Shuhong Wang

List of Publications by Year
in descending order

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137 papers	1,484 citations	430874 18 h-index	377865 34 g-index
138 all docs	138 docs citations	138 times ranked	1190 citing authors

#	Article	IF	Citations
1	System-Level Design Optimization Method for Electrical Drive Systemsâ€"Robust Approach. IEEE Transactions on Industrial Electronics, 2015, 62, 4702-4713.	7.9	188
2	System-Level Design Optimization Methods for Electrical Drive Systems: Deterministic Approach. IEEE Transactions on Industrial Electronics, 2014, 61, 6591-6602.	7.9	142
3	Analytical calculation of air-gap magnetic field distribution and instantaneous characteristics of brushless dc motors. IEEE Transactions on Energy Conversion, 2003, 18, 424-432.	5.2	101
4	Dynamic Deformation Analysis of Power Transformer Windings in Short-Circuit Fault by FEM. IEEE Transactions on Applied Superconductivity, 2014, 24, 1-4.	1.7	86
5	Survey on electrical machines in electrical vehicles. , 2009, , .		52
6	Hysteresis Modeling of High-Temperature Superconductor Using Simplified Preisach Model. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	43
7	Transient Performance Analysis of Induction Motor Using Field-Circuit Coupled Finite-Element Method. IEEE Transactions on Magnetics, 2014, 50, 873-876.	2.1	38
8	Cumulative Deformation Analysis for Transformer Winding Under Short-Circuit Fault Using Magneticâ€"Structural Coupling Model. IEEE Transactions on Applied Superconductivity, 2016, 26, 0-5.	1.7	37
9	Calculation and Analysis of Mechanical Characteristics of Transformer Windings Under Short-Circuit Condition. IEEE Transactions on Magnetics, 2019, 55, 1-4.	2.1	37
10	Initial Rotor Position and Magnetic Polarity Identification of PM Synchronous Machine Based on Nonlinear Machine Model and Finite Element Analysis. IEEE Transactions on Magnetics, 2010, 46, 2016-2019.	2.1	31
11	Determination of 3D magnetic reluctivity tensor of soft magnetic composite material. Journal of Magnetism and Magnetic Materials, 2007, 312, 458-463.	2.3	30
12	Transient Simulation and Analysis for Saturated Core High Temperature Superconducting Fault Current Limiter. IEEE Transactions on Magnetics, 2007, 43, 1813-1816.	2.1	29
13	Robust Multilevel Optimization of PMSM Using Design for Six Sigma. IEEE Transactions on Magnetics, 2011, 47, 3248-3251.	2.1	29
14	Robust Optimization in HTS Cable Based on Design for Six Sigma. IEEE Transactions on Magnetics, 2008, 44, 978-981.	2.1	25
15	Multilevel Optimization for Surface Mounted PM Machine Incorporating With FEM. IEEE Transactions on Magnetics, 2009, 45, 4700-4703.	2.1	24
16	Geometry and Power Optimization of Coilgun Based on Adaptive Genetic Algorithms. IEEE Transactions on Plasma Science, 2015, 43, 1208-1214.	1.3	24
17	Analysis of Inter-Turn Insulation of High Voltage Electrical Machine by Using Multi-Conductor Transmission Line Model. IEEE Transactions on Magnetics, 2013, 49, 1905-1908.	2.1	23
18	Optimum Design of Rotor for High-Speed Switched Reluctance Motor Using Level Set Method. IEEE Transactions on Magnetics, 2014, 50, 765-768.	2.1	22

