

# Rukmi Dutta

## List of Publications by Year in descending order

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104  
papers

1,201  
citations

516215

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552369

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106  
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106  
docs citations

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times ranked

1059  
citing authors

#	ARTICLE	IF	CITATIONS
1	A Comparative Analysis of Two Test Methods of Measuring $d$ - and $q$ -Axes Inductances of Interior Permanent-Magnet Machine. IEEE Transactions on Magnetics, 2006, 42, 3712-3718.	1.2	125
2	Design and Analysis of an Interior Permanent Magnet (IPM) Machine With Very Wide Constant Power Operation Range. IEEE Transactions on Energy Conversion, 2008, 23, 25-33.	3.7	121
3	Design and Experimental Verification of an 18-Slot/14-pole Fractional-Slot Concentrated Winding Interior Permanent Magnet Machine. IEEE Transactions on Energy Conversion, 2013, 28, 181-190.	3.7	97
4	Winding Inductances of an Interior Permanent Magnet (IPM) Machine With Fractional Slot Concentrated Winding. IEEE Transactions on Magnetics, 2012, 48, 4842-4849.	1.2	65
5	Planar polymer electrolyte membrane fuel cells: powering portable devices from hydrogen. Sustainable Energy and Fuels, 2020, 4, 439-468.	2.5	42
6	Direct torque and flux control of interior permanent magnet synchronous machine in deep flux-weakening region. IET Electric Power Applications, 2018, 12, 98-105.	1.1	36
7	Performance of a Sensorless Controlled Concentrated-Wound Interior Permanent-Magnet Synchronous Machine at Low and Zero Speed. IEEE Transactions on Industrial Electronics, 2016, 63, 2016-2026.	5.2	35
8	Lifetime Cost Assessment of Permanent Magnet Synchronous Generators for MW Level Wind Turbines. IEEE Transactions on Sustainable Energy, 2014, 5, 10-17.	5.9	34
9	Space Vector PWM Techniques for Three-to-Five-Phase Indirect Matrix Converter in the Overmodulation Region. IEEE Transactions on Industrial Electronics, 2016, 63, 550-561.	5.2	32
10	Analytical Modeling of Armature Reaction Air-Gap Flux Density Considering the Non-Homogeneously Saturated Rotor in a Fractional-Slot Concentrated-Wound IPM Machine. IEEE Transactions on Magnetics, 2017, 53, 1-12.	1.2	31
11	Design of Optimal Winding Configurations for Symmetrical Multiphase Concentrated-Wound Surface-Mount PMSMs to Achieve Maximum Torque Density Under Current Harmonic Injection. IEEE Transactions on Industrial Electronics, 2018, 65, 1751-1761.	5.2	31
12	Analysis of Low-Speed IPMMs With Distributed and Fractional Slot Concentrated Windings for Wind Energy Applications. IEEE Transactions on Magnetics, 2017, 53, 1-10.	1.2	27
13	Analysis of MMF and back-EMF waveforms for fractional-slot concentrated-wound permanent magnet machines. , 2014, , .		24
14	Deep flux weakening control of a segmented interior permanent magnet synchronous motor with maximum torque per voltage control. , 2015, , .		22
15	Detailed Analytical Modeling of Fractional-Slot Concentrated-Wound Interior Permanent Magnet Machines for Prediction of Torque Ripple. IEEE Transactions on Industry Applications, 2017, 53, 5272-5283.	3.3	22
16	ANALYSIS AND EXPERIMENTAL VERIFICATION OF LOSSES IN A CONCENTRATED WOUND INTERIOR PERMANENT MAGNET MACHINE. Progress in Electromagnetics Research B, 2013, 48, 221-248.	0.7	21
17	Cascaded Predictive Flux Control for a 3-L Active NPC Fed IM Drives Without Weighting Factor. IEEE Transactions on Energy Conversion, 2021, 36, 1797-1807.	3.7	17
18	Cogging Torque Analysis of a Segmented Interior Permanent Magnet Machine. , 2007, , .		16

