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Supervised PhD Theses

#	Thesis title	By	Date
1	Design, Prototyping, and Analysis of a Novel High-Efficiency Brushless Disc Synchronous Machine	Saeid Javadi & Mojtaba Agha-Mirsalim	October 2010

Supervised MSc Theses

#	Thesis title	By	Date
1	Design, simulation and prototyping of hybrid excitation flux-switching P-M Machine with segmental magnets for electric vehicles	Tohid Sharifi & Mojtaba Agha-Mirsalim	October 2021
2	Design, Simulation and, Prototyping of an Improved Wireless Power Transfer for Electrical Vehicles	Behnam Mohamadian Mosamam & Mojtaba Agha-Mirsalim	February 2020
3	ransformer rectifier design ,simulation, and prototyping with a flat power _efficiency curve in wide range of output power	Shokoufeh Valadkhani & Mojtaba Agha-Mirsalim	February 2020
4	Simulation, Implementation and Improved Design of a Brushless PermanentMagnet Linear Synchronous Motor	Saman Ahmadi & Mojtaba Agha-Mirsalim	February 2019
5	Simulation, and Optimization of an E-Core Switched Reluctance Motor for Electric and Hybrid Electric Vehicles applications	Maryam Abdollahi & Mojtaba Agha-Mirsalim	February 2019
6	Design, Simulation ,and Prototyping of an Improved Modular Switched Reluctance Motor (MSRM) for EV Applications	Mohammad Amin Jalali Kondelaji & Mojtaba Agha-Mirsalim	February 2019

7	Design, Finite Element Analysis, and Prototyping of a 100-w Wireless Power Transfer System	Jamshid Kavianpour & Mojtaba Agha-Mirsalim	February 2019
8	Design and Simulation of High Frequency Transformer	Taghi Aghajpour Kouchaksaraei & Mojtaba Agha-Mirsalim	September 2018
9	Design and Prototyping of a Wireless Power Transfer for Electric Vehicles	Navid Rasekh & Mojtaba Agha-Mirsalim	February 2018
10	Design, Simulation and Prototyping a Sensorless Speed Control Drive for Double Stator Brushless DC (BLDC) Motor	Nejat Saed & Mojtaba Agha-Mirsalim	February 2018
11	Modeling, design, optimization and prototyping of a novel hybrid hysteresis motor	Farbod Parvin & Mojtaba Agha-Mirsalim	October 2017
12	low - voltage ride-through characteristic analysis in doubly fed induction generators with superconducting magnetic energy storage	Sayyed Meelad Moosavy Chashmy & Mojtaba Agha-Mirsalim	July 2017
13	Design and analysis of a new type of 2-phase Hybrid Reluctance Motor	Moien Masoumi & Mojtaba Agha-Mirsalim	February 2017
14	"A Study of Possible Rotor Design for Brushless Doubly – Fed (Induction) Machines (BDFMs), Presenting a New Structure and Performing the Required Simulations"	Davood Raeesifar & Mojtaba Agha-Mirsalim	September 2015
15	"Design and prototyping of a novel wound-excitation eddy-current Coupler with Capability of Speed Control"	Sajjad Mohammadiyangjeh & Mojtaba Agha-Mirsalim	February 2014
16	"Design and prototyping of a Self – Starting Two- Phase Switched Reluctance Motor"	Gholamreza Davarpanah & Mojtaba Agha-Mirsalim	February 2014
17	- Dynamic Analysis and Modeling of Linear Eddy Current Brakes for Railway Applications	Marzieh Dordanihaghghi & Mojtaba Agha-Mirsalim	January 2014
18	Modeling and parameter estimation of LV and HV windings of transformers by frequency domain measurements	Masoud Mohammadalizadeh Shabestary & Mojtaba Agha-Mirsalim	December 2013
19	On-line Identification and Estimation of Parameters of Synchronous Generator and Excitation System Using Measurements Data in Smart Grids	Behrooz Zaker & Mojtaba Agha-Mirsalim	September 2013
20	Design and Prototyping a linear Induction Motor	Aliasghar Pourmoosa & Mojtaba Agha-Mirsalim	January 2013
21	Design , evaluation ,and optimization of a new operation method for solar tube utilization ,based on frog leap algorithm ,PSO,or ICA	Omid Rezaee Esfadan & Mojtaba Agha-Mirsalim	December 2012
22	Design and Prototyping of a 2-Phase Switched Reluctance Motor with Different Widths of Stator Poles	Hamed Eskandari & Mojtaba Agha-Mirsalim	October 2012
23	Design, analysis, and prototyping a permanent magnetic coupler	Hamidreza Amini & Mojtaba Agha-Mirsalim	June 2012
24	Design and prototyping a new limited-angle torque motor	Parham Hekmati & Mojtaba Agha-Mirsalim	February 2012
25	Dynamic improvement of fuel cells by using ultra capacitors and replacement of conventional converters with resonance converters	Navid Ghardash Khani & Mojtaba Agha-Mirsalim	September 2011
26	Analysis of Using Super Capacitors in Connecting A Wind Generator to a Power Grid to Improve its Dynamic Response	Saeed Behjoo & Mojtaba Agha-Mirsalim	September 2011

