

Berker Bilgin

List of Publications by Year in descending order

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118
papers

3,606
citations

172207

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161609

54
g-index

119
all docs

119
docs citations

119
times ranked

2162
citing authors

#	ARTICLE	IF	CITATIONS
1	Making the Case for Electrified Transportation. IEEE Transactions on Transportation Electrification, 2015, 1, 4-17.	5.3	328
2	An Extended-Speed Low-Ripple Torque Control of Switched Reluctance Motor Drives. IEEE Transactions on Power Electronics, 2015, 30, 1457-1470.	5.4	218
3	An Offline Torque Sharing Function for Torque Ripple Reduction in Switched Reluctance Motor Drives. IEEE Transactions on Energy Conversion, 2015, 30, 726-735.	3.7	217
4	Design and Comparison of Interior Permanent Magnet Motor Topologies for Traction Applications. IEEE Transactions on Transportation Electrification, 2017, 3, 86-97.	5.3	193
5	An Improved Torque Sharing Function for Torque Ripple Reduction in Switched Reluctance Machines. IEEE Transactions on Power Electronics, 2019, 34, 1635-1644.	5.4	156
6	Design Considerations for Switched Reluctance Machines With a Higher Number of Rotor Poles. IEEE Transactions on Industrial Electronics, 2012, 59, 3745-3756.	5.2	155
7	800-V Electric Vehicle Powertrains: Review and Analysis of Benefits, Challenges, and Future Trends. IEEE Transactions on Transportation Electrification, 2021, 7, 927-948.	5.3	139
8	Comprehensive Evaluation of the Dynamic Performance of a 6/10 SRM for Traction Application in PHEVs. IEEE Transactions on Industrial Electronics, 2013, 60, 2564-2575.	5.2	133
9	Thermal management of electric machines. IET Electrical Systems in Transportation, 2017, 7, 104-116.	1.5	94
10	Electric Motors in Electrified Transportation: A step toward achieving a sustainable and highly efficient transportation system. IEEE Power Electronics Magazine, 2014, 1, 10-17.	0.6	86
11	Three-Phase 24/16 Switched Reluctance Machine for a Hybrid Electric Powertrain. IEEE Transactions on Transportation Electrification, 2017, 3, 76-85.	5.3	83
12	Bus Bar Design for High-Power Inverters. IEEE Transactions on Power Electronics, 2018, 33, 2354-2367.	5.4	82
13	Modeling and Analysis of Electric Motors: State-of-the-Art Review. IEEE Transactions on Transportation Electrification, 2019, 5, 602-617.	5.3	77
14	Making the Case for Switched Reluctance Motors for Propulsion Applications. IEEE Transactions on Vehicular Technology, 2020, 69, 7172-7186.	3.9	74
15	Loss and Efficiency Analysis of Switched Reluctance Machines Using a New Calculation Method. IEEE Transactions on Industrial Electronics, 2015, 62, 3072-3080.	5.2	73
16	Acoustic Noise Analysis of a High-Speed High-Power Switched Reluctance Machine: Frame Effects. IEEE Transactions on Energy Conversion, 2016, 31, 69-77.	3.7	62
17	Radial Force Shaping for Acoustic Noise Reduction in Switched Reluctance Machines. IEEE Transactions on Power Electronics, 2019, 34, 9866-9878.	5.4	62
18	Speed Range Extended Maximum Torque Per Ampere Control for PM Drives Considering Inverter and Motor Nonlinearities. IEEE Transactions on Power Electronics, 2017, 32, 7151-7159.	5.4	59