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19	Comparative performance analysis of field-oriented control and direct torque control for a fractional-slot concentrated winding interior permanent magnet synchronous machine. , 2012, , .		16
20	Analytical Calculation of Maximum Mechanical Stress on the Rotor of Interior Permanent-Magnet Synchronous Machines. IEEE Transactions on Industry Applications, 2020, 56, 1321-1331.	3.3	16
21	A Novel Rotor Topology for High-Performance Fractional Slot Concentrated Winding Interior Permanent Magnet Machine. IEEE Transactions on Energy Conversion, 2021, 36, 658-670.	3.7	16
22	Application of partial direct-pole-placement and differential evolution algorithm to optimize controller and LCL filter design for grid-tied inverter. , 2014, , .		15
23	Field weakening performance of a concentrated wound PM machine with rotor and magnet geometry variation. , 2010, , .		14
24	A preliminary study of the effect of saturation and cross-magnetization on the inductances of a fractional-slot concentrated-wound interior PM synchronous machine. , 2015, , .		14
25	A Segmented Magnet Interior Permanent Magnet Machine with Wide Constant Power Range for Traction Application in Hybrid Vehicles. , 0, , .		13
26	Application of concentrated windings in interior permanent magnet machine. , 2007, , .		12
27	Design Optimization of a Spoke-Type FSCW IPM Machine to Achieve Low Torque Ripple and High Torque Density Under a Wide Constant Power Speed Range. , 2018, , .		11
28	Torque ripple minimization in dual inverter open-end winding PMSM drives with non-sinusoidal back-EMFs by harmonic current suppression. , 2016, , .		10
29	Performances of a Fractional-Slot Concentrated-Winding Permanent Magnet Synchronous Machine Under Position Sensorless Control in Deep Flux-Weakening Region. IEEE Transactions on Industry Applications, 2019, 55, 5938-5946.	3.3	10
30	Design of a highly efficient 1kW concentric wound IPM machine with a very wide constant power speed range. , 2010, , .		9
31	Distributed and concentrated winding Interior PM Synchronous Machine (IPMSM) for direct drive wind turbine. , 2013, , .		9
32	Inductances of a fractional-slot concentrated-winding interior PM synchronous machine considering effects of saturation and cross magnetization. , 2015, , .		9
33	Analytical Calculation of Maximum Mechanical Stress on the Rotor of the Interior Permanent-Magnet Synchronous Machine. , 2018, , .		9
34	Flux density analysis of using Halbach array in MW level permanent magnet synchronous generators for wind turbines: A preliminary linear model. , 2012, , .		8
35	A Standstill Method to Measure Electromagnetically Induced Torque Ripple of Permanent Magnet Synchronous Machines. IEEE Transactions on Instrumentation and Measurement, 2020, 69, 7627-7635.	2.4	8
36	Deep flux weakening control with six-step overmodulation for a segmented interior permanent magnet synchronous motor. , 2017, , .		7

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37	Analysis of Torque Ripple of a Spoke-Type Interior Permanent Magnet Machine. <i>Energies</i> , 2020, 13, 2886.	1.6	7
38	A new rotor design of interior permanent magnet machine suitable for wide speed range. , 0, , .		6
39	Operation along the maximum torque per voltage trajectory in a direct torque and flux controlled interior permanent magnet synchronous motor. , 2016, , .		6
40	Preliminary study on differences in the performance characteristics of concentrated and distributed winding IPM machines with different rotor topologies. , 2017, , .		6
41	Analysis of low-speed IPMMs with distributed and fractional slot concentrated windings designed for wind energy applications. , 2017, , .		6
42	A New Mechanical-Strength-Oriented Rotor Parametric Model Design for the Optimization of a Very-High-Speed IPMSM. , 2019, , .		6
43	Experimental verification of core and magnet losses in a concentrated wound IPM machine with V-shaped magnets used in field weakening applications. , 2011, , .		5
44	Space vector PWM for three-to-five phase indirect matrix converters with $d$ and $q$ vector elimination. , 2013, , .		5
45	Investigation of flat and V-shaped magnets in interior permanent magnet machine for direct drive wind turbine application. , 2013, , .		5
46	Performance analysis of a new concentrated winding interior permanent magnet synchronous machine under Field Oriented Control. , 2014, , .		5
47	Closed-loop control strategy for PM machines with non-sinusoidal back-EMFs using dual-inverter open-end winding. , 2015, , .		5
48	Optimization of a MW Halbach PMSG for wind turbine applications. , 2016, , .		5
49	Direct torque and flux control of a fractional-slot concentrated-winding IPMSM in deep flux-weakening region. , 2017, , .		5
50	Study on PCB Based Litz Wire Applications for Air-Core Inductor and Planar Transformer. , 2019, , .		5
51	An investigation of a segmented rotor interior permanent magnet (IPM) machine for field weakening. , 0, , .		4
52	Design and Analysis of an Interior Permanent Magnet (IPM) Machine with Very Wide Constant Power Operation Range. <i>Industrial Electronics Society (IECON)</i> , Annual Conference of IEEE, 2006, , .	0.0	4
53	Analysis of Cogging Torque and its Effect on Direct Torque Control (DTC) in a Segmented Interior Permanent Magnet Machine. , 2007, , .		4
54	An investigation of the use of a Halbach array in MW level permanent magnet synchronous generators. , 2012, , .		4

