



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.
4. Abolfazl Halvaei Niasar, Mohsen Rahimi ,Design and Implementation of an Adjustable 400 Hz Single-Phase Power Frequency Inverter ,12th Annual Power Electronics, Drive Systems, and Technologies Conference (PEDSTC2021) ,pp. 1-5 ,Tabriz, Iran ,February 2021.
5. Seyed Mohammd Taher, Abolfazl Halvaei Niasar, Seyed Abbas Taher ,A New MPC-based Approach for Torque Ripple Reduction in BLDC Motor Drive ,12th IEEE Power Electronics, Drive Systems and

Technologies Conference (PEDSTC 2021) ,pp. 1-6 ,Tabriz, Iran ,February 2021.

6. Abolfazl Halvaei Niasar, Mohsen Rahimi, Allahyar Akhbari ,Design and Simulation of a Single-Phase 400 Hz Inverter with Variable Input and Output Voltages ,11th IEEE Power Electronics, Drive Systems and Technologies Conference (PEDSTC 2020) ,pp. 1-7 ,Shahid Rajaei Teacher Training University, Tehran, Iran ,February 2020.
7. Ehsan Boloor Kashani, Abolfazl Halvaei Niasar ,Improved BLDC motor drive performance without electrolytic capacitor in DC link ,28th Iranian Conference on Electrical Engineering (ICEE 2020) ,pp. 1-6 ,Tabriz, Iran ,May 2020.
8. Amir Movahedi, Abolfazl Halvaei Niasar, Gevorg B. Gharehpetian ,Improvement of LVRT and transient stability of power system with wind farms using coordination of FACTS and PSSs controllers ,27th Iranian Conference on Electrical Engineering (ICEE 2019) ,pp. 1-5 ,Yazd, Iran ,May 2019.
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.
10. Abolfazl Halvaei Niasar, Fariborz EshratAbadi ,Brushless Motor Drive based on Power Control Method for Direct Evaporative Air Cooler ,27th Iranian Conference on Electrical Engineering (ICEE 2019) ,pp. 1-5 ,Yazd, Iran ,May 2019.
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.
21. Mohammad Kebriaei, Abbas Ketabi, Abolfazl Halvaei Niasar ,Three-Phase Pulsed Power Generator using Diode-Capacitor Boost Topology, (in Persian) ,3rd National and First International Conference in applied research on Electrical, Mechanical and Mechatronics Engineering ,Malek-e-Ashtar University of Tehnology, Tehran, Iran ,18-19 Feb. 2015.
 22. Mohammad Kebriaei, Abolfazl Halvaei Niasar, Abbas Ketabi ,A New Pulsed Power Generator Topology for Corona Discharge ,7th IEEE Power Electronics, Drive Systems & Technologies Conference (PEDSTC 2016) ,Iran University of Science and Technology (IUST), Tehran, Iran ,February 2016.
 23. Abolfazl Halvaei Niasar, Arsham Ghanbari ,Evaluation of Various Dynamic Modeling Methods of a Circumferential-Flux Hysteresis Motors ,7th IEEE Power Electronics, Drive Systems & Technologies Conference (PEDSTC 2016) ,Iran University of Science and Technology (IUST), Tehran, Iran ,February 2016.
 24. Saeed Khoobi Arani, Abolfazl Halvaei Niasar, Amin Haji Zadeh ,Energy Management of Dual-Source Propelled Electric Vehicle using Fuzzy Controller Optimized via Genetic Algorithm ,7th IEEE Power Electronics, Drive Systems & Technologies Conference (PEDSTC 2016) ,Iran University of Science and Technology (IUST), Tehran, Iran ,February 2016.
 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.
 26. Abolfazl Halvaei Niasar, Arsham Ghanbari, AmirHossein PirZadeh ,An Improved Analytical Dynamic Modeling of Hysteresis Motor ,24th Iranian Conference on Electrical Engineering (ICEE 2016) ,Shiraz University, Shiraz, Iran ,May 2016.
 27. Mohammad Kebriaei, Abolfazl Halvaei Niasar, Behzad Asaei ,Hybrid electric vehicles: An overview ,4th International Conference on Connected Vehicles and Expo (ICCVE 2015) ,Shenzhen, China ,October 2015.
 28. Mohammad Kebriaei, Abbas Ketabi, Abolfazl Halvaei Niasar ,Water and Gas Treatment by Using Pulsed Corona Discharge Technique ,IEEE International Conference on Plasma Sciences (ICOPS) ,Antalya, Turkey ,May 2015.
 29. Saber Jamshidi far, Abolfazl Halvaei Niasar, AliReza Faraji ,Position Sensorless Direct Power Control of Brushless DC Motor Drive ,Seminar on Power Electronics Technologies (TPES 2015) ,Sharif University of Technology, Tehran, Iran ,March 2015.
 30. Abolfazl Halvaei Niasar, Ehsan Bolor Kashani ,Implementation of Constant Current of Five-Phase Stepper Motor Drive, using One-Cycle Control Strategy (in Persian) ,Seminar on Power Electronics Technologies (TPES 2015) ,Sharif University of Technology, Tehran, Iran ,March 2015.
 31. Abolfazl Halvaei Niasar, Zahra Zare, Fahimeh Rabiei Far ,A Low-Cost P&O based Maximum Power Point Tracking, Combined with Two-Degree Sun Tracker ,6th IEEE Power Electronics, Drive Systems & Technologies Conference (PEDSTC 2015) ,Shahid Beheshti University, Tehran, Iran ,February 2015.
 32. Omid Mohammadpour, Abolfazl Halvaei Niasar ,One Cycle Control of Buck-Type,Current Source Inverter-Fed, Brushless DC Motor Drive ,6th IEEE Power Electronics, Drive Systems & Technologies Conference (PEDSTC 2015) ,Shahid Beheshti University, Tehran, Iran ,February 2015.
 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.
 34. Abolfazl Halvaei Niasar, Hassan Moghbeli, Hossein Rahimi Khoei ,Sensorless Direct Power Control Of Induction Motor Drive Using Artificial Neural Network ,Qatar Foundation Annual Research Conference ,Doha, Qatar ,February 2014.
 35. Omid Mohammadpour, Abolfazl Halvaei Niasar ,Comparison of One-Cycle Control and PWM Strategies in Sensorless Drive of Brushless DC Motor Drive (in Persian) ,8th National Conference on Engineering, Science and Novel Ideas ,Tonekabon, Iran ,11 May 2014.
 36. Omid Mohammadpour, Abolfazl Halvaei Niasar ,Current Source Inverter, Brushless DC Motor Drive

