek | 18. Electrical Machines - I |
| 19. Power Electronics I | 20. Mechatronics 1 |
| 21. Make up (Electrical Machines And Power Systems Analysis | 22. Power System Lab |

Master Thesis

Journals Papers

2021

[1. Impedance-Based Stability Analysis and Design of a Fractional-Order Active Damper for Grid-Connected Current-Source Inverters](#)

, S. Masoud Barakati, Amirnaser Yazdani

IEEE Transactions on Sustainable Energy Volume: (12) 599 - 611

2020

[2. An effective hybrid wind-photovoltaic system including battery energy storage with reducing control loops and omitting PV converter](#)

Sajad Najafi Shad, S. Masoud Barakati, Amirnaser Yazdani

Journal of Energy Storage Volume: (27) 1 - 101088 - 8 - 101088

[3. New generalized topologies of asymmetric modular multilevel inverter based on six-switch H-bridge](#)

Masoud Ghodsi, S. Masoud Barakati

INTERNATIONAL JOURNAL OF CIRCUIT THEORY AND APPLICATIONS Volume: (1) 1 - 20

[4. A Temporary Overvoltages Mitigation Strategy for Grid-Connected Photovoltaic Systems Based on Current-Source Inverters](#)

, S. Masoud Barakati

Iranian Journal of Science and Technology-Transactions of Electrical Engineering Volume: (1) 1 - 10

[5. Design an adaptive sliding mode controller for an advanced hybrid energy storage system in a wind dominated RAPS system based on PMSG](#)

Homayoun Kord, S. Masoud Barakati

Sustainable Energy, Grids and Networks Volume: (21) 100310 - 100320

2019

[6. Extended switched-inductor quasi-Z-source inverter: Modeling and prototype realization](#)

Masoud Ghodsi, S. Masoud Barakati, Bin Wu

International Transactions on Electrical Energy Systems Volume: (29) e2744-1 - e2744-14

[7. A Generalized Cascade Switched-Capacitor Multilevel Converter Structure and Its Optimization Analysis](#)

Masoud Ghodsi, S. Masoud Barakati

IEEE Journal of Emerging and Selected Topics in Power Electronics Volume: () -

[8. Compact dual-output inverter based on flying-capacitor: modelling, control, and prototype validation](#)

, S. Masoud Barakati

IET Power Electronics Volume: (12) 1825 - 1832

9. High Frequency Transformer Isolated Quasi Z-Source Cascade Multilevel Inverter

, S. Masoud Barakati

Volume: (16) 119 - 131

10. Analyzing Impacts of FACTS Devices in Dealing with Short-Term and Long-Term Wind Turbine Faults

Amir Shahdadi, behrooz Z-M-Shahrekohne2,, S. Masoud Barakati

Journal of Operation and Automation in Power Engineering Volume: (7) 206 - 215

11. A novel low-cost microcontroller-based implementation of SVM algorithm for an indirect matrix converter

Ahmad Khajeh, Mohamad Hosseini Abardeh, Reza Ghazi, S. Masoud Barakati, Mahmoud Oukati sadegh

EPE JOURNAL Volume: (29) 1 - 12

12. A New Asymmetric Multilevel Inverter with Reduced Number of Components

, S. Masoud Barakati

IEEE Journal of Emerging and Selected Topics in Power Electronics Volume: (1) 1 - 10

2018

13. DFT studies of hydrocarbon combustion on metal surfaces

Mina Arya, Ali Akbar Mirzaei, Abdol Mahmood Davarpanah, S. Masoud Barakati, Hossein Atashi, abas moh

JOURNAL OF MOLECULAR MODELING Volume: (24) 1 - 10

14. Competitive study on reliability of difference voltage levels of NPC multilevel inverters

Masoud Ghodsi, S. Masoud Barakati, S.M. Sadr

ELECTRONICS LETTERS Volume: (54) 1047 - 1049

15. Comprehensive voltage and power factor control strategy for electric spring

, S. Masoud Barakati

ELECTRONICS LETTERS Volume: (54) 521 - 523

16. Dynamic Modeling and Control of Grid-Connected Photovoltaic Systems based on Amplitude-Phase Transformation

, S. Masoud Barakati, Bin Wu

Iranian Journal of Electrical and Electronic Engineering Volume: (14) 342 - 352

17. Trajectory tracking for two-degree of freedom helicopter system using a controller-disturbance observer integrated design