27	Improved modeling of saturation effect in three - phase induction machines by the winding function method	Mehrdad Gholami & Mojtaba Agha-Mirsalim	July 2009
28	A Method for Flicker Severity Evaluation using Discrete Wavelet Transform (DWT)	Ali Mazloomzadeh & Mojtaba Agha-Mirsalim	July 2009
29	Fault Current Limiting in Distribution Systems Considering DG Units	Hamidreza Baghaee Kashi & Mojtaba Agha-Mirsalim	July 2009
30	PERFORMANCE IMPROVEMENT OF DIRECT TORQUE CONTROLLED INDUCTION MOTOR DRIVES BY USING INTELLIGENT ALGORITHMS	Mohammad Mehdi Rezaii Adriami & Mojtaba Agha-Mirsalim	September 2008
31	sensorless control of position and speed for pmsm drives using extended kalman filter sliding mode and adaptive observer	Abbas Abdolmaleki & Mojtaba Agha-Mirsalim	September 2008
32	DYNAMIC MODELING AND SIMULATION OF AN INDUCTION MOTOR IN A TYPICAL HYBRID ELECTRIC VEHICLE	Ehsan Ali Looee Dolat & Mojtaba Agha-Mirsalim	July 2007
33	DESIGN, PROTOTYPING AND ANALYSIS OF A FLUX REVERSAL PERMANENT MAGNET GENERATOR	Hamid Bahrami Abarghoee & Mojtaba Agha-Mirsalim	May 2007

Books

#	Title	Author(s)	Publisher country	publication date	version
Portal Records					
1	Theory, Performance and Applications of Electrical Machinery	Mojtaba Agha-Mirsalim	Iran (Islamic Republic of)	September 2012	1
2	Electrical Machines I, II	Mojtaba Agha-Mirsalim, Reza Pezmanfar	Iran (Islamic Republic of)	May 2012	1
3	Numerical Modeling for Electromagnetic Non-Destructive Evaluation	Hamid Zabet Khososi, Mojtaba Agha-Mirsalim	Iran (Islamic Republic of)	March 2006	0
4	Power electronics for modern wind turbines	Navid Rasekh, Mojtaba Agha-Mirsalim	Iran (Islamic Republic of)	June 2018	1
5	Application of Harmony Search Algorithm in Power Engineering, in Search Algorithms for Engineering Optimization	Hamidreza Baghaee Kashi, Mojtaba Agha-Mirsalim, Gevork B. Gharehpetian	United States	February 2013	1
6	Theory, Performance, and Applications of Electrical Machines Applying MATLAB	Mojtaba Agha-Mirsalim	Iran (Islamic Republic of)	April 2016	1

Journal Papers

Portal Records

- 1 Mohammad Amin Jalali Kondelaji, Ehsan Farmahini Farahani, Mojtaba Agha-Mirsalim, "Teethed-Pole Switched Reluctance Motors Assisted With Permanent Magnets: Analysis and Evaluation", IEEE TRANSACTIONS ON ENERGY CONVERSION, January 2021 Vol. 36, Num. 3, Page 2131-2140, January 2021,
- 2 Ali Akbar Nasiri, Mojtaba Agha-Mirsalim, "Analysis of a reverse hybrid hysteresis motor using hyperbolic modelling of hysteresis loop", IET ELECTRIC POWER APPLICATIONS, February 2020 Vol. 10, Num. 1, Page 1-8, February 2020,
- 3 Ehsan Farmahini Farahani, Mohammad Amin Jalali Kondelaji, Mojtaba Agha-Mirsalim, "A New Exterior-Rotor Multiple Teeth Switched Reluctance Motor With Embedded Permanent Magnets for Torque Enhancement", IEEE TRANSACTIONS ON MAGNETICS, January 2020 Vol. 56, Num. 2, Page 1-5, January 2020,
- 4 Mohammad Amin Jalali Kondelaji, Mojtaba Agha-Mirsalim, "Segmented-Rotor Modular Switched Reluctance Motor with High Torque and Low Torque Ripple", IEEE Transactions on Transportation Electrification, January 2020 Vol. 6, Num. 1, Page 62-72, January 2020,
- 5 Ehsan Farmahini Farahani, Mohammad Amin Jalali Kondelaji, Mojtaba Agha-Mirsalim, "An Innovative Hybrid-Excited Multi-Tooth Switched Reluctance Motor for Torque Enhancement", IEEE TRANSACTIONS ON INDUSTRIAL ELECTRONICS, January 2020 Vol. 68, Num. 2, Page 982-992, January 2020,
- 6 Mohammad Amin Jalali Kondelaji, Mojtaba Agha-Mirsalim, "A Novel Hybrid-Excited Modular Variable Reluctance Motor for Electric Vehicle Applications: Analysis, Comparison, and Implementation", AUT Journal of Electrical Engineering, December 2019 Vol. 51, Num. 1, Page 45-54, December 2019,
- 7 , Mojtaba Agha-Mirsalim, Gevork B. Gharehpetian, Heidar Ali Talebi, "OC/OL Protection of Droop-Controlled and Directly Voltage-Controlled Microgrids Using TMF/ANNBased Fault Detection and Discrimination", IEEE Journal of Emerging and Selected Topics in Power Electronics, December 2019 Vol. 9, Num. 3, Page 3254-3265, December 2019,
- 8 Mohammad Amin Jalali Kondelaji, Ehsan Farmahini Farahani, Mojtaba Agha-Mirsalim, "Performance Analysis of a New Switched Reluctance Motor with Two Sets of Embedded Permanent Magnets", IEEE TRANSACTIONS ON ENERGY CONVERSION, June 2019 Vol. 35, Num. 2, Page 818-827, June 2019,
- 9 Shahin Asgari, Mojtaba Agha-Mirsalim, "A Novel Dual-Stator Radial-Flux Machine With Diametrically Magnetized Cylindrical Permanent Magnets", IEEE TRANSACTIONS ON INDUSTRIAL ELECTRONICS, May 2019 Vol. 66, Num. 5, Page 3605-3614, May 2019,
- 10 Moien Masoumi, Mohammad Amin Jalali Kondelaji, Mojtaba Agha-Mirsalim, Javad Shokrollahi Moghani, "Analytical modelling and experimental verification of E-type reluctance motors", IET ELECTRIC POWER APPLICATIONS, January 2019 Vol. 13, Num. 1, Page 110-118, January 2019,
- 11 Hamidreza Baghaee Kashi, Mojtaba Agha-Mirsalim, Gevork B. Gharehpetian, Heidar Ali Talebi, "Decentralized Sliding Mode Control of WG/PV/FC Microgrids Under Unbalanced and Nonlinear Load Conditions for On- and Off-Grid Modes", IEEE SYSTEMS JOURNAL, November 2018 Vol. 12, Num. 4, Page 3108-3119, November 2018,
- 12 Vahid Aberoumand, Mojtaba Agha-Mirsalim, Rasul Fesharakifard, "Design Optimization of Double-Sided Permanent-Magnet Axial Eddy-Current Couplers for Use in Dynamic Applications", IEEE TRANSACTIONS ON ENERGY CONVERSION, November 2018 Vol. 33, Num. 4, Page 1-12, November 2018,