- 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.
 38. Hassan Moghbeli, Abolfazl Halvaei Niasar, Mozghan Behzadi Shahrabak ,Direct Power Control of Brushless DC Motor Drive ,IEEE Industrial Electronics Society Conf., (ISIE 2014) ,Istanbul, Turkey ,June 2014.
 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.
 42. Mohammad Zare, Abolfazl Halvaei Niasar ,A Novel Sensorless Vector Control of Hysteresis Motor Drive ,4th IEEE Power Electronics, Drive Systems & Technologies Conference (PEDSTC 2013) ,K.N. Toosi University of Technology, Tehran, Iran ,February 2013.
 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.
 47. S.A. Seyedi, A. Halvaei Niasar ,State of Charge Estimation of Battery using Kalman Filter, (in Persian) ,15th Iranian Student Conference on Electrical Engineering (ISCEE) ,University of Kashan, Kashan, Iran ,28-30 August 2012.
 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.
 52. S. AhmadZadeh, A. Halvaei Niasar ,Sensorless Indirect Flux Oriented Control of Single-Phase Induction Motor, (in Persian) ,15th Iranian Student Conference on Electrical Engineering (ISCEE)

,University of Kashan, Kashan, Iran ,28-30 August 2012.

53. Abolfazl Halvaei Niasar, Hassan Moghbelli ,Sensitivity Analysis to the Design Parameters of a Hysteresis Motor ,3rd IEEE Power Electronics, Drive Systems & Technologies Conference (PEDSTC 2012) ,Tehran, Iran ,February 2012.
54. A. Halvaei Niasar, S. Golabi ,Design and Manufacturing of Hybrid Electric Vehicle Pride at University of Kashan, Part 2: Electrical Considerations, (in Persian) ,First National Conference on Electric and Hybrid Vehicles ,Tehran, Iran ,23-24 Oct. 2011.
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.
57. A. Halvaei Niasar, A. Vahedi, H. Moghbelli ,Estimation Error Analysis of the Position Sensorless-Controlled BLDC Motor Drive based on Line-to-Line Voltages Measurement ,17th Iranian Conference on Electrical Engineering (ICEE) ,Iran University of Science and Technology, Tehran, Iran ,May 2009.
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.
62. A. Halvaei Niasar, H. Moghbelli, A. Vahedi ,A Novel Sensorless Control Method for Four-Switch, Brushless DC Motor Drive without Using any 30 degree Phase Shifter ,IEEE International Conference on Electrical Machines and Systems (ICEMS) ,Seoul, South Korea ,October 2007.
63. Abolfazl Halvaei Niasar, Hassan Moghbelli, Abolfazl Vahedi ,Implementation of Four-Switch Brushless DC Motor Drive based on TMS320LF2407 DSP ,IEEE International Conference on Signal Processing and Communications (ICSPC) ,Dubai, UAE ,November 2007.
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.
67. Abolfazl Halvaei Niasar, Abolfazl Vahedi, Hassan Moghbelli ,ANFIS-Based Controller with Fuzzy Supervisory Learning for Speed Control of 4-Switch Inverter Brushless DC Motor Drive ,37th IEEE Power Electronics Specialists Conference (PESC) ,Jeju island, South Korea ,June 2006.
68. A. Halvaei Niasar, H. Moghbelli, A. Vahedi ,Commutation Torque Ripple of Four-Switch Brushless DC Motor Drives_Part II: Controllability and Minimization ,9th IEEE International Workshop on Advanced Motion Control (AMC) ,Istanbul, Turkey ,March 2006.
69. A. Halvaei Niasar, H. Moghbelli, A. Vahedi ,Commutation Torque Ripple of Four-Switch Brushless