Amin Zarei, Mohammad sedigh Poutari, S. Masoud Barakati

ISA TRANSACTIONS Volume: (74) 99 - 110

2017

18. Estimation of nutritional demand function of urban households in Sistan and Balouchestan Province using two NNDS and Q

Ahmad Akbari, mehri ahmadi javid, , S. Masoud Barakati

Volume: (9) 93 - 116

2016

19. Energy Management Using Fuzzy Controller for Hybrid Electrical Vehicles

, S. Masoud Barakati

JOURNAL OF INTELLIGENT and FUZZY SYSTEMS Volume: (30) 1411 - 1420

20. Estimating the continuum of quasars using the artificial neural networks

, Alireza Aghaee, S. Masoud Barakati

Iranian Journal of Astronomy and Astrophysic Volume: (3) 1 - 13

21. Prediction of Fe-Co-Mn/MgO Catalytic Activity in Fischer-Tropsch Synthesis Using Nu-support Vector Regression

Ali Akbar Mirzaei, , S. Masoud Barakati

Physical Chemistry Research Volume: (4) 391 - 405

22. Design of a fractional order PID controller using GBMO algorithm for load–frequency control with governor saturation consideration

, S. Masoud Barakati,

ISA TRANSACTIONS Volume: (64) 56 - 66

23. On power tracking and alleviation by a new controller for fulfilment of the damping and performance requisites for a variable speed wind system An optimal approach

, Saeed Tavakoli Afshari, S. Masoud Barakati

INTERNATIONAL JOURNAL OF ELECTRICAL POWER and ENERGY SYSTEMS Volume: (75) 187 - 193

24. Prediction of Fe-Co-Mn/MgO Catalytic Activity in Fischer-Tropsch Synthesis Using Nu-support Vector Regression

Ali Akbar Mirzaei, Somayeh Golestan, S. Masoud Barakati

Physical Chemistry Research Volume: (4) 391 - 405

2015

25. Short-term load forecasting using mixed lazy learning method

S. Masoud Barakati, Ali Akber Gharevisi, MohamdReza Rafiei

Turkish Journal of Electrical Engineering and Computer Sciences Volume: (23) 201 - 211

2014

26. Optimal size and cost analysis of stand-alone hybrid wind/photovoltaic power-generation systems

Said Farahat, S. Masoud Barakati

CIVIL ENGINEERING AND ENVIRONMENTAL SYSTEMS Volume: (31) 283 - 303

27. Position control of an electro-pneumatic system based on PWM technique and FLC

, S. Masoud Barakati, , ,

ISA TRANSACTIONS Volume: (53) 647 - 657

28. Transformer-less Single-Phase Four-level Inverter for PV System Applications

, S. Masoud Barakati

Journal of Power Electronics Volume: (14) 1233 - 1242

2013

29. A Genetic-Fuzzy Control Strategy for Parallel Hybrid Electric Vehicle

, S. Masoud Barakati, Behrouz Najjari, Davod Mohebbi Kalhori

International Journal of Automotive Engineering Volume: (3) 482 - 495

30. An efficient sizing method with suitable energy management strategy for hybrid renewable energy systems

S. Masoud Barakati, Said Farahat

INTERNATIONAL TRANSACTIONS ON ELECTRICAL ENERGY SYSTEMS Volume: (24) 1473 - 1493

2012

31. Harmonic reduction in wind turbine generators using a Shunt Active Filter based on the proposed modulation technique

alireza hoseynpoor, S. Masoud Barakati,

INTERNATIONAL JOURNAL OF ELECTRICAL POWER and ENERGY SYSTEMS Volume: (43) 1401 - 1412

32. Optimal Design of Double Folded Stub Microstrip Filter by Neural Network Modelling and Particle Swarm Optimization

Amir Banookh, S. Masoud Barakati

JOURNAL OF MICROWAVES OPTOELECTRONICS AND ELECTROMAGNETIC APPLICATIONS Volume: (11) 204 - 213

2009

33. Maximum power tracking control for a wind turbine system including a matrix converter

S. Masoud Barakati, Mehrdad Kazerani, Dwight Aplevich

IEEE TRANSACTIONS ON ENERGY CONVERSION Volume: (24) 705 - 713

34. Received Signal Strength Estimation in Vehicle-to-Vehicle Communications Using Neural Networks

S. Masoud Barakati, Mehri Mehrjoo, Hengameh Keshavarz

International Journal of Digital Information and Wireless Communications Volume: () -

Conferences Papers

2021

1. Hierarchical control to manage power and eliminate rotational current in AC / DC hybrid microgrids including parallel converters in island mode

25th Electrical Power Distribution Network International Conference

, S. Masoud Barakati

2. Voltage Balancing of Capacitors Using Kalman Filter in Modular Multilevel Converters without Current Sensors

12th Power Electronics, Drive Systems, and Technologies Conference (PEDSTC)

Mohammad Bagheri, S. Masoud Barakati, , , Ahmad Khajeh

3. Improved Indirect Model Predictive Control for Modular Multilevel Converter

12th Power Electronics, Drive Systems, and Technologies Conference (PEDSTC)

Abolfazl Shiybani far, S. Masoud Barakati, , , Hamed Torabi

2020

4. uncertainty and disturbance estimator-based control for current-source inverter-interfaced photovoltaic systems

11th Power Electronics, Drive Systems and Technologies Conference

Mohammad sedigh Poutari, S. Masoud Barakati

5. Presenting of an optimal method for decreasing of sensors for multi-level converters

28th Iranian Conference of Electrical Engineering

Mohammad Bagheri, Saeed Yousofi-Darmian, S. Masoud Barakati,

6. Balancing of Capacitors voltages of multilevel converters by a sensor less method

28th Iranian Conference of Electrical Engineering

, , S. Masoud Barakati

7. Intelligent MPPT and DC-Link Voltage Control in the Hybrid PV-DFIG system

28th Iranian Electrical Engineering Conference

Sajad Najafi Shad, S. Masoud Barakati

2019

8. Virtual RL Damping and Harmonic Suppression for Current-Source Inverter-Based Photovoltaic Systems

10th annual International Power Electronics, Drive Systems & Technologies Conference (PEDSTC 2019)

, S. Masoud Barakati

9. Using Electrical Spring for Damping Power Oscillation in DC Microgrid

Electrical Power Distribution Conference

Mahdi Rahat Dahmarde, S. Masoud Barakati, Ahmad Khajeh

10. Targeted DC bus voltage control in a reduced hybrid system consisting of a dual-voltage photovoltaic system and a two-feed induction generator

Electrical Power Distribution Conference

Sajad Najafi Shad, S. Masoud Barakati

11. Evaluation of the performance of AC / DC hybrid converter microchannel converter as a network side current harmonic compensator

Electrical Power Distribution Conference

Shirin Hoseini, S. Masoud Barakati

12. Improvement of Fault Through Capability and System Stability in Wind Farm by Inter-Phase Power Integrated Controller

Electrical Power Distribution Conference

Navid Golzari, S. Masoud Barakati, Ahmad Khajeh

13. Interlinking Converter of Hybrid AC/DC Microgrid as an Active Power Filter

IEEE International Conference on Renewable Energy and Power Engineering (REPE2019)

Shirin Hoseini, S. Masoud Barakati

2018

14. A New Slip Surface Sliding Mode Controller to Implement MPPT Method in Photovoltaic System

9th Power Electronics, Drive Systems, and Technologies

Amir Shahdadi, Ahmad Khajeh, S. Masoud Barakati

15. Predictive Control Strategy Study of dynamic performance three-phase rectifier with space vector modulation converter

33rd International Power System Conference

Masoud Ghodsi, S. Masoud Barakati

16. Implementing Virtual Synchronous Generator to Load-Frequency Control with Penetration of Wind Turbine Considering Limitation of Storage System Capacity

26th Iranian Conference on Electrical Engineering (ICEE)

Navid Nouri, S. Masoud Barakati

17. Load Frequency Control with Considering Impact of Wind Turbine Using a Fractional PID Controller

2018 Smart Grid Conference

Navid Nouri, Abbas Zamani, S. Masoud Barakati

2017

18. Distributed Power Generator by Excessive Bike and Storage

2th International Electrical Engineering

19. Reduction of transient overvoltages in photovoltaic systems connected to the network based on current source inverters

EPDC22

, S. Masoud Barakati

20. Use of nonlinear slip mode controller in photovoltaic system with the aim of improving production voltage regulation

Alaa Mohammadi, S. Masoud Barakati, Saeed Tavakoli Afshari

21. A Novel Approach for Mitigating SSR in DFIGBased Wind Farms Integrated into Series Compensated Network

ICUMT2017

Behrouz Zoghdar Moghadam Shahrekohne, S. Masoud Barakati

22. Analysis and simulation of a Quasi Z-Source Cascade Multilevel Inverter using High Frequency Transformers

25th Iranian Electrical Engineering Conference

, , S. Masoud Barakati

23. A New Compact On and Off-grid Inverter for Photovoltaic Applications

40th international Conference on Telecommunication and Signal Processing

, S. Masoud Barakati, bin wu

2016

24. Multi-loop Control and Resonance Damping of GridConnected Current Source Inverter-Based Photovoltaic System

31th Iranian international electrical conference

, S. Masoud Barakati

25. A new switched boost inverter using transformer suitable for the micro-Inverter connected PV with high boost ability

power electronics and Drive system and technology

, S. Masoud Barakati

26. A New Switched-Inductor Quasi-Z-Source Inverter

2016 (Power Electronic and Drive System Technology (PEDSTC

Masoud Ghodsi, S. Masoud Barakati

27. Dynamic Modeling and Separate Control of Pulse Width Modulation Indicators A voltage source inverter in networked photovoltaic systems

24th Iranian Conference on Electrical Engineering

, S. Masoud Barakati

28. Improvement overvoltage of PV systems

EPDC21

, S. Masoud Barakati, Saeed Tavakoli Afshari

29. Short-term forecast of Mashhad and Baluchestan by the support of a backup machine with a Nu fix

Second National Conference on Technology, Energy and Data with the Approach of Electrical and Computer Engineering

Adnan Omidi, Saeed Tavakoli Afshari, S. Masoud Barakati

30. Improve Distance Protective in the presence of Wind Turbine

International Congress on Engineering Innovation and Technology Development

, S. Masoud Barakati

2015

31. A New Dynamic Voltage Restorer Structure Based on Three-Phase to Single-Phase AC/AC Matrix Converter

The 20th Iranian Electrical Power Distribution Conference

, S. Masoud Barakati

32. Short Term Load Forecasting Based On Brain Emotional Predictor

The 20th Iranian Electrical Power Distribution Conference

, S. Masoud Barakati, ,

33. Data Mining Approach for Islanding Detection of Synchronous Distributed Generation in Micro Grid

The 20th Iranian Electrical Power Distribution Conference

, S. Masoud Barakati

34. Reliability Computation of cluste/red smart meters using fussy logic

13th Iran conference on Fuzzy System

, Mehri Mehrjoo, S. Masoud Barakati

35. Fuzzy Energy Management in Electrical Vehicles with Different Hybrid Energy Storage Topologies

, S. Masoud Barakati

Executive activities

مدیر فناوری اطلاعات

from 1390/11/15 - to 1394/04/25

Research Project

2014

2001

1. Website's design & implementation of Central Computer

S. Masoud Barakati - 2001

1999

2. Review and Analysis of Noise Canceling Methods

Javad Ahmadi Shokouh, S. Masoud Barakati - 1999

3. Interfacing Methode to Connect Laboratory Robot to Computer

S. Masoud Barakati, Javad Ahmadi Shokouh - 1999

1998

4. Providing Internet Services in Sistan and Balouchestan University

Mehri Mehrjoo, S. Masoud Barakati - 1998