- 13 Hamidreza Baghaee Kashi, Mojtaba Agha-Mirsalim, Gevork B. Gharehpetian, Heidar Ali Talebi, "Nonlinear Load Sharing and Voltage Compensation of Microgrids Based on Harmonic Power-Flow Calculations Using Radial Basis Function Neural Networks", IEEE SYSTEMS JOURNAL, September 2018 Vol. 12, Num. 3, Page 2749-2759, September 2018,
- 14 Hamidreza Baghaee Kashi, Mojtaba Agha-Mirsalim, Gevork B. Gharehpetian, Heidar Ali Talebi, "A Decentralized Robust Mixed H₂/H_∞ Voltage Control Scheme to Improve Small/Large-Signal Stability and FRT Capability of Islanded Multi-DER Microgrid Considering Load Disturbances", IEEE SYSTEMS JOURNAL, September 2018 Vol. 12, Num. 3, Page 2610-2621, September 2018,
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- 19 Hamidreza Baghaee Kashi, Mojtaba Agha-Mirsalim, Gevork B. Gharehpetian, Heidar Ali Talebi, "Unbalanced harmonic power sharing and voltage compensation of microgrids using radial basis function neural network-based harmonic power-flow calculations for distributed and decentralised control structures", IET GENERATION TRANSMISSION & DISTRIBUTION, April 2018 Vol. 12, Num. 7, Page 1518-1530, April 2018,
- 20 Hamidreza Baghaee Kashi, Mojtaba Agha-Mirsalim, Gevork B. Gharehpetian, "Performance Improvement of Multi-DER Microgrid for Small- and Large-Signal Disturbances and Nonlinear Loads: Novel Complementary Control Loop and Fuzzy Controller in a Hierarchical Droop-Based Control Scheme", IEEE SYSTEMS JOURNAL, March 2018 Vol. 12, Num. 1, Page 444-451, March 2018,
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- 25 Abdolaziz Ashrafian, Mojtaba Agha-Mirsalim, Mohammad Masoum, "Application of a Recursive Phasor Estimation Method for Adaptive Fault Component Based Differential Protection of Power Transformers", IEEE TRANSACTIONS ON INDUSTRIAL INFORMATICS, June 2017 Vol. 13, Num. 3, Page 1381-1392, June 2017,
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- 81 Behrang Yousef Pour, Mojtaba Agha-Mirsalim, Mahmoud Hoseiny, Mehei Nafar, "A new model for order reduction in induction motors based on wavelet " , , March 2004
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- 99 Mojtaba Agha-Mirsalim, Aref Doroudi, Javad Shokrollahi Moghani, "A New Modified Model for Linear Induction Motors ", , January 2000
- 100 Mohammad Bagher Menhaj, Mojtaba Agha-Mirsalim, Aref Doroudi, "simulation of fuzzy and neural network controllers for stabilizing synchronous machins ", , November 1995
- 101 Mojtaba Agha-Mirsalim, "Modeling and adaptive control of a permanent DC motor with nonlinear load using feedback linea rization ", , January 1995
- 102 Mojtaba Agha-Mirsalim, Bahram Hooshanfar, "Simulation of Double - Cage Induction Motors Using Discrete Time Equation ", , November 1993
- 103 Bahram Hooshanfar, Mojtaba Agha-Mirsalim, "Determination of the Two Layer Soil Model parameters ", , November 1993
- 104 Mojtaba Agha-Mirsalim, Seyed Ali Gorji Zadeh, "A Software Package for Computer Simulation of the steady - state Characteristics of Electrical Machines ", , May 1993
- 105 Mojtaba Agha-Mirsalim, Ali Fallahi, "A Novel Software package for Computer Simulation and Operation of the Position Control system of a DC Motor ", , May 1993
- 106 Mojtaba Agha-Mirsalim, Said Manshaie, "Computer Aided Optimum Design of Transformers ", , November 1992
- 107 Mojtaba Agha-Mirsalim, Jalal Nazarzadeh, "Single - Phase Operation of a Three- Phase Induction Motor ", , May 1992
- 108 Mojtaba Agha-Mirsalim, Afshin Meshkat- Dini, "A Novel Method of Determining Magnetic Characteristic of power Transformers ", , November 1991