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19	A New Torque Sharing Function Method for Switched Reluctance Machines With Lower Current Tracking Error. IEEE Transactions on Industrial Electronics, 2021, 68, 10612-10622.	5.2	57
20	Elimination of Mutual Flux Effect on Rotor Position Estimation of Switched Reluctance Motor Drives. IEEE Transactions on Power Electronics, 2015, 30, 1499-1512.	5.4	50
21	Radial Force Density Analysis of Switched Reluctance Machines: The Source of Acoustic Noise. IEEE Transactions on Transportation Electrification, 2019, 5, 93-106.	5.3	42
22	A Review of Shaft Voltages and Bearing Currents in EV and HEV Motors. , 2016, , .		41
23	A topological evaluation of isolated DC/DC converters for Auxiliary Power Modules in Electrified Vehicle applications. , 2015, , .		40
24	Elimination of Mutual Flux Effect on Rotor Position Estimation of Switched Reluctance Motor Drives Considering Magnetic Saturation. IEEE Transactions on Power Electronics, 2015, 30, 532-536.	5.4	39
25	Rotor skew pattern design and optimisation for cogging torque reduction. IET Electrical Systems in Transportation, 2016, 6, 126-135.	1.5	38
26	Mutually Coupled Switched Reluctance Motor: Fundamentals, Control, Modeling, State of the Art Review and Future Trends. IEEE Access, 2019, 7, 100099-100112.	2.6	37
27	A Review of Structural and Thermal Analysis of Traction Motors. IEEE Transactions on Transportation Electrification, 2015, 1, 255-265.	5.3	36
28	A Comprehensive Analysis for High-Power Density, High-Efficiency 60 kW Interleaved Boost Converter Design for Electrified Powertrains. IEEE Transactions on Vehicular Technology, 2020, 69, 7131-7145.	3.9	36
29	Design of an External-Rotor Direct Drive E-Bike Switched Reluctance Motor. IEEE Transactions on Vehicular Technology, 2020, 69, 2552-2562.	3.9	36
30	Hybrid Acoustic Noise Analysis Approach of Conventional and Mutually Coupled Switched Reluctance Motors. IEEE Transactions on Energy Conversion, 2017, 32, 1042-1051.	3.7	35
31	Estimating switching losses for SiC MOSFETs with non-flat miller plateau region. , 2017, , .		33
32	A Comprehensive Review of Flux Barriers in Interior Permanent Magnet Synchronous Machines. IEEE Access, 2019, 7, 149168-149181.	2.6	33
33	Modeling of Conducted Emissions for EMI Analysis of Power Converters: State-of-the-Art Review. IEEE Access, 2020, 8, 189313-189325.	2.6	33
34	Design considerations for a universal input battery charger circuit for PHEV applications. , 2010, , .		30
35	Radial forces and vibration analysis in an externalâ€rotor switched reluctance machine. IET Electric Power Applications, 2017, 11, 252-259.	1.1	29
36	Design optimization of switched reluctance machine using genetic algorithm. , 2015, , .		28

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37	Development of an External Rotor V-Shape Permanent Magnet Machine for E-Bike Application. IEEE Transactions on Energy Conversion, 2018, 33, 1650-1658.	3.7	28
38	Enhancement of electric motor thermal management through axial cooling methods: A materials approach. , 2015, , .		27
39	Analysis of unbalanced magnetic pull in eccentric interior permanent magnet machines with series and parallel windings. IET Electric Power Applications, 2016, 10, 526-538.	1.1	24
40	Advanced Dynamic Modeling of Three-Phase Mutually Coupled Switched Reluctance Machine. IEEE Transactions on Energy Conversion, 2018, 33, 146-154.	3.7	24
41	State-of-the-art high-speed switched reluctance machines. , 2015, , .		22
42	A Finite Control Set Model Predictive Torque Control for Switched Reluctance Motor Drives with Adaptive Turn-off Angle. , 2019, , .		22
43	Universal input battery charger circuit for PHEV applications with simplified controller. , 2011, , .		21
44	Global loss minimization control of PMSM considering cross-coupling and saturation. , 2015, , .		19
45	Investigation and design of an axial flux permanent magnet machine for a commercial midsize aircraft electric taxiing system. IET Electrical Systems in Transportation, 2018, 8, 52-60.	1.5	17
46	Transient electro-thermal analysis for a MOSFET based traction inverter. , 2014, , .		16
47	Laminated busbar design criteria in power converters for electrified powertrain applications. , 2014, , .		15
48	Electromagnetic Modeling Techniques for Switched Reluctance Machines: State-of-the-Art Review. IEEE Open Journal of the Industrial Electronics Society, 2020, 1, 218-234.	4.8	15
49	External-Rotor Switched Reluctance Motor for Direct-Drive Home Appliances. , 2018, , .		14
50	Source of Acoustic Noise in a 12/16 External-Rotor Switched Reluctance Motor: Stator Tangential Vibration and Rotor Radial Vibration. IEEE Open Journal of Industry Applications, 2020, 1, 63-73.	4.8	14
51	Closed loop control of a six phase interleaved bidirectional dc-dc boost converter for an EV/HEV application. , 2016, , .		12
52	Comprehensive Analysis and Optimized Control of Torque Ripple and Power Factor in a Three-Phase Mutually Coupled Switched Reluctance Motor With Sinusoidal Current Excitation. IEEE Transactions on Power Electronics, 2021, 36, 7150-7164.	5.4	12
53	A comprehensive evaluation of bidirectional boost converter topologies for electrified vehicle applications. , 2014, , .		11
54	Fundamentals of Electric Machines. Energy, Power Electronics, and Machines Series, 2014, , 107-186.	1.0	11

