

Heath F Hofmann

List of Publications by Year in descending order

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78
papers

6,833
citations

109321

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133252

59
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78
all docs

78
docs citations

78
times ranked

4747
citing authors

#	ARTICLE	IF	CITATIONS
1	Adaptive piezoelectric energy harvesting circuit for wireless remote power supply. IEEE Transactions on Power Electronics, 2002, 17, 669-676.	7.9	1,064
2	Optimized piezoelectric energy harvesting circuit using step-down converter in discontinuous conduction mode. IEEE Transactions on Power Electronics, 2003, 18, 696-703.	7.9	569
3	A Double-Sided <i>LCLC</i> -Compensated Capacitive Power Transfer System for Electric Vehicle Charging. IEEE Transactions on Power Electronics, 2015, 30, 6011-6014.	7.9	345
4	Optimization for a hybrid energy storage system in electric vehicles using dynamic programming approach. Applied Energy, 2015, 139, 151-162.	10.1	321
5	Energy Harvesting Using a Piezoelectric "Cymbal" Transducer in Dynamic Environment. Japanese Journal of Applied Physics, 2004, 43, 6178-6183.	1.5	308
6	Energy management strategies comparison for electric vehicles with hybrid energy storage system. Applied Energy, 2014, 134, 321-331.	10.1	305
7	Multi-objective optimization of a semi-active battery/supercapacitor energy storage system for electric vehicles. Applied Energy, 2014, 135, 212-224.	10.1	275
8	Damping as a result of piezoelectric energy harvesting. Journal of Sound and Vibration, 2004, 269, 991-1001.	3.9	273
9	A 4-Plate Compact Capacitive Coupler Design and LCL-Compensated Topology for Capacitive Power Transfer in Electric Vehicle Charging Applications. IEEE Transactions on Power Electronics, 2016, , 1-1.	7.9	209
10	A Dynamic Charging System With Reduced Output Power Pulsation for Electric Vehicles. IEEE Transactions on Industrial Electronics, 2016, 63, 6580-6590.	7.9	208
11	Sliding-mode and Lyapunov function-based control for battery/supercapacitor hybrid energy storage system used in electric vehicles. Energy, 2017, 122, 601-612.	8.8	188
12	A comparison study of different semi-active hybrid energy storage system topologies for electric vehicles. Journal of Power Sources, 2015, 274, 400-411.	7.8	170
13	A Double-Sided LC-Compensation Circuit for Loosely Coupled Capacitive Power Transfer. IEEE Transactions on Power Electronics, 2018, 33, 1633-1643.	7.9	166
14	An Inductive and Capacitive Combined Wireless Power Transfer System With <i>LC</i> -Compensated Topology. IEEE Transactions on Power Electronics, 2016, 31, 8471-8482.	7.9	164
15	The battery-supercapacitor hybrid energy storage system in electric vehicle applications: A case study. Energy, 2018, 154, 433-441.	8.8	161
16	Six-Plate Capacitive Coupler to Reduce Electric Field Emission in Large Air-Gap Capacitive Power Transfer. IEEE Transactions on Power Electronics, 2018, 33, 665-675.	7.9	128
17	A Dual-Coupled LCC-Compensated IPT System With a Compact Magnetic Coupler. IEEE Transactions on Power Electronics, 2018, 33, 6391-6402.	7.9	112
18	Single crystal PMN-PT/Epoxy 1-3 composite for energy-harvesting application. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2006, 53, 631-638.	3.0	105