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55	Sensorless direct torque control of a fractional-slot concentrated winding interior permanent magnet synchronous machine using extended rotor flux model. , 2012, , .		4
56	Design of an Interior Permanent Magnet Synchronous Machine suitable for Direct Drive Wind Turbine. , 2013, , .		4
57	Investigating characteristics of a concentrated-winding interior permanent magnet synchronous machine for sensorless direct torque control. , 2013, , .		4
58	Analysis of common mode voltage using carrier-based method for dual-inverter open-end winding. , 2014, , .		4
59	COGGING TORQUE AND TORQUE RIPPLE IN A DIRECT-DRIVE INTERIOR PERMANENT MAGNET GENERATOR. Progress in Electromagnetics Research B, 2016, 70, 73-85.	0.7	4
60	Investigation of the Stress Concentration Factor for Estimating Maximum Mechanical Stress of Interior Permanent-Magnet Machines. , 2018, , .		4
61	Analytical Calculation of the Mechanical Stress on IPMSM Bridges with Decomposition of the Centrifugal Force. , 2021, , .		4
62	Comparative Analysis of Different Halbach Array Structures in the Design Optimization of an In-wheel Permanent Magnet Machine for Land Speed Racing. , 2020, , .		4
63	Analysis and Comparison of Methods for Determining d- and q-axes Inductances of IPM Machines. , 2005, , .		3
64	Comparison of Core Loss Prediction Methods for the Interior Permanent Magnet Machine. , 0, , .		3
65	Experimental verification of open circuit parameters of an IPM machine with concentrated windings. , 2011, , .		3
66	Analysis of CPSR in motoring and generating modes of an IPM motor. , 2011, , .		3
67	Performance comparison between concentrated and distributed wound IPM machines used for field weakening applications. , 2011, , .		3
68	The preliminary results on Direct Torque Control for an fractional-slot concentrated winding Interior Permanent Magnet Synchronous Machine. , 2012, , .		3
69	Application of particle swarm optimization in the design of large permanent magnet synchronous generators for wind turbines. , 2012, , .		3
70	Control Strategy of Post-fault Operation in Dual Inverter-fed, PMSM considering Zero Sequence and Back-emf Harmonic. , 2016, , .		3
71	Development of a cost-effective circuit hardware architecture for brushless direct current motor driver. International Journal of Circuit Theory and Applications, 2021, 49, 2183-2198.	1.3	3
72	Reduced-Sensors-Based Predictive Controller for LC Filtered Four-Leg Inverters. IEEE Open Journal of Industry Applications, 2021, 2, 301-309.	4.8	3