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19	Modeling and Measurement of Magnetic Hysteresis of Soft Magnetic Composite Materials Under Different Magnetizations. IEEE Transactions on Industrial Electronics, 2017, 64, 2459-2467.	7.9	21
20	Analysis of Transient Overvoltage in 220 kV Saturated Core HTS FCL. IEEE Transactions on Magnetics, 2011, 47, 2620-2623.	2.1	18
21	Dynamic Multilevel Optimization of Machine Design and Control Parameters Based on Correlation Analysis. IEEE Transactions on Magnetics, 2010, 46, 2779-2782.	2.1	17
22	Nonlinear Magnetic Model of Surface Mounted PM Machines Incorporating Saturation Saliency. IEEE Transactions on Magnetics, 2009, 45, 4684-4687.	2.1	16
23	Kinetic characteristics of transformer windings under short circuit condition. International Journal of Applied Electromagnetics and Mechanics, 2010, 33, 457-464.	0.6	14
24	Finite Element Analysis and Evaluation of Stator Insulation in High Voltage Synchronous Motor. IEEE Transactions on Magnetics, 2012, 48, 955-958.	2.1	14
25	Application of an Improved Multi-Conductor Transmission Line Model in Power Transformer. IEEE Transactions on Magnetics, 2013, 49, 2029-2032.	2.1	14
26	Modeling and Insulation Performance Analysis of Composite Transmission Line Tower Under Lightning Overvoltage. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	14
27	Optimal design of a linear induction motor applied in transportation. , 2009, , .		12
28	Transient Lightning Impulse Performance Analysis for Composite Transmission Line Tower. IEEE Transactions on Electromagnetic Compatibility, 2015, 57, 1103-1111.	2.2	12
29	Conceptual Design of a Liquid-Nitrogen-Insulated Metal-Enclosed Switchgear. IEEE Transactions on Applied Superconductivity, 2016, 26, 1-5.	1.7	12
30	Topology Optimization of Rotor Pole in Switched Reluctance Motor for Minimum Torque Ripple. Electric Power Components and Systems, 2017, 45, 905-911.	1.8	12
31	Frequency-Dependent Multi-Conductor Transmission Line Model for Shielded Power Cables Considering Geometrical Dissymmetry. IEEE Transactions on Magnetics, 2018, 54, 1-4.	2.1	12
32	A New Interpretation of FRA Results by Sensitivity Analysis Method of Two FRA Measurement Connection Ways. IEEE Transactions on Magnetics, 2018, 54, 1-4.	2.1	12
33	Current Distribution Calculation of Superconducting Layer in HTS Cable Considering Magnetic Hysteresis by Using XFEM. IEEE Transactions on Magnetics, 2018, 54, 1-4.	2.1	11
34	A New Multi-Conductor Transmission Line Model of Transformer Winding for Frequency Response Analysis Considering the Frequency-Dependent Property of the Lamination Core. Energies, 2018, 11, 826.	3.1	11
35	Calibration of Sensing Coils of a Three-Dimensional Magnetic Property Tester. IEEE Transactions on Magnetics, 2006, 42, 3243-3245.	2.1	10
36	A new Preisach type hysteresis model of high temperature superconductors. Journal of Applied Physics, 2015, 117, .	2.5	10

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37	Transient Electromagnetic Field Analysis for the Single-Stage Fast Linear Transformer Driver With Two Different Configurations Using the Finite-Element Method and Finite Integration Technique. IEEE Transactions on Magnetics, 2020, 56, 1-5.	2.1	10
38	Radiated EMI Modeling and Performance Analysis of a PWM PMSM Drive System Based on Field-Circuit Coupled FEM. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	9
39	An Analytical Loss Model of Litz-Wire Windings for Transformers Excited by Converters With Winding Configurations Considered. IEEE Transactions on Magnetics, 2019, 55, 1-5.	2.1	9
40	Circuit-Field Coupling and Magnetic-Thermal Coupling Analysis of RRF Converter Designed With Magnetic Integration. IEEE Transactions on Magnetics, 2019, 55, 1-8.	2.1	9
41	Optimization for capacitor-driven coilgun based on equivalent circuit model and genetic algorithm. , 2009, , .		7
42	Performance analysis of electric machine drives for plug-in hybrid electric vehicles. , 2009, , .		7
43	An Improved XFEM With Multiple High-Order Enrichment Functions and Low-Order Meshing Elements for Field Analysis of Electromagnetic Devices With Multiple Nearby Geometrical Interfaces. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	7
44	The Harmonic Suppression Characteristic Analysis of a Phase-Shifting Reactor in Rectifier System. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	7
45	Electromagnetic-Thermalâ€“Deformed-Fluid-Coupled Simulation for Levitation Melting of Titanium. IEEE Transactions on Magnetics, 2016, 52, 1-4.	2.1	7
46	Mechanical characteristics analysis of defective transformer windings under short-circuit fault using 3-D FEM. , 2017, , .		7
47	Analysis of mechanical characteristics of transformer windings under short circuit fault. , 2018, , .		7
48	Short-Circuit Characteristics of a High Temperature Superconducting Wind Turbine Generator Employing a Segmented Armature Winding. IEEE Transactions on Applied Superconductivity, 2019, 29, 1-5.	1.7	7
49	Application of Multi-level Multi-domain Modeling in the Design and Analysis of a PM Transverse Flux Motor with SMC Core. , 2007, , .		6
50	Extended Finite-Element Method for Weak Discontinuities in Electric Fields. IEEE Transactions on Applied Superconductivity, 2016, 26, 1-5.	1.7	6
51	A Temperature-Dependent Hysteresis Model for Soft Ferrites. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	6
52	An Experimental Study of the Sweep Frequency Impedance Method on the Winding Deformation of an Onsite Power Transformer. Energies, 2020, 13, 3511.	3.1	6
53	Multi-Level Transient Modeling of the Aeronautic Asymmetric 18-Pulse Phase-Shifting Auto-Transformer Rectifier in Full-Cycle Design. IEEE Transactions on Transportation Electrification, 2022, 8, 3759-3770.	7.8	6
54	Current distribution analysis for high temperature superconducting cable considering hysteresis characteristics. International Journal of Applied Electromagnetics and Mechanics, 2010, 33, 511-517.	0.6	5

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55	Double-Ladder Circuit Model of Transformer Winding for Frequency Response Analysis Considering Frequency-Dependent Losses. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	5
56	Dependence of AC Loss on Structural Compactness of Superconducting Power Cables With Narrow Coated Conductors. IEEE Transactions on Applied Superconductivity, 2016, 26, 1-5.	1.7	5
57	FDTD Formulation Based on High-Order Surface Impedance Boundary Conditions for Frequency-Dependent Lossy Multi-Conductor Transmission Lines. IEEE Transactions on Magnetics, 2020, 56, 1-4.	2.1	5
58	Design Optimization of an Interior-type Permanent Magnet BLDC Motor using PSO and Improved MEC. , 2007, , .		5
59	Application of Petri net in development of finite element analysis package for electromagnetic fields. IEEE Transactions on Magnetics, 2006, 42, 1255-1258.	2.1	4
60	Magnetic properties of soft magnetic composites under three-dimensional excitations. International Journal of Applied Electromagnetics and Mechanics, 2007, 25, 237-241.	0.6	4
61	Magneto-optical visualization of vortices penetration into Ba(Fe1.8Co0.2)As2. Journal of Applied Physics, 2010, 107, 09E155.	2.5	4
62	Finite Element Analysis of Mechanical and Electric Properties of Electric Connector in Electric Vehicle. , 2012, , .		4
63	Design of the Electromagnetic Repulsion Mechanism and the Low-Inductive Coil Used in the Resistive-Type Superconducting Fault Current Limiter. IEEE Transactions on Applied Superconductivity, 2014, 24, 1-4.	1.7	4
64	Extended Finite-Element Method for Electric Field Analysis of Insulating Plate With Crack. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	4
65	Theoretical Analysis and Design of a Variable Frequency Magnetic Field Stimulation System for Tumor Suppression. IEEE Transactions on Applied Superconductivity, 2016, 26, 1-4.	1.7	4
66	A Stress-Dependent Magnetic Hysteresis Model for Soft Magnetic Composite Materials. IEEE Transactions on Applied Superconductivity, 2016, 26, 1-5.	1.7	4
67	Design and Calculation of Planar Eddy Current Coil in Coin Identification. IEEE Transactions on Applied Superconductivity, 2016, 26, 1-4.	1.7	4
68	Core losses calculation of nanocrystalline alloy high frequency transformer considering magnetic hysteresis effects. , 2017, , .		4
69	Study on the Electromagnetic Field in HVDC/AC Hybrid Submarine Cable Tunnel. , 2018, , .		4
70	Improved Analytical Model for Inductance Calculations of a Dual-Rotor Permanent Magnet Reluctance Machine Based on Magnetic Networks. IEEE Transactions on Industry Applications, 2018, 54, 5822-5832.	4.9	4
71	Study on the Corona Discharge Ionized Field of UHVdc Based on Particle-in-Cell Iterative Method. IEEE Transactions on Magnetics, 2019, 55, 1-4.	2.1	4
72	Numerical Analysis of a Single-Stage Fast Linear Transformer Driver Using Field-Circuit Coupled Time-Domain Finite Integration Theory. Applied Sciences (Switzerland), 2020, 10, 8301.	2.5	4

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73	Robust Optimization of Multilayer Conductors of HTS AC Cable Using PSO and Perturbation Analysis. Conference Record - IAS Annual Meeting (IEEE Industry Applications Society), 2006, , .	0.0	3
74	Analysis on performance of linear induction motor basing on winding function method. , 2009, , .		3
75	Cogging torque reduction of Bldc motor using level set based topology optimization incorporating with triangular finite element. International Journal of Applied Electromagnetics and Mechanics, 2010, 33, 1069-1076.	0.6	3
76	Functional Magnetic Stimulation System and Pulsed Magnetic-Field Effect on Peripheral Nerve. IEEE Transactions on Magnetics, 2013, 49, 1853-1856.	2.1	3
77	Conducted EMI simulation for a high power Ultra-precision PMSM driven by PWM converter. , 2016, , .		3
78	Accuracy analysis of structure with nearby interfaces within XFEM. AIP Advances, 2017, 7, .	1.3	3
79	Comparison of Limiting Loop Model and Elemental Operator Model for Magnetic Hysteresis of Ferromagnetic Materials. IEEE Transactions on Magnetics, 2017, 53, 1-4.	2.1	3
80	Fast thermal analysis of an ISG in hybrid electric vehicle drive system. , 2017, , .		3
81	Field-Circuit Coupling and Electromagneticâ€“Thermalâ€“Mechanical Coupling Analysis of the Single-Stage Fast Linear Transformer Driver Using Time-Domain Finite Integration Technique. IEEE Transactions on Magnetics, 2021, 57, 1-5.	2.1	3
82	Computational Investigations on the Four-Stage MA-Class Fast Linear Transformer Driver With Sharing Cavity Shell. IEEE Transactions on Plasma Science, 2021, 49, 2364-2372.	1.3	3
83	Multi-physics coupling simulation of electrode induction melting gas atomization for advanced titanium alloys powder preparation. Scientific Reports, 2021, 11, 23106.	3.3	3
84	Research on Real-Time Disconnector State Evaluation Method Based on Multi-Source Images. IEEE Transactions on Instrumentation and Measurement, 2022, 71, 1-15.	4.7	3
85	Correction to: "Transient simulation and analysis for saturated core high temperature superconducting fault current limiter". IEEE Transactions on Magnetics, 2007, 43, 3540-3540.	2.1	2
86	Design of cold dielectric hts power cable. , 2009, , .		2
87	Optimization with sequential GA and dynamic force analysis of capacitor-driven inductive coilgun. , 2010, , .		2
88	Simulation and Analysis for New Bridge-Type High Temperature Superconducting Fault Current Limiter. , 2012, , .		2
89	Simulation and analysis for power frequency electric field of building close to power transmission lines. , 2014, , .		2
90	Study on planar coil with multi-frequency stimulations applied to an eddy current non-destructive testing. , 2017, , .		2

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91	Oscillations and Size Control of Titanium Droplet for Electromagnetic Levitation Melting. IEEE Transactions on Magnetics, 2018, 54, 1-4.	2.1	2
92	Study on the Effects of Magnetic Stimulation on K-Ras-Driven Lung Cancer in Mice. IEEE Transactions on Magnetics, 2018, 54, 1-4.	2.1	2
93	Quasi-3-D Cylindrical Coordinate XFEM Model of HTS Cable. IEEE Transactions on Magnetics, 2019, 55, 1-4.	2.1	2
94	Dynamic deformation analysis of power transformer windings considering the influence of temperature on elasticity characteristics of winding materials under short circuit fault. International Journal of Applied Electromagnetics and Mechanics, 2019, 59, 657-668.	0.6	2
95	FDTD Formulation Based on High-Order Surface Impedance Boundary Conditions for Lossy Two-Conductor Transmission Lines. IEEE Transactions on Electromagnetic Compatibility, 2020, 62, 194-203.	2.2	2
96	Fast Time-Domain Solution of Dynamic Electromagnetic Problems Based on Sinc Interpolation. IEEE Transactions on Magnetics, 2021, 57, 1-4.	2.1	2
97	Feature-based fuzzy control adaptive finite-element mesh generation for electromagnetic fields. IEEE Transactions on Magnetics, 2005, 41, 1688-1691.	2.1	1
98	Study of A PMSM Model Incorporating Structural and Saturation Saliencies. , 0, , .		1
99	Robust Optimization in HTS Cable Based on DEPSO and Design for Six Sigma. , 2008, , .		1
100	Simulation of sensorless drive for surface mounted PM machine based on comprehensive machine model. , 2009, , .		1
101	Simulation and optimization of six-stage electromagnetic coilgun. International Journal of Applied Electromagnetics and Mechanics, 2010, 33, 465-471.	0.6	1
102	Analysis and Design in Extra High Voltage Circuit Breakers Employing Shunted Capacitors. , 2012, , .		1
103	Induced voltage analysis of superconducting fault current limiter. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2013, 33, 38-46.	0.9	1
104	Multi-level and multi-objective optimization of coilgun considering temperature rise. , 2014, , .		1
105	Surge voltage and environmental electromagnetic field analysis for HV composite transmission tower under lightning strokes. , 2014, , .		1
106	Radiated EMI simulation for high-power ultra-precision PMSM system driven by PWM converter. , 2016, , .		1
107	Improved analytical model of a dual-rotor permanent magnet reluctance machine based on magnetic networks. , 2017, , .		1
108	Simulation analysis and development of industrial design software of phase-shifting reactor used in the 6-phase rectifier system. , 2017, , .		1

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109	Frequency Response Analysis of the Transformer Subjected to Twice Short-circuit Impulse Tests Under Two Different Connection Schemes. , 2018, , .		1
110	Research on Voltage Sag Suppression Technique based on CLR and Artificial Current Zero Interruption of FVCB. , 2019, , .		1
111	Theoretical Analysis and Design of an Innovative Coil Structure for Transcranial Magnetic Stimulation. Applied Sciences (Switzerland), 2021, 11, 1960.	2.5	1
112	Research on Extended Finite Element Method for Axisymmetric Electrostatic Field Based on Liquid Nitrogen with Bubbles. Applied Sciences (Switzerland), 2021, 11, 5214.	2.5	1
113	Performance analysis of an SMC transverse flux motor with modified double-sided stator and PM flux concentrating rotor. , 2007, , .		1
114	Transient electromagnetic force analysis of high temperature superconducting fault current limiter. International Journal of Applied Electromagnetics and Mechanics, 2010, 33, 503-510.	0.6	0
115	Modeling and simulation of direct torque controlled SPMSM Drive incorporating magnetic saturation saliency. International Journal of Applied Electromagnetics and Mechanics, 2010, 33, 473-479.	0.6	0
116	Simulation and optimization of structure parameters in 550kV disconnectors based on Response Surface Method. , 2010, , .		0
117	Study on Neural Regeneration Effect of Rat by Using Pulsed Functional Magnetic Stimulation. IEEE Transactions on Magnetics, 2015, 51, 1-4.	2.1	0
118	Modelling of magnetic properties in soft magnetic composite material under rotational magnetization. , 2016, , .		0
119	Titanium droplet formation in electromagnetic levitation melting process. , 2016, , .		0
120	Mitosis interference of K-Ras driven lung cancer cells by magnetic stimulation. , 2016, , .		0
121	Stress-based variable phase-shifting reactor for the multi-phase rectifier system. , 2016, , .		0
122	A temperature-dependent hysteresis model for soft ferrites based on a vectorial elemental operator. , 2016, , .		0
123	Current distribution calculation of superconducting layer in HTS cable considering magnetic hysteresis by using XFEM. , 2016, , .		0
124	Macro-modeling and passivity enforcement for PMSM winding. COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering, 2017, 36, 1729-1738.	0.9	0
125	Multiscale Modeling of Magnetic Distribution in a Magnetic Core of High-frequency Transformer. , 2018, , .		0
126	Modelling of Hysteresis Phenomenon Based on the Elemental Operator and Wind-Rose Method. , 2018, , .		0

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127	A Scalar Hysteresis Model of Ferromagnetic Materials Based on the Elemental Operators. IEEE Transactions on Magnetics, 2018, 54, 1-4.	2.1	0
128	Study on Temperature Field of MVA Capacity High Temperature Superconducting Transformer. Lecture Notes in Electrical Engineering, 2021, , 607-615.	0.4	0
129	Modelling and Experimental Verification on Magnetic Hysteresis Properties of Soft Magnetic Composite Material. Lecture Notes in Electrical Engineering, 2021, , 873-879.	0.4	0
130	Non-Thermal Intervention of Lung Tumor by Core-Shell Magnetic Nanoparticles in a Magnetic Field. Applied Sciences (Switzerland), 2021, 11, 2003.	2.5	0
131	Research on 3D Improved Extended Finite Element Method for Electric Field of Liquid Nitrogen with Bubbles. Applied Sciences (Switzerland), 2021, 11, 4839.	2.5	0
132	Research on a Cell Proliferation Model Based on A549 Cell Line With Magnetic Field Stimulation. IEEE Transactions on Magnetics, 2021, 57, 1-4.	2.1	0
133	Inclusion of frequency dependences into prediction model of conducted electromagnetic emissions for a VFD motor system. International Journal of Applied Electromagnetics and Mechanics, 2021, 67, 313-325.	0.6	0
134	Magnetic Characteristic Analysis of High Temperature Superconductors by the Elemental Operator Model. IEEE Transactions on Magnetics, 2022, 58, 1-4.	2.1	0
135	The Design and Analysis of a Static and Extremely Low-Frequency Magnetic Field Stimulation Platform for Cell Prolifation Inhibition. , 2018, , .		0
136	Ion flow field modelling based on lattice Boltzmann method and its mesh refinement. IET Generation, Transmission and Distribution, 2020, 14, 4539-4546.	2.5	0
137	A Novel Optimized Technology for Busbar Based on Finite Element Method. International Journal of Simulation: Systems, Science and Technology, 0, , .	0.0	0