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55	Investigation of impact of number of phases in interleaved dc-dc boost converter. , 2015, , .		11
56	Prediction of acoustic noise and vibration of a 24/16 traction switched reluctance machine. IET Electrical Systems in Transportation, 2020, 10, 35-43.	1.5	10
57	An Online Torque Sharing Function Method Involving Current Dynamics for Switched Reluctance Motor Drives. IEEE Transactions on Transportation Electrification, 2023, 9, 534-548.	5.3	10
58	Comparative evaluation of 6/8 and 6/10 switched reluctance machines for traction application in Plug-in Hybrid Electric Vehicles. , 2011, , .		9
59	An investigation of slot-pole combinations for interior permanent magnet synchronous machines with different magnet topologies. , 2017, , .		9
60	A Comprehensive Analysis of the Acoustic Noise in an Interior Permanent Magnet Traction Motor. , 2019, , .		9
61	Time-Efficient Integrated Electrothermal Model for a 60-kW Three-Phase Bidirectional Synchronous DCâ€“DC Converter. IEEE Transactions on Industry Applications, 2020, 56, 654-668.	3.3	9
62	Design of a mutually coupled externalâ€“rotor direct drive Eâ€“bike switched reluctance motor. IET Electrical Systems in Transportation, 2020, 10, 89-95.	1.5	9
63	Design considerations for switched reluctance machines with higher number of rotor poles for solar-assisted plug-in electric auto rickshaw. , 2010, , .		8
64	Performance evaluation of a high-speed high-power switched reluctance motor drive. , 2015, , .		8
65	Inductor design for multiphase bidirectional DC-DC boost converter for an EV/HEV application. , 2017, , .		8
66	A Multi-objective Optimization Framework for the Design of a High Power-Density Switched Reluctance Motor. , 2022, , .		8
67	An FEA/MATLAB based machine design tool for switched reluctance motors. , 2011, , .		7
68	Maximizing thermal effectiveness and minimizing parasitic loss in a liquid cooled switched reluctance machine. , 2016, , .		7
69	Noise and vibration reduction for IPMSM by using rotor circumferential slits. , 2017, , .		7
70	Shaft Design for Electric Traction Motors. IEEE Transactions on Transportation Electrification, 2018, 4, 720-731.	5.3	7
71	Comparison of Current Control Strategies for Low- and High-Power Switched Reluctance Motor Drives. , 2020, , .		7
72	A Novel Three-Dimensional Analytical Approach for Acoustic Noise Modeling in Switched Reluctance Machines. IEEE Transactions on Energy Conversion, 2021, 36, 2099-2109.	3.7	7

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73	Electric Motor Industry and Switched Reluctance Machines. , 2019, , 1-33.		7
74	A novel axial flux switched reluctance motor with multi-level air gap geometry. , 2016, , .		6
75	Design considerations of switched reluctance machines with high power density. , 2016, , .		6
76	Optimisationâ€based procedure for characterising switched reluctance motors. IET Electric Power Applications, 2017, 11, 1366-1375.	1.1	6
77	Thermal trade-off analysis of an exterior rotor e-bike switched reluctance motor. , 2017, , .		6
78	Adjoint Sensitivity Analysis of Switched Reluctance Motors. Electric Power Components and Systems, 2018, 46, 1959-1968.	1.0	6
79	Design of Unskewed Interior Permanent Magnet Traction Motor with Asymmetric Flux Barriers and Shifted Magnets for Electric Vehicles. Electric Power Components and Systems, 2020, 48, 652-666.	1.0	6
80	An optimization Study for a Switched Reluctance Motor using Magnetic Equivalent Circuit and Space Mapping Techniques. , 2020, , .		6
81	Analytical Calculation of Temporal and Circumferential Orders of Radial Force Density Harmonics in External-Rotor and Internal-Rotor Switched Reluctance Machines. IEEE Open Journal of Industry Applications, 2021, 2, 70-81.	4.8	6
82	Design of Multilayer Concentric Ferrite-Magnet Machines for a Traction Application. IEEE Transactions on Transportation Electrification, 2021, 7, 1548-1560.	5.3	6
83	Dynamic analysis of the interaction between an Interleaved Boost Converter with Coupled Inductor and a Constant Power Load. , 2014, , .		5
84	A MATLAB Toolbox for Adjoint-Based Sensitivity Analysis of Switched Reluctance Motors. , 2018, , .		5
85	Adjoint-Based Design Optimization of Nonlinear Switched Reluctance Motors. Electric Power Components and Systems, 2019, 47, 1705-1716.	1.0	5
86	Dynamic Vector Modeling of Three-Phase Mutually Coupled Switched Reluctance Machines with Single dq-Quadrant Look-up Tables. IEEE Open Journal of the Industrial Electronics Society, 2020, , 1-1.	4.8	5
87	Dynamic Modeling of an Interior Permanent Magnet Machine with Space-Vector-Modulation-Based Voltage Source Inverter. , 0, , .		5
88	Switched reluctance generator with higher number of rotor poles than stator poles. , 2012, , .		4
89	Reduced-parts three-phase inverters: A comparative study. , 2012, , .		4
90	Modeling and analysis of AC resistance of a permanent magnet machine for online estimation purposes. , 2015, , .		4