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73	Open circuit analysis of concentrated winding in interior permanent magnet machines with fractional slot distribution. , 2008, , .		2
74	Application of Concentrated Windings in the Interior Permanent Magnet Machine. Australian Journal of Electrical and Electronics Engineering, 2008, 5, 229-236.	0.7	2
75	Design and thermal considerations of an interior permanent magnet machine with concentrated windings. , 2009, , .		2
76	Investigation of sensorless direct torque control using high frequency injection apply to a fractional-slot concentrated winding interior PMSM. , 2013, , .		2
77	Overmodulation techniques for the three-to-five phase indirect matrix converter with space vector PWM. , 2014, , .		2
78	Efficiency analysis of a 42- pole/54-slot fractional-slot concentrated-wound interior permanent magnet synchronous machine. , 2015, , .		2
79	Detailed analytical modelling of fractional-slot concentrated-wound interior permanent magnet machines for prediction of torque ripple. , 2016, , .		2
80	A modified single-current-regulator control scheme for deep flux-weakening operation of interior permanent magnet synchronous motors. , 2016, , .		2
81	Analytical modeling of pulsating torque in concentrated-wound interior permanent magnet machines to achieve maximum average torque under an open-phase fault condition. , 2016, , .		2
82	Challenges for including characteristic current as a design parameter in optimization of IPM machines. , 2017, , .		2
83	Airgap magnetic field estimation for IPM rotors considering their non-uniform local saturation. , 2017, , .		2
84	Study on Core Loss Reduction in the Transformer of Isolated DC/DC Converter with Series L-C and Resonant L-C Shunt Filter. , 2018, , .		2
85	Position Sensorless Control of an Interior Permanent Magnet Synchronous Machine (IPMSM) in Deep Flux-weakening Region. , 2018, , .		2
86	Partially-Coupled dâ€“qâ€“0 Components of Magnetically-Isolated FSCW IPM Machines With Open-End-Winding Drives. IEEE Transactions on Industry Applications, 2020, 56, 1397-1407.	3.3	2
87	Design of a 4KW interior permanent magnet machine suitable for low speed application. , 2013, , .		1
88	Space vector PWM for five-to-three phase conventional matrix converter with d&lt;inf&gt;2&lt;/inf&gt;&#x2013;q&lt;inf&gt;2&lt;/inf&gt; vector elimination. , 2013, , .		1
89	Post-fault control strategy for IPMSMs with non-sinusoidal back-EMFs in an open-ended winding configuration. , 2016, , .		1
90	Effect of eliminating rotor iron on a mega-watt halfbach permanent magnet synchronous generator for wind turbine applications. , 2016, , .		1

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91	Power and voltage control of a nonpitchable direct driven fractional slot concentrated wound-IPMSG based wind turbine operating above base speed. , 2016, , .		1
92	Control of direct driven fractional slot concentrated wound-IPMSG for variable speed wind energy system. , 2016, , .		1
93	An extended dq model for concentrated-wound interior permanent magnet machines considering non-ideal machine parameters. , 2016, , .		1
94	Verification of a novel voltage control strategy for MTPV control of a fractional-slot concentrated-winding IPMSM. , 2017, , .		1
95	Torque ripple minimization of an IPMSG with fractional-slot, concentrated-winding using uncontrolled rectifier-connected boost converter control. , 2017, , .		1
96	An Analytical Approach to Direct Torque and Flux Control of Interior Permanent Magnet Synchronous Machine for Deep Field Weakening Without Using Pre-calculated Lookup Tables. , 2019, , .		1
97	Investigation of suitable vector control techniques for low voltage IPM machine in 42V system. , 0, , .		0
98	Anomalies in experimental measurement of operational inductances of a concentrated-wound IPM machine under field-weakening region. , 2015, , .		0
99	Modified efficiency optimization control for fractional slot concentrated wound interior permanent magnet synchronous generators. , 2015, , .		0
100	Tradeoffs in high-speed performance characteristics in optimization of saliency ratio and efficiency for designing FSCW IPM machines. , 2017, , .		0
101	Challenges of considering saliency ratio in design optimization of IPM machines. , 2017, , .		0
102	An Improved Modulated Model Predictive Torque and Flux Control for High-Speed IPMSM Drives. , 2019, , .		0
103	Deadbeat Predictive Direct Torque and Active Flux Control with Disturbance Observer. , 2021, , .		0
104	Online Deadbeat Predictive Direct Torque and Active Flux Control for IPMSM Drive. , 2022, , .		0