Taught Courses

#	Course title	Description	Headlines	Date
1	Electrical Machines (II)	The chief objective of Energy Conversion courses continues to be to build a strong foundation in the basic principles of Electro-Mechanics and Electric Machinery. The emphasis of the courses has been on both physical and analytical techniques.		Fall 2021
2	Design of Transformers & Electrical Machines	Design of Electrical Machines and Transformers		Spring 2021

3	Electrical Machines (II)	The chief objective of Energy Conversion courses continues to be to build a strong foundation in the basic principles of Electro-Mechanics and Electric Machinery. The emphasis of the courses has been on both physical and analytical techniques.	Spring 2021
4	Electrical Machines (II)	The chief objective of Energy Conversion courses continues to be to build a strong foundation in the basic principles of Electro-Mechanics and Electric Machinery. The emphasis of the courses has been on both physical and analytical techniques.	Fall 2020

Inventions/Patents

#	Invention title	Reg. number	Country	contributors	Reg. date	Exp. date
1	A new E-core hybrid reluctance motor (HRM)	94635			2018/01/1	2037/03/1
2	High-torque, low-noise, low-vibration, two-stator PM brushless motor	88438			2016/04/1	2035/07/1
3	Self-Excited Hybrid Electromagnetic Brake	9401529			2015/07/1	-
4	A Modified Axial-Flux Permanent Magnet Machine with Slotless Double-Sided Trapezoidal Winding Stator	83736			2014/09/1	2034/06/1
5	Self-Excited Hybrid Electromagnetic Brake	83000			2014/06/1	2033/03/1
6	An Interior magnet, eddy current touch-less low-vibration coupler for wind turbines, pumps, and hazardous materials	81504			2013/12/1	2033/12/1
7	Design, simulation and prototyping a self-start slotted solid-rotor PM machine to improve the synchronization capability	80090			2013/07/1	2033/07/1
8	Linear Induction Motor with Toroidal Winding	79686			2013/06/1	2033/03/1
9	Novel limited angle-controlled axial-flux high-density torque actuator with distributed winding and trapezoidal cross-section of stator	76211			2012/07/1	2032/05/1
10	Design of an LSPM using number of pole reduction at start-up	68390			2011/01/1	-
11	A 42-Volt Double-Layer Coreless Axial-Flux PM Generator for Hybrid Vehicles	62574			2009/12/1	-
12	Core-less Axial-Flux PM Generator for Vehicle Applications	59877			2009/07/1	-
13	Flux Switching Motor with Helical Winding	59812			2009/06/1	-
14	Three-Phase Axial-Flux Disk PM Generator with Core-less Stator	38690			2007/01/1	2026/12/1
15	High-Speed Double Salient PM Generator	37857			2006/12/1	2026/12/1