- DC Motor Drives_Part I: Analysis ,9th IEEE International Workshop on Advanced Motion Control (AMC) ,Istanbul, Turkey ,March 2006.
70. S.A. Kamali, A.Vahedi, A.Halvaei ,Performance Analysis of HTS Fault Current Limiter Combined with a ZnO Varistor ,8th IEEE International Conference on Electrical Machines and Systems (ICEMS) ,Nanjing, China ,September 2005.
71. A. M. Kashtiban, A. Vahedi, A. Halvaei ,Investigation of Winding Type effect on Leakage Flux of Single Phase Shell Type Transformer Using FEM ,8th IEEE International Conference on Electrical Machines and Systems (ICEMS) ,Nanjing, China ,September 2005.
72. A. Halvaei Niasar, A. Vahedi, H. Moghbelli ,Speed Control of a Brushless DC Motor Drive via Adaptive Neuro-Fuzzy Controller based on Emotional Learning Algorithm ,8th IEEE International Conference on Electrical Machines and Systems (ICEMS) ,Nanjing, China ,September 2005.
73. A. Halvaei Niasar, H. Moghbelli, A. Vahedi ,Design Methodology of Drive Train for a Series-Parallel Hybrid Electric Vehicle (SP-HEV) and its Power Flow Control Strategy ,IEEE International Electric Machines and Drives Conference (IEMDC) ,San Antonio, Texas, USA ,May 2005.
74. Abolfazl Halvaei Niasar, Hassan Moghbelli, Abolfazl Vahedi ,Modeling and Simulation Methods for Brushless DC Motor Drives ,First International Conference on Modeling, Simulation and Applied Optimization (ICMSAO) ,Sharjah, UAE ,February 2005.
75. A. Halvaei Niasar, SH. Jadid, H. Moghbelli ,Dynamic Stability of a Grid-Connected Photovoltaic System and Interactive Effects Analysis, (in Persian) ,19th International Power System Conference (PSC) ,Tehran, Iran ,November 2004.
76. A. Halvaei Niasar ,Superconductive Magnetic Energy Storage Systems (SMES): Control and Applications in Electrical Power Systems, (in Persian) ,7th Iranian Student Conference on Electrical Engineering (ISCEE) ,Khajeh Nasiraddin Toosi University, Tehran, Iran ,September 2004.
77. A. Halvaei Niasar, A. Gholami, H. Moghbelli ,Lifetime Assessment and Aging Acceleration of Power and Distribution Transformers Insulation under Combined Electrical & Thermal Stresses, (in Persian) ,9th Conference of Electric Power Distribution Networks (EPDN) ,Zanjan, Iran ,May 2004.
78. A. Halvaei Niasar, M.A.S. Masoum, H. Moghbelli ,Adaptive Neuro-Fuzzy Intelligent Controller via Emotional Learning for Indirect Vector Control (IVC) of Induction Motor Drives ,12th Iranian Conference of Electrical Engineering (ICEE) ,University of Ferdowsi, Mashhad, Iran ,May 2004.
79. A. Halvaei Niasar, A. Kazemi, H. Moghbelli, M. Kalantar ,Reactive Power Distribution and Control of a Wind Farm Made up with Doubly Fed Induction Generators using Adaptive Neuro-Fuzzy Inference Systems (ANFIS), (in Persian) ,12th Iranian Conference of Electrical Engineering (ICEE) ,Mashhad, Iran ,May 2004.
80. A. Halvaei Niasar, R. Kazemi, H. Moghbelli ,Yaw Moment Control via Emotional Adaptive Neuro-Fuzzy Controller for Independent Rear Wheel Drives of an Electric Vehicle ,IEEE Conference on Control Applications (CCA) ,Istanbul, Turkey ,June 2003.
81. A. Halvaei Niasar, H. Moghbelli, R. Kazemi, Sh. Farhangi ,Control of Independent Rear Wheel Drives for Electric and Hybrid Vehicles Using One Neuro-Fuzzy Controller ,Society of Automotive Engineers (SAE) Congress & Exhibition ,Michigan, USA ,March 2003.
82. A. Halvaei Niasar, Sh. Farhangi, R. Kazemi ,Torque Control of an Electric Vehicle equipped with two Electric Drives, Part II: Efficiency Enhancement of Induction Motor Drive via Flux Optimization for Electric Vehicle Applications, (in Persian) ,8th Iranian Conference of Electrical Engineering (ICEE) ,Isfahan University of Technology, Isfahan, Iran ,May 2000.
83. A. Halvaei Niasar, R. Kazemi, Sh. Farhangi ,Torque Control of an Electric Vehicle equipped with two Electric Drives, Part I: Yaw Moment Control of Vehicle via Fuzzy Logic, (in Persian) ,8th Iranian Conference of Electrical Engineering (ICEE) ,Isfahan University of Technology, Isfahan, Iran ,May 2000.

Papers in Journals

-
1. Mohammad Reza Yaghoubi Nia, Hamed Hashemi Dezaki, Abolfazl Halvaei Niasar,Optimized

- 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.
 4. Yaser Nabati, Abolfazl Halvaei Niasar, Hamid Reza Mohammadi, A New L-C-D Cell Based Non-Isolated Single Switch High Step-Up DC-DC Converter for Photovoltaic Applications, *Journal of Solar Energy Research (JSER)*, University of Tehran, Vol. 7, No. 2, pp. 1027-1036, 2022, ISC, Scopus.
 5. Ehsan Bolor Kashani, Abolfazl Halvaei Niasar, Torque Ripple Reduction of Electrolytic Capacitor-less BLDC Motor Drive using Simultaneous Speed and Torque Control (in Persian), *Journal of Iranian Association of Electrical and Electronics Engineers*, Vol. 19, No. 4, pp. 117-125, 2022, ISC.
 6. Vahid Soori, Abolfazl Halvaei Niasar, Abbas Ketabi, Control of Buck-Type Dynamic Capacitor (DCAP) Using Model Predictive Control Method with PSO optimization algorithm for Dynamic Var and Harmonic Compensation, *Journal of Computational Intelligence in Electrical Engineering*, Vol. 13, No. 1, pp. 55-70, 2022, ISC.
 7. Mohammad Reza Yaghoubi Nia, Hamed Hashemi Dezaki, Abolfazl Halvaei Niasar, Optimal Stochastic Scenario-based Allocation of Smart Grids' Renewable and Nonrenewable Distributed Generation Units and Protective Devices, *Sustainable Energy Technologies and Assessments*, Vol. 44, No. 1, pp. 1-13, 2021, ISI.
 8. Ehsan Bolor Kashani, Abolfazl Halvaei Niasar, Reduction of Torque Ripple in an Electrolytic Capacitor-less BLDC Motor Drive by Simultaneous Speed and Torque Control Method, *Ain Shams Engineering Journal*, Vol. 12, No. 4, pp. 3703-3709, 2021, ISI.
 9. Vahid Soori, Abolfazl Halvaei Niasar, Abbas Ketabi, Control of Three-Phase Buck-Type Dynamic Capacitor Using the Model Predictive Control Method for Dynamic Compensation of the Reactive Power and Load Current Harmonics, *Journal of Solar Energy Research (JSER)*, University of Tehran, Vol. 4, No. 6, pp. 898-913, 2021, ISC, Scopus.
 10. Abolfazl Halvaei Niasar, Yahya Abdollahi Asadabadi, Torque Ripple Reduction of Non-Ideal Permanent Magnet Brushless Motor based on Selective Torque Harmonic Elimination Using One Cycle Control Strategy, *Electromechanical Energy Conversion Systems*, Vol. 1, No. 1, pp. 28-37, 2021.
 11. Mohammad Kebriaei, Abolfazl Halvaei Niasar, Abbas Ketabi, Combination of Marx and Capacitor Diode Voltage Multiplier for Pulsed Power Applications, *Journal of Scientia Iranica, Transactions D: on Computer Science & Engineering and Electrical Engineering*, Vol. 27, No. 3, pp. 1506-1514, 2020, ISI.
 12. Mostafa Rahideh, Abbas Ketabi, Abolfazl Halvaei Niasar, Iman zamani, Linear Quadratic Integral optimal control of photovoltaic systems, *AUT Journal of Electrical Engineering*, Vol. 52, No. 2, pp. 231-242, 2020, ISC.
 13. Abolfazl Halvaei Niasar, Hossein NikKhah, Fariborz EshratAbadi, Technical and Economic Considerations for using of Permanent Magnet Brushless Motors in Evaporative Water Coolers, *Journal of Scientia Iranica, Transactions D: on Computer Science & Engineering and Electrical Engineering*, Vol. 27, No. 6, pp. 3204-3217, 2020, ISI.
 14. Mostafa Rahideh, Abbas Ketabi, Abolfazl Halvaei Niasar, Maximum Power Point Tracking Using State-dependent Riccati equation based Model Reference Adaptive Control, *International Journal of Industrial Electronics, Control and Optimization*, Vol. 3, No. 2, pp. 115-124, 2020, ISI.
 15. Abolfazl Halvaei Niasar, Hossein NikKhah, Performance Enhancement of Evaporative Water Cooler Equipped with Permanent Magnet Brushless Motor Drive Based on Power Control Strategy, *IEEE Journal of Emerging and Selected Topics in Power Electronics (JESTPE)*, Vol. 8, No. 2, pp. 1268-1275, 2019, ISI.

