

Yves Perriard

List of Publications by Citations

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123
papers

1,437
citations

20
h-index

34
g-index

154
ext. papers

1,857
ext. citations

4
avg, IF

4.88
L-index

#	Paper	IF	Citations
123	An autonomous untethered fast soft robotic insect driven by low-voltage dielectric elastomer actuators. <i>Science Robotics</i> , 2019 , 4,	18.6	135
122	Very-High-Speed Slotless Permanent-Magnet Motors: Analytical Modeling, Optimization, Design, and Torque Measurement Methods. <i>IEEE Transactions on Industrial Electronics</i> , 2010 , 57, 296-303	8.9	132
121	. <i>IEEE Transactions on Industry Applications</i> , 2002 , 38, 1266-1272	4.3	79
120	Optimization Design of a Segmented Halbach Permanent-Magnet Motor Using an Analytical Model. <i>IEEE Transactions on Magnetics</i> , 2009 , 45, 2955-2960	2	73
119	Slotless Permanent-Magnet Machines: General Analytical Magnetic Field Calculation. <i>IEEE Transactions on Magnetics</i> , 2011 , 47, 1739-1752	2	64
118	Reducing the cogging torque in brushless DC motors by using conformal mappings. <i>IEEE Transactions on Magnetics</i> , 2004 , 40, 451-455	2	64
117	Analytical Solution for Rotor Eddy-Current Losses in a Slotless Permanent-Magnet Motor: The Case of Current Sheet Excitation. <i>IEEE Transactions on Magnetics</i> , 2008 , 44, 386-393	2	51
116	Force and Torque Analytical Models of a Reaction Sphere Actuator Based on Spherical Harmonic Rotation and Decomposition. <i>IEEE/ASME Transactions on Mechatronics</i> , 2013 , 18, 1006-1018	5.5	43
115	Design of a semi-implantable hearing device for direct acoustic cochlear stimulation. <i>IEEE Transactions on Biomedical Engineering</i> , 2011 , 58, 420-8	5	34
114	An Analytical Determination of Eddy-Current Losses in a Configuration With a Rotating Permanent Magnet. <i>IEEE Transactions on Magnetics</i> , 2007 , 43, 3380-3386	2	34
113	Untethered Feel-Through Haptics Using 18- μ m Thick Dielectric Elastomer Actuators. <i>Advanced Functional Materials</i> , 2020 , 31, 2006639	15.6	34
112	. <i>IEEE Transactions on Industry Applications</i> , 2014 , 50, 1706-1716	4.3	32
111	Design of a Contactless Energy-Transfer System for Desktop Peripherals. <i>IEEE Transactions on Industry Applications</i> , 2011 , 47, 1643-1651	4.3	32
110	Optimization of electric motor for a solar airplane application. <i>IEEE Transactions on Industry Applications</i> , 2006 , 42, 1053-1061	4.3	30
109	Simplified Design Methodology for a Slotless Brushless DC Motor. <i>IEEE Transactions on Magnetics</i> , 2006 , 42, 3842-3846	2	27
108	Determination of tooth cogging force in a hard-disk brushless DC motor. <i>IEEE Transactions on Magnetics</i> , 2005 , 41, 4421-4426	2	25
107	. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2013 , 62, 1267-1275	5.2	24

106	Characterization of Magnetic Immunity of an Ironless Inductive Position Sensor. <i>IEEE Sensors Journal</i> , 2013 , 13, 941-948	4	22
105	Closed-loop magnetic bearing and angular velocity control of a reaction sphere actuator. <i>Mechatronics</i> , 2015 , 30, 214-224	3	20
104	Development of a Hybrid MEMS BLDC Micromotor. <i>IEEE Transactions on Industry Applications</i> , 2011 , 47, 3-11	4-3	20
103	Determination of the Thermal Convection Coefficient for a Small Electric Motor. <i>Conference Record - IAS Annual Meeting (IEEE Industry Applications Society)</i> , 2006 ,		19
102	Sensitivity analysis and optimization of a standing wave ultrasonic linear motor. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2006 , 53, 1352-61	3-2	19
101	A New Standstill Position Detection Technique for Nonsalient Permanent-Magnet Synchronous Motors Using the Magnetic Anisotropy Method. <i>IEEE Transactions on Magnetics</i> , 2007 , 43, 554-560	2	17
100	PM motor sensorless position detection based on iron B-H local hysteresis 2009 ,		15
99	Design and Optimization of A Blood Pump for A Wearable Artificial Kidney Device. <i>IEEE Transactions on Industry Applications</i> , 2013 , 49, 2053-2060	4-3	13
98	Theoretical and Experimental Investigation of Flex-PCB Air-Gap Windings in Slotless BLDC Machines. <i>IEEE Transactions on Industry Applications</i> , 2014 , 50, 3153-3160	4-3	12
97	First-Pulse Technique for Brushless DC Motor Standstill Position Detection Based on Iron B-H Hysteresis. <i>IEEE Transactions on Industrial Electronics</i> , 2012 , 59, 2319-2328	8,9	12
96	Modeling of High-Frequency Electromagnetic Effects on an Ironless Inductive Position Sensor. <i>IEEE Sensors Journal</i> , 2013 , 13, 4663-4670	4	10
95	About tuning capacitors in inductive coupled power transfer systems 2013 ,		10
94	Ironless position sensor with intrinsic immunity to external magnetic fields 2011 ,		10
93	Very-high-speed permanent magnet motors: Mechanical rotor stresses analytical model 2017 ,		9
92	Modeling and Compensation of Thermal Effects on an Ironless Inductive Position Sensor. <i>IEEE Transactions on Industry Applications</i> , 2014 , 50, 375-382	4-3	9
91	Analytical Determination of the Phase Inductances of a Brushless DC Motor With Faulhaber Winding. <i>IEEE Transactions on Industry Applications</i> , 2010 , 46, 1360-1366	4-3	9
90	An analytical solution for the torque and power of a solid-rotor induction motor 2011 ,		9
89	Design optimization of a BLDC motor: a comparative analysis 2007 ,		9

88	Electromagnetic model of an ironless inductive position sensor 2012 ,		8
87	Sensorless position detection of a linear actuator using the resonance frequency 2009 ,		8
86	Brushless DC Motor Optimization Process - Choice between Standard or Straight Tooth Shape. <i>Conference Record - IAS Annual Meeting (IEEE Industry Applications Society)</i> , 2006 ,		8
85	Analytical and experimental investigation on the force and torque of a Reaction Sphere for satellite attitude control 2011 ,		7
84	An open-loop control strategy of a reaction sphere for satellite attitude control 2011 ,		7
83	Optimization of a new type of ultrasonic linear motor. <i>IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control</i> , 2008 , 55, 659-67	3-2	7
82	New implantable hearing device based on a micro-actuator that is directly coupled to the inner ear fluid. <i>Annual International Conference of the IEEE Engineering in Medicine and Biology Society</i> , 2006 , 2006, 3162-5		7
81	Hybrid FEM-analytical force and torque models of a reaction sphere actuator 2013 ,		6
80	Validity Tests of Superposition Principle Based on Forward Model for Electromagnetic Induction Scattering. <i>IEEE Transactions on Magnetics</i> , 2015 , 51, 1-4	2	6
79	Study of a miniature magnetorheological fluid actuator for haptic devