



Abolfazl Halvaei Niasar

Associate Professor

College: Faculty of Electrical and Computer Engineering

Department: Electrical Engineering - Power

Education

Degree	Graduated in	Major	University
BSc	1996	Electrical Engineering - Control	Isfahan University of Technology
MSc	1999	Electrical Engineering - Control	University of Tehran
Ph.D	2006	Electrical Engineering - Power	Iran University of Science and Technology

Employment Information

Faculty/Department	Position/Rank	Employment Type	Cooperation Type	Grade
(not set)	(not set)	Tenured	Full Time	26

Papers in Conferences

1. Zahra Emami, Abolfazl Halvaei Niasar ,Torque Ripple reduction of BLDC Motor Drive using Finite-Control-Set Model Predictive Control Strategy ,The 3rd International Conference on Electrical Machines and Drives (ICEMD) ,pp. 1-7 ,Tehran, Iran ,December 20-21, 2023.
2. Mehdi Aghaei Fatideh, Hamed Hashemi ,& Dezaki, Abolfazl Halvaei Niasar ,Optimal Protection of Smart Grids Using Communication-based Dual-setting Directional Overcurrent Relays Considering Different Grid Configurations ,16th International Conference on Protection & Automation in Power System ,pp. 1-6 ,University of Sistan and Baluchestan, Zahedan, Iran ,January 2023.
3. Sajjad Mohammadi Koojani, Abolfazl Halvaei Niasar ,Control of Four-Switch Inverter, Three-phase Brushless DC Motor Drive, using Finite-Set Model Predictive Control (FCS-MPC) ,29th Iranian Conference on Electrical Engineering (ICEE 2021) ,pp. 1-6 ,Tehran, Iran ,May 2021.
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9. Saeed Paksaz, Abolfazl Halvaei Niasar ,Implementation of CSI-Fed Brushless DC Motor Drive using Space Vector Modulation Strategy ,27th Iranian Conference on Electrical Engineering (ICEE 2019) ,pp. 1-6 ,Yazd, Iran ,May 2019.
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11. Abolfazl Halvaei Niasar, Fariborz EshratAbadi ,Energy Saving of Evaporative Coolers using Permanent Magnet Brushless Motor Drive Technology ,The 10th International Power Electronics, Drive Systems and Technologies Conference (PEDSTC2019) ,pp. 78-83 ,Shiraz, Iran ,Feb. 2019.
12. Yaser Nabati, Hami Reza Mohammadi, Abolfazl Halvaei Niasar ,A new non-isolated DC-DC converter with high voltage gain ,27th Iranian Conference on Electrical Engineering (ICEE 2019) ,pp. 1-6 ,Yazd, Iran ,May 2019.
13. Seyed Ali Seyedi Seadati, Abolfazl Halvaei Niasar ,Optimal Design and Finite Element Analysis of a High Speed, Axial-Flux Permanent Magnet Synchronous Motor ,9th IEEE Power Electronics, Drive Systems & Technologies Conference (PEDSTC 2018) ,Amirkabir University of Technology, Tehran, Iran ,February 2018.
14. Sayyed Hossein Edjtahed, Marzieh Ahmadi, Abolfazl Halvaei Niasar ,Research on Control of Non-Ideal Permanent Magnet Brushless Motor in view of Torque Ripple Minimization ,8th IEEE Power Electronics, Drive Systems & Technologies Conference (PEDSTC 2017) ,pp. 229-234 ,University of Ferdowsi, Mashhad, Iran ,February 2017.
15. Sayyed Hossein Edjtahed, Seyed Ali Seyedi Seadati, Abolfazl Halvaei Niasar, Marzieh Ahmadi ,Analytical Design and Finite Element Analysis of High Speed, Axial-Flux Permanent Magnet Synchronous Motor ,8th IEEE Power Electronics, Drive Systems & Technologies Conference (PEDSTC 2017) ,University of Ferdowsi, Mashhad, Iran ,February 2017.
16. AmirHossein PirZadeh, Abolfazl Halvaei Niasar , Sayyed Hossein Edjtahed ,Analytical Modeling and Simulation of Overexcitation Process in Hysteresis Motor ,8th IEEE Power Electronics, Drive Systems & Technologies Conference (PEDSTC 2017) ,University of Ferdowsi, Mashhad, Iran ,February 2017.
17. Sayyed Hossein Edjtahed, Abolfazl Halvaei Niasar, Marzieh Ahmadi ,Sensorless Control of Non-Sinusoidal Permanent Magnet Brushless Motor using Selective Torque Harmonic Elimination Method and Sliding Mode Observer ,8th IEEE Power Electronics, Drive Systems & Technologies Conference (PEDSTC 2017) ,University of Ferdowsi, Mashhad, Iran ,February 2017.
18. Abolfazl Halvaei Niasar, Mohsen Teimoori ,Design and Simulation of Z-Source Inverter Fed Brushless DC Motor Drive Supplied With Fuel Cell for Automotive Applications ,32th International Power System Conference (PSC 2017) ,Tehran, Iran ,October 2017.
19. Majid Moazzemi, Abolfazl Halvaei Niasar ,Design and Implementation of Direct Power Control Method for Standalone Brushless DC Generator ,31th International Power System Conference (PSC 2016) ,Tehran, Iran ,October 2016.
20. Abolfazl Halvaei Niasar, Saeed Khoobi Arani, Amin Haji Zadeh ,Energy Management of a Solar Electric Vehicle Equipped with Two-Energy Storages via Optimized Fuzzy Controller by Genetic

- Algorithm ,31th International Power System Conference (PSC 2016) ,Tehran, Iran ,October 2016.
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 25. Mohammad Kebriaei, Abbas Ketabi, Abolfazl Halvaei Niasar ,A New Resonant CDVM Topology for Pulsed Power Application ,24th Iranian Conference on Electrical Engineering (ICEE 2016) ,Shiraz University, Shiraz, Iran ,May 2016.
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 33. Abolfazl Halvaei Niasar, Dariush Zamani, Hassan Moghbeli ,Power System Stabilizer Design Based On Honey-Bee Mating Optimization Algorithm ,Qatar Foundation Annual Research Conference ,Doha, Qatar ,February 2014.
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- based on One Cycle Control Strategy (in Persian) ,First National Conference on Electrical and Computer in North of Iran ,Bandar Anzali, Iran ,12 June 2014.
37. Abolfazl Halvaei Niasar, Hassan Moghbeli, Ehsan Bolor Kashani ,A Low-Cost Sensorless BLDC Motor Drive using One-Cycle Current Control Strategy ,22nd Iranian Conference on Electrical Engineering (ICEE 2014) ,Tehran, Iran ,May 2014.
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39. Hassan Moghbeli, Abolfazl Halvaei Niasar, Naser Fallahi ,Fuzzy Energy Control Strategy of Through-To-Road Hybrid Electric Vehicle ,IEEE Industrial Electronics Society Conf., (ISIE 2014) ,Istanbul, Turkey ,June 2014.
40. Ehsan Bolor Kashani, Abolfazl Halvaei Niasar ,Implementation of a Novel Brushless DC Motor Drive based on One-Cycle Control Strategy ,5th IEEE Power Electronics, Drive Systems & Technologies Conference (PEDSTC 2014) ,Tehran, Iran ,February 2014.
41. Abolfazl Halvaei Niasar, Mozghan Behzadi Shahrabak ,Direct Power Control of Brushless DC Generator for Automotive Applications ,5th IEEE Power Electronics, Drive Systems & Technologies Conference (PEDSTC 2014) ,Tehran, Iran ,February 2014.
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43. Naser Fallahi, Abolfazl Halvaei Niasar ,Optimized Energy Management Strategy for Separated-Axle Parallel Hybrid Electric Vehicle ,4th IEEE Power Electronics, Drive Systems & Technologies Conference (PEDSTC 2013) ,K.N. Toosi University of Technology, Tehran, Iran ,February 2013.
44. Abolfazl Halvaei Niasar, Hassan Moghbelli, Mojtaba Yavari ,Speed Sensorless Control of Hysteresis Motor based on MRAS and Luenberger Observer Techniques ,19th International Conference on Neural Information Processing (ICONIP'12) ,Doha, Qatar ,2012.
45. S. Falahati, A. Halvaei Niasar ,Design of Power System Stabilizer via Optimal Control, (in Persian) ,15th Iranian Student Conference on Electrical Engineering (ISCEE) ,University of Kashan, Kashan, Iran ,28-30 August 2012.
46. E. Bolor Kashani, A. Halvaei Niasar ,XMEGA-Based Implementation of Four-Switch, Three-Phase Voltage Source Inverter-Fed Induction Motor Drive, (in Persian) ,15th Iranian Student Conference on Electrical Engineering (ISCEE) ,University of Kashan, Kashan, Iran ,28-30 August 2012.
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48. M. NasimAfza, A. Halvaei Niasar ,Sensorless Control of BLDC Motor at Low Speeds using Neural Networks, (in Persian) ,15th Iranian Student Conference on Electrical Engineering (ISCEE) ,University of Kashan, Kashan, Iran ,28-30 August 2012.
49. Mohammad Zare, Abolfazl Halvaei Niasar ,Control of Induction Motor Drive Using Direct Torque Control with 12 Sectors ,15th Iranian Student Conference on Electrical Engineering ,University of Kashan, Kashan, Iran ,August 2012.
50. A. Halvaei Niasar, E. Bolor Kashani ,Sensorless Control of PMSM using Extended Kalman Filter, (in Persian) ,15th Iranian Student Conference on Electrical Engineering (ISCEE) ,University of Kashan, Kashan, Iran ,28-30 August 2012.
51. Afsoon Abolfathi, Manizheh Jafaie, Sayyede Armaghan Moghaddasi, Abolfazl Halvaei Niasar, Hassan Moghbelli ,Design and Implementation of a Low-Cost Photovoltaic Traffic Light Signal System ,American Society for Engineering Education (ASEE) Annual Conference ,San Antonio, Texas, USA ,June 2012.
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55. S. Golabi, A. Halvaei Niasar ,Design and Manufacturing of Hybrid Electric Vehicle Pride at University of Kashan, Part 1: Mechanical Considerations, (in Persian) ,First National Conference on Electric and Hybrid Vehicles ,Tehran, Iran ,23-24 Oct. 2011.
56. Hassan Moghbelli, Mahmood Amani, A. Halvaei Niasar, Sh. Agrawal, J.J. Abraham ,Conversion of Gasoline Vehicles to CNG Vehicles and Hybrid Vehicles (CNG-Electric) ,American Society for Engineering Education (ASEE) Annual Conference ,McNeese State University, Louisiana, USA ,2010.
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58. A. Halvaei Niasar, H. Moghbelli, A. Vahedi ,Modeling, Simulation and Implementation of Four-Switch, Three-Phase Brushless DC Motor Drive based on Switching Function Concept ,IEEE Eurocon conference ,Russia ,May 2009.
59. H. R. Soroush, A. R. Rahmati, H. Moghbelli, A. Vahedi, A. Halvaei Niasar ,Study on the Hunting in High Speed Hysteresis Motors due to the Rotor Hysteresis Material ,IEEE Eurocon conference ,Russia ,May 2009.
60. A. Halvaei Niasar, H. Moghbelli, A. Vahedi ,A Low-Cost Sensorless Control for Reduced-Parts, Brushless DC Motor Drives ,IEEE International Symposium on Industrial Electronics (ISIE) ,Cambridge, UK ,June 2008.
61. A. Halvaei Niasar, Abolfazl Vahedi, Hsaan Moghbelli ,Torque Control of Brushless DC Motor Drive based on DSP Technology ,IEEE International Conference on Electrical Machines and Systems (ICEMS) ,Seoul, South Korea ,October 2007.
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64. H. Moghbelli, A. Halvaei Niasar, R. Langari ,New Generation of Passenger Vehicles: FCV or HEV? ,International Conference on Renewable Energy and Power Quality (ICREPQ) ,Sevilla, Spain ,March 2007.
65. A. Halvaei Niasar, H. Moghbelli ,Mild Hybrid, A New Strategy for Fuel Consumption Optimization in Internal Combustion Engine and Energy Saving, (in Persian) ,9th Iranian Student Conference on Electrical Engineering (ISCEE) ,University of Tehran, Tehran, Iran ,September 2006.
66. Abolfazl Halvaei Niasar, Abolfazl Vahedi, Hassan Moghbelli ,Analysis and Control of Commutation Torque Ripple in Four-Switch, Three-Phase Brushless DC Motor Drive ,IEEE International Conference on Industrial Technology (ICIT) ,Mumbai, India ,December 2006.
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- DC Motor Drives_Part I: Analysis ,9th IEEE International Workshop on Advanced Motion Control (AMC) ,Istanbul, Turkey ,March 2006.
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- Allocation of Microgrids' Distributed Generations and Electric Vehicle Charging Stations Considering System Uncertainties by Clustering Algorithms, IET Renewable Power Generation, Vol. 18, pp. 1798–1818, 2024, ISI.
2. Zahra Zahedipour, Mohammad Ali ShamsiNejad, Abolfazl Halvaei Niasar, Hussein Eliasi, Short circuit fault detection in permanent magnet synchronous motor based-on Group Model of Data Handling deep neural network, Jordan Journal of Electrical Engineering, Vol. 10, No. 2, pp. 169-184, 2024, ISI.
 3. Yahya Abollahi, Mohsen Rahimi, Abolfazl Halvaei Niasar, Control and performance assessment of grid-connected PMSG-based wind turbine equipped with diode bridge rectifier and boost converter using three different control strategies, Journal of Scientia Iranica, Transactions D: on Computer Science & Engineering and Electrical Engineering, Vol. 31, No. 14, pp. 1206-1221, 2024, ISI.
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