16. Amir Movahedi, Abolfazl Halvaei Niasar, G. B. Gharehpetian, LVRT improvement and transient stability enhancement of power systems based on renewable energy resources using coordination of SSSC and PSSs controllers, *IET Renewable Power Generation (RPG)*, Vol. 13, No. 11, pp. 1849-1860, 2019, ISI.
17. Mostafa Rahideh, Abbas Ketabi, Abolfazl Halvaei Niasar, State-dependent Riccati equation and fuzzy sliding mode control for maximum power point tracking in partially shaded conditions in PV systems, *International Transactions on Electrical Energy Systems (ETEP)*, Vol. 30, No. 2, pp. 1-16, 2019, ISI.
18. Amir Movahedi, Abolfazl Halvaei Niasar, G.B. Gharehpetian, Designing of SSSC, TCSC and STATCOM controllers with using AVURPSO, GSA and GA for transient stability improvement of multi-machine power system with PV and wind farms, *International Journal of Electrical Power and Energy Systems (IJEPE)*, Vol. 106, pp. 455-466, 2019, ISI.
19. Saeed Paksaz, Abolfazl Halvaei Niasar, Yahya Abdollahi, Design, Simulation and Implementation of Brushless DC Motor Drive supplied from Current Source Inverter based on Space Vector Modulation Strategy, *Journal of Electrical and Electronics Engineering (JEEE)*, Vol. 12, No. 1, pp. 33-38, 2019, Scopus.
20. Abolfazl Halvaei Niasar, Hossein NikKhah, Fariborz EshratAbadi, Performance Improvement of Evaporative Cooler Equipped with a Permanent Magnet Brushless Motor Using Power Control Method, *Journal of Energy Engineering and Management*, Vol. 10, No. 1, pp. 32-45, 2020, ISC.
21. Saeid Paksaz, Abolfazl Halvaei Niasar, Design and Implementation of Brushless DC Motor Drive Using Current Source Inverter Based on Space Vector Modulation Strategy, *Iranian Journal of Electrical and Computer Engineering (IJECE)*, Vol. 17, No. 1, pp. 51-59, 2019, ISC.
22. Abolfazl Halvaei Niasar, Fariborz EshratAbadi, Energy Saving in Evaporative Coolers using Permanent Magnet Brushless Motors, *Iranian Journal of Energy*, Vol. 21, No. 4, pp. 27-52, 2019, ISI.
23. Saman Amini, Abolfazl Halvaei Niasar, Keyvan Amini, Improved Direct Torque Control of Axial-Flux Hysteresis Motor, *Majlesi Journal of Telecommunication Devices*, Vol. 7, No. 3, pp. 103-109, 2018.
24. Samane Sadooghi, Abolfazl Halvaei Niasar, Sensorless control of Non-Ideal back-EMF Permanent Magnet Synchronous Motor Based on State Space Control and Sliding Mode Observer, *Journal of Innovative Research in Engineering Sciences*, Vol. 4, No. 1, pp. 1-8, 2016.
25. Mohammad Kebriaei, Abbas Ketabi, Abolfazl Halvaei Niasar, Modular Hybrid Solid State Pulsed Power Generator, *IEEE Transactions on Dielectrics and Electrical Insulation*, Vol. 24, No. 4, pp. 2234-2240, 2017, ISI.
26. Abolfazl Halvaei Niasar, and AmirHossein Sabbaghean, Design and Implementation of a Low-Cost Maximization Power Conversion System for Brushless DC Generator, *Ain shams Engineering journal*, Vol. 8, No. 4, pp. 571-580, 2017, ISI.
27. Abolfazl Halvaei Niasar, A Novel Time Varying Dynamic Modeling for Hysteresis Motor, *Journal of Scientia Iranica, Transactions D: on Computer Science & Engineering and Electrical Engineering*, Vol. 24, No. 3, pp. 1395-1409, June 2017, ISI.
28. Abolfazl Halvaei Niasar, Majid Moazzemi, Design and Implementation of Direct Power Control System for Brushless DC Generator in Standalone DC Applications, *Electric Power Components and Systems journal*, TAYLOR & FRANCIS, Vol. 45, No. 7, pp. 752-762, May 2017, ISI.
29. Mohammad Kebriaei, Abbas Ketabi, Abolfazl Halvaei Niasar, A New Resonant Capacitor Diode Voltage Multiplier Topology for Pulsed Power Application, *Journal of Electrical Systems*, Vol. 13, No. 3, pp. 517-527, December 2017, ISI.
30. Sayyed Hossein Edjtahed, AmirHossein PirZadeh, Abolfazl Halvaei Niasar, Dynamic Modeling and Simulation of Short-Duration Over-excitation Phenomenon in Hysteresis Motor, *International Journal of Power Electronics and Drive Systems (IJPEDS)*, Vol. 8, No. 2, pp. 623-638, June 2017, SCOPUS, ISC.
31. Abolfazl Halvaei Niasar, Alireza Faraji, Sensorless Selective Torque Harmonic Elimination Control for a Non-Sinusoidal Permanent Magnet Brushless Motor Using a Full-Order Sliding Mode Observer (in Persian), *Tabriz Journal of Electrical Engineering*, Vol. 47, No. 1, pp. 55-68, Spring 2017, ISC.
32. Saeed Khoobi Arani, Sayyed Hossein Edjtahed, Abolfazl Halvaei Niasar, Energy Management of a Solar Powered Electric Vehicle with Multiple-Energy Storage via Optimized Fuzzy Controller, *Journal of*