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91	Modeling and analysis of core losses of an IPM machine for online estimation purposes. , 2015, , .		4
92	Thermal analysis of a three-phase 24/16 switched reluctance machine used in HEVs. , 2016, , .		4
93	Design of a Switched Reluctance Motor for a Pump Jack Application. , 2018, , .		4
94	Design of a Spoke-Type Ferrite Magnet Generator for a Hybrid Electric Vehicle Application. , 2019, , .		4
95	Junction Temperature Estimation Based on Updating RC Network for Different Liquid Cooling Conditions. , 2019, , .		4
96	Torque Ripple Reduction for Interior Permanent Magnet Synchronous Machines under Load Excitation by Optimizing Rotor Skew Angles. , 2019, , .		4
97	Gradient-Based Design Optimization of a Switched Reluctance Motor for an HVAC Application. , 2020, , .		4
98	Study on the Effect of Dynamic Eccentricity on Acoustic Noise of an Interior Permanent Magnet Traction Motor. , 2020, , .		4
99	Fatigue Life Calculation and Mitigation of Bridge Stresses in the Rotor Core of a Delta-Shape Interior Permanent Magnet Motor. , 2021, , .		4
100	Comparative Analysis of Two Rotor Topologies for a High-Power Density Dual Three-Phase IPM Propulsion Motor. , 2021, , .		4
101	Reluctance Mesh-Based Magnetic Equivalent Circuit Modeling of Switched Reluctance Motors for Static and Dynamic Analysis. IEEE Transactions on Transportation Electrification, 2022, 8, 2164-2176.	5.3	4
102	Switched Reluctance Motor Design for an EV Propulsion Application. , 2021, , .		4
103	Geometric Optimization of Switched Reluctance Motors Using an Invasive Weed Method. , 2018, , .		3
104	Power Inductor Optimization Using Non-linear Magnetization Characteristics. , 2020, , .		3
105	Analytical EMI Modeling of an Active Neutral Point Clamped Inverter. , 2021, , .		3
106	Comparative evaluation of power converters for 6/4 and 6/10 switched reluctance machines. , 2012, , .		2
107	Reluctance Mesh-Based Modeling of Switched Reluctance Machines. , 2021, , .		2
108	Axial-Flux Switched Reluctance Motor Design for a Light Electric Vehicle Application. , 2022, , .		2

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109	A simple control scheme for active power filtering in ultracapacitor assisted plug-in hybrid electric vehicles. , 2012, , .		1
110	A reduced-order model based induction machine self-commissioning method. , 2015, , .		1
111	Effects of Current Excitation on Nodal Forces in Switched Reluctance Motors. , 2018, , .		1
112	A Truncated Fourier Based Analytical Model for SRMs with Higher Number of Rotor Poles. , 2020, , .		1
113	Integrated Busbar Design for Stray Inductance and Volume Reduction in a High-Power SiC Traction Inverter. , 0, , .		1
114	Radial Force Density Calculation of Switched Reluctance Machines Using Reluctance Mesh-Based Magnetic Equivalent Circuit. IEEE Open Journal of the Industrial Electronics Society, 2022, 3, 37-49.	4.8	1
115	An REU project on the design of a brushless DC machine for plug-in hybrid electric vehicles. , 2011, , .		0
116	Design of a Compact Thermal Management System for a High-Power Silicon Carbide Traction Inverter. , 0, , .		0
117	Switched Reluctance Machines in Generating Mode. , 2019, , 183-195.		0
118	Frequency-Band Analysis for Acoustic Noise Characterization of an Interior Permanent Magnet Motor. , 2021, , .		0