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19	Investigation of electrostrictive polymers for energy harvesting. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2005, 52, 2411-2417.	3.0	104
20	Active Piezoelectric Energy Harvesting: General Principle and Experimental Demonstration. Journal of Intelligent Material Systems and Structures, 2009, 20, 575-585.	2.5	103
21	Component sizing optimization of plug-in hybrid electric vehicles with the hybrid energy storage system. Energy, 2018, 144, 393-403.	8.8	103
22	Control development and performance evaluation for battery/flywheel hybrid energy storage solutions to mitigate load fluctuations in all-electric ship propulsion systems. Applied Energy, 2018, 212, 919-930.	10.1	97
23	Mitigating Power Fluctuations in Electric Ship Propulsion With Hybrid Energy Storage System: Design and Analysis. IEEE Journal of Oceanic Engineering, 2018, 43, 93-107.	3.8	96
24	The optimization of a hybrid energy storage system at subzero temperatures: Energy management strategy design and battery heating requirement analysis. Applied Energy, 2015, 159, 576-588.	10.1	95
25	High-speed synchronous reluctance machine with minimized rotor losses. IEEE Transactions on Industry Applications, 2000, 36, 531-539.	4.9	90
26	Speed-sensorless vector torque control of induction machines using a two-time-scale approach. IEEE Transactions on Industry Applications, 1998, 34, 169-177.	4.9	82
27	Robust State of Health estimation of lithium-ion batteries using convolutional neural network and random forest. Journal of Energy Storage, 2022, 48, 103857.	8.1	81
28	Control of High-Speed Solid-Rotor Synchronous Reluctance Motor/Generator for Flywheel-Based Uninterruptible Power Supplies. IEEE Transactions on Industrial Electronics, 2008, 55, 3038-3046.	7.9	74
29	Adaptive model predictive control with propulsion load estimation and prediction for all-electric ship energy management. Energy, 2018, 150, 877-889.	8.8	66
30	Adaptive model predictive control for hybrid energy storage energy management in all-electric ship microgrids. Energy Conversion and Management, 2019, 198, 111929.	9.2	52
31	Current Profile Optimization for Combined State of Charge and State of Health Estimation of Lithium Ion Battery Based on Cramerâ€™Rao Bound Analysis. IEEE Transactions on Power Electronics, 2019, 34, 7067-7078.	7.9	52
32	Parameter Identification and Maximum Power Estimation of Battery/Supercapacitor Hybrid Energy Storage System Based on Cramerâ€™Rao Bound Analysis. IEEE Transactions on Power Electronics, 2019, 34, 4831-4843.	7.9	51
33	Implementation and evaluation of real-time model predictive control for load fluctuations mitigation in all-electric ship propulsion systems. Applied Energy, 2018, 230, 62-77.	10.1	50
34	Output power and efficiency sensitivity to circuit parameter variations in double-sided LCC-compensated wireless power transfer system. , 2015, , .		49
35	A study of cell-to-cell variation of capacity in parallel-connected lithium-ion battery cells. ETransportation, 2021, 7, 100091.	14.8	48
36	The sequential algorithm for combined state of charge and state of health estimation of lithium-ion battery based on active current injection. Energy, 2020, 193, 116732.	8.8	44

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37	Offline Identification of Induction Machine Parameters With Core Loss Estimation Using the Stator Current Locus. IEEE Transactions on Energy Conversion, 2016, 31, 1549-1558.	5.2	36
38	Control Strategy for Battery/Flywheel Hybrid Energy Storage in Electric Shipboard Microgrids. IEEE Transactions on Industrial Informatics, 2021, 17, 1089-1099.	11.3	34
39	Wideband energy harvesting for piezoelectric devices with linear resonant behavior. IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 2011, 58, 1294-1301.	3.0	33
40	Combined State and Parameter Estimation of Lithium-Ion Battery With Active Current Injection. IEEE Transactions on Power Electronics, 2020, 35, 4439-4447.	7.9	31
41	Computationally Efficient 3-D Finite-Element-Based Dynamic Thermal Models of Electric Machines. IEEE Transactions on Transportation Electrification, 2015, 1, 138-149.	7.8	27
42	Hierarchical predictive control for electric vehicles with hybrid energy storage system under vehicle-following scenarios. Energy, 2022, 251, 123774.	8.8	24
43	Analysis and Reduction of Time Harmonic Rotor Loss in Solid-Rotor Synchronous Reluctance Drive. IEEE Transactions on Power Electronics, 2008, 23, 985-992.	7.9	23
44	Finite-Element-Based Computationally Efficient Scalable Electric Machine Model Suitable for Electrified Powertrain Simulation and Optimization. IEEE Transactions on Industry Applications, 2015, 51, 4435-4445.	4.9	23
45	Electrostrictive polymers for mechanical energy harvesting. , 2004, 5385, 17.		16
46	Simultaneous Identification and Adaptive Torque Control of Permanent Magnet Synchronous Machines. IEEE Transactions on Control Systems Technology, 2017, 25, 1372-1383.	5.2	16
47	Autonomous Wideband Piezoelectric Energy Harvesting Utilizing a Resonant Inverter. IEEE Transactions on Power Electronics, 2017, 32, 6178-6187.	7.9	15
48	Simultaneous Identification and Control for Hybrid Energy Storage System Using Model Predictive Control and Active Signal Injection. IEEE Transactions on Industrial Electronics, 2020, 67, 9768-9778.	7.9	13
49	Simultaneous Identification and Control Using Active Signal Injection for Series Hybrid Electric Vehicles Based on Dynamic Programming. IEEE Transactions on Transportation Electrification, 2020, 6, 298-307.	7.8	13
50	Computationally Efficient AC Resistance Model for Stator Winding With Rectangular Conductors. IEEE Transactions on Magnetics, 2020, 56, 1-9.	2.1	13
51	Steady-State Algorithms for Nonlinear Time-Periodic Magnetic Diffusion Problems Using Diagonally Implicit Runge-Kutta Methods. IEEE Transactions on Magnetics, 2015, 51, 1-12.	2.1	12
52	Magnetic and thermal scaling of electric machines. International Journal of Vehicle Design, 2013, 61, 219.	0.3	11
53	Rotor Resistance Estimation for Induction Machines Using Carrier Signal Injection With Minimized Torque Ripple. IEEE Transactions on Energy Conversion, 2019, 34, 942-951.	5.2	11
54	Modeling and Control of Solid-Rotor Synchronous Reluctance Machines Based on Rotor Flux Dynamics. IEEE Transactions on Magnetics, 2008, 44, 4639-4647.	2.1	9

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55	Active stabilization of DC-DC converters with input LC filters via current-mode control and input voltage feedback. , 2010, , .		9
56	Power electronic circuitry for energy harvesting backpack. , 2009, , .		8
57	Wideband energy harvesting for resonant piezoelectric devices. , 2010, , .		6
58	Design and testing of a power electronic synthetic inductor. International Journal of Electronics, 2009, 96, 1249-1264.	1.4	5
59	A Framework for Optimization of the Traction Motor Design Based on the Series-HEV System Level Goals. , 2014, , .		5
60	Sensorless control of a thermoacoustic refrigerator. Journal of the Acoustical Society of America, 2004, 116, 288-293.	1.1	4
61	Individual Cell Fault Detection for Parallel-Connected Battery Cells Based on the Statistical Model and Analysis. , 2020, , .		4
62	Internal Short Circuit Detection for Parallel-Connected Battery Cells Using Convolutional Neural Network. Automotive Innovation, 2022, 5, 107.	5.1	4
63	Analysis of Permanent-Magnet Machines Using an Anisotropic Magnetostatic Continuum Formulation. IEEE Transactions on Magnetics, 2007, 43, 516-522.	2.1	3
64	Energy harvesting using AC machines with high effective pole count. Power Electronics Specialist Conference (PESC), IEEE, 2008, , .	0.0	3
65	Harmonic balance FEA of synchronous machines using a traveling-wave airgap model. , 2011, , .		3
66	Finite-element-based computationally-efficient electric machine model suitable for use in electrified vehicle powertrain design optimization. , 2014, , .		3
67	A stator current locus approach to induction machine parameter estimation. , 2014, , .		2
68	Design and Testing of A Power Electronic Synthetic Inductor. , 2007, , .		1
69	A computationally efficient finite-element/analytical model for simulating electric machines with rotor movement. , 2009, , .		1
70	Resonant inverter design for stand-alone dynamic active piezoelectric energy harvesting. , 2015, , .		1
71	Simultaneous identification and torque regulation of permanent magnet synchronous machines via adaptive excitation decoupling. , 2015, , .		1
72	Space-Time Field Projection: Finite-Element Analysis Coupled Between Different Meshes and Different Time-Step Settings. IEEE Transactions on Magnetics, 2016, 52, 1-4.	2.1	1

#	ARTICLE	IF	CITATIONS
73	Energy Efficient Platooning of Connected Electrified Vehicles Enabled by a Mixed Hybrid Electric Powertrain Architecture. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 20383-20397.	8.0	1
74	An Investigation of Energy Harvesting Using Electrostrictive Polymers. Materials Research Society Symposia Proceedings, 2005, 889, 1.	0.1	0
75	Steady-state finite element analysis of magnetic devices using a shooting-NewtonGMRES algorithm with Runge-Kutta integration. , 2012, , .		0
76	Theoretical Comparison of Energy Harvesting Methods for Electret-free Variable-Capacitance Devices. Energy Harvesting and Systems, 2016, 3, 245-262.	2.7	0
77	Simultaneous Identification and Torque Control of Surface-Mount Permanent Magnet Synchronous Machines with Inverter Current and Voltage Constraints. , 2018, , .		0
78	Reduced-order models for electro-magnetic-structural coupling phenomena. Mechanical Systems and Signal Processing, 2021, 159, 107752.	8.0	0