Control & Instrumentation, Vol. 7, No. 3, pp. 1-11, 2016.

33. Abolfazl Halvaei Niasar, Torque Ripple Minimization of the Non-Ideal Permanent Magnet Brushless Motors (in Persian), Journal of Electrical Machines, Niroo Research Institute, Vol. 2, No. 4, pp. 59-72, Summer 2017.

34. Mohsen Teimoori, Sayyed Hossein Edjtahed, Abolfazl Halvaei Niasar, Design and Simulation of Z-Source Inverter Fed Brushless DC Motor Drive Supplied With Fuel Cell for Automotive Applications, Journal of Power Electronics & Power Systems, Vol. 6, No. 3, pp. 1-12, 2016.

35. Abolfazl Halvaei Niasar, Marzieh Ahmadi, Sayyed Hossein Edjtahed, Sensorless Control of Non-Sinusoidal Permanent Magnet Brushless Motor Using Selective Torque Harmonic Elimination Control Method Based on Full-Order Sliding Mode Observer, Advances in Power Electronics Journal, Vol. 2016, No. 9358604, pp. 1-13, 2016, SCOPUS.

36. Abolfazl Halvaei Niasar, Amir Naderi Darbaghshahi, Mohsen Shirani, Speed Estimation of High-Speed Hysteresis Motor Based on Extended Kalman Filter, Journal of Power Electronics & Power Systems, Vol. 6, No. 1, pp. 34-44, January 2016.

37. Sayyed Hossein Edjtahed, Saeid Khoobi Arani, Abolfazl Halvaei Niasar, Amin HajiZadeh, Optimal Power Management of an Electric Vehicle with Dual-Energy Sources via Optimized Fuzzy Controller using Genetic Algorithm (in Persian), Journal of Energy Engineering Management, Vol. 6, No. 3, pp. 34-45, Fall 2016, ISC.

38. Mohammad Kebriaei, Abbas Ketabi, and Abolfazl Halvaei Niasar, Pulsed Corona Discharge, a New and Effective Technique for Water and Air Treatment, International Journal on Biological Forum, Vol. 7, No. 1, pp. 1686-1692, 2015, ISI.

39. Abolfazl Halvaei Niasar, Seyed Ali Seyedi Seadati, Optimal Design and Finite Element Analysis of a High Speed, Axial-Flux Permanent Magnet Synchronous Motor, (in Persian), Iranian Journal of Electrical and Computer Engineering (IJECE), Vol. 14, No. 4, pp. 289-297, Winter 2017, SCOPUS, ISC.

40. Abolfazl Halvaei Niasar, Sayyed Hossein Edjtahed, Control of Brushless DC Motor Drives, (in Persian), Journal of Energy, Vol. 59, No. 3, pp. 145-166, Winter 2017, ISC.

41. Abolfazl Halvaei Niasar, Saber Jamshidi far, Ali Reza Faraji, Position Sensorless Direct Power Control of Brushless DC Motor Drive using Unknown Input Speed Observer, Journal of Control & Instrumentation, Vol. 6, No. 3, pp. 31-41, 2015.

42. Abolfazl Halvaei Niasar, Saeid Golabi, Design and Manufacturing of Hybrid Electric Vehicle Pride at University of Kashan (in Persian), Iranian Journal of Energy, Vol. 18, No. 4, pp. 95-114, Winter 2016, ISC.

43. Abolfazl Halvaei Niasar, Review on Analysis, Control, Implementation, and Assessment of Brushless DC Motor Drives, (in Persian), Journal of Energy Engineering Management, Vol. 5, No. 2, pp. 42-51, Summer 2015, ISC.

44. Abolfazl Halvaei Niasar, and Behzad Habibzadeh Khoei, Design and Implementation of Single-Phase, Three-Level, Sub-Harmonic PWM Inverter with Short-Circuit Fault Detection, Journal of Instrumentation Technology & Innovations, Vol. 5, No. 2, pp. 5-13, 2015.

45. Abolfazl Halvaei Niasar, and Hossein Rahimi Khoei, Sensorless Direct Power Control of Induction Motor Drive using Artificial Neural Network, Journal of Advances in Artificial Neural Systems, Vol. 2015, No. 318589, pp. 1-9, 2015.

46. Abolfazl Halvaei Niasar, H. Rahimi Khoei, M. Zolfaghari and H. Moghbeli, Artificial Neural Network based Sensorless Vector Control of Induction Motor Drive, Applied Mechanics and Materials Journal, Vol. 704, pp. 325-328, 2015, SCOPUS.

47. M. Ahmadi, A. Halvaei Niasar, A. Faraji and H. Moghbeli, Design of Robust Nonlinear Optimal Controller for Underwater Vehicle to Move in Depth Channel using Gradient Descent Method with Systematic Step Selection, Applied Mechanics and Materials Journal, Vol. 704, pp. 320-324, 2015, SCOPUS.

48. H. Moghbelli, A. Halvaei Niasar, E. Bolor Kashani, Acoustic Noise Reduction of BLDC Motor Drive using One-Cycle Current Control Strategy, Applied Mechanics and Materials Journal, Vol. 704, pp. 385-389, 2015, SCOPUS.

49. Abolfazl Halvaei Niasar, Dariush Zamani, Power System Stabilizer Design based on Honey-Bee Mating Optimization Algorithm, Trends in Electrical Engineering Journal, Vol. 4, No. 3, pp. 18-25, 2014.
50. M. Ahmadi, A. Faraji, A. Halvaei Niasar, Design of Nonlinear Optimal Controller for Underwater Vehicle to Move in Depth Channel using Gradient Descent Method, (in Persian), Journal of Control, Vol. 8, No. 2, pp. 35-46, Summer 2014, ISC.
51. A. Halvaei Niasar, M. Behzadi Shahrababak, Direct Power Control of Brushless DC Motor Drive, Journal of Power Electronics & Power Systems, Vol. 4, No. 1, pp. 1-12, January 2014.
52. A. Halvaei Niasar, E. Bolor Kashani, Implementation of a Novel Brushless DC Motor Drive based on One-Cycle Control Strategy, Iranian Journal of Electrical and Electronics Engineering (IJEET), Vol. 10, No. 3, pp. 244-249, September 2014, SCOPUS, ISC.
53. N. Fallahi, A. Halvaei Niasar, Intelligent Energy Management Strategy for a Separated-Axle Parallel Hybrid Electric Vehicle, Computational Intelligence in Electrical Engineering, Vol. 4, No. 4, pp. 51-62, Winter 2014, ISC.
54. A. Halvaei Niasar, E. Bolor Kashani, XMEGA-Based Implementation of Four-Switch, Three-Phase Voltage Source Inverter-Fed Induction Motor Drive, International Journal of Power Electronics and Drive Systems (IJPEDS), Vol. 3, No. 2, pp. 218-227, June 2013, SCOPUS, ISC.
55. Abolfazl Halvaei Niasar, Saber Falahati, Control of BLDC Motor by using of FOPID Controller Optimized by Imperialist Competitive Algorithm ICA, (in Persian), Soft Computing Journal, Vol. 2, No. 1, pp. 1-11, Summer 2013, ISC.
56. A. Halvaei Niasar, H. Moghbelli, Conversion of Gasoline Vehicles to CNG Hybrid Vehicles (CNG-Electric Vehicles), Research Journal of Applied Sciences, Engineering and Technology, Vol. 16, No. 13, pp. 2332-2338, August 2013, SCOPUS.
57. Abolfazl Halvaei Niasar, Robert Vartanian, Hassan Moghbelli, Implementation of Solar Cells and Natural Gas Fuel Cells as a Green Hybrid Power Plant, Journal of Alternate Energy Sources & Technologies, Vol. 4, No. 1, pp. 19-26, January 2013.
58. A. Halvaei Niasar, M. Zare, H. Moghbelli, Dynamic Modeling and Simulation of a Super-High Speed Circumferential-Flux Hysteresis Motor, Journal of Engineering, Vol. 2013, No. 898634, pp. 1-7, 2013, ISI, SCOPUS.
59. Mohammad Zare, Abolfazl Halvaei Niasar, A Novel Sensorless Vector Control of High-Speed Hysteresis Motor Drive, Journal of Power Electronics & Power Systems, Vol. 2, No. 3, pp. 1-7, December 2012.
60. S.M. Seyedi, A. Halvaei Niasar, H. Moghbelli, Position Sensorless Direct Torque Control of Brushless DC Motor Drive Using Four-Switch, Three Phase Inverter, International Review on Modelling and Simulations (I.RE.MO.S.), Vol. 5, No. 5, pp. 2036-2041, October 2012, SCOPUS.
61. S. Taravat, A. Halvaei Niasar, A. Rabiee, "Sensorless Vector Control of Single Phase Line Start Permanent Magnet Motors (LSPMs), International Journal of Science and Advanced Technology, Vol. 2, No. 4, pp. 126-131, April 2012.
62. A. Halvaei Niasar, A. Vahedi, H. Moghbelli, Low Cost Sensorless Control of Four-Switch, Brushless DC Motor Drive with Direct Back EMF Detection, Journal of Zhejiang University, Science-A (JZUS), Vol. 10, No. 2, pp. 201-208, February 2009, ISI.
63. A. Halvaei Niasar, A. Vahedi, H. Moghbelli, Design and Implementation of Sensorless Control for Four-Switch, Three-Phase Brushless DC Motor Drive based on DSP Technology, Iranian Journal of Electrical and Computer Engineering (IJECE), Vol. 8, No. 1, pp. 1-8, Winter-Spring 2009, SCOPUS, ISC.
64. A. Halvaei Niasar, A. Vahedi, H. Moghbelli, Sensorless Control of Four-Switch, Brushless DC Motor Drive without Phase Shifter, IEEE Transaction on Power Electronics, Vol. 23, No. 6, pp. 3079-3087, November 2008, ISI.
65. A. Halvaei Niasar, A. Vahedi, H. Moghbelli, A Novel Method for Commutation Torque Ripple Reduction of Four-Switch, Three-Phase Brushless DC Motor Drive, Iranian Journal of Electrical and Electronics Engineering (IJEET), Vol. 3, No. 3, pp. 83-97, July 2007, SCOPUS, ISC.
66. A. Halvaei Niasar, H. Moghbelli, A. Vahedi, High Performance Torque Control of Brushless DC Motor

Drive based on TMS320LF2407 DSP Controller,International Review of Electrical Engineering Journal (IREE),Vol. 2,No. 3,pp. 438-447,May - June 2007,SCOPUS.

67. A. Halvaei Niasar, A. Kazemi, M. Kalantar,Reactive Power Control of a Wind Farm Made up with Doubly Fed Induction Generators using Adaptive Neuro-Fuzzy Inference Systems, (in Persian),International Journal of Engineering Science (IJES),Vol. 16,No. 3,pp. 1-9,Fall 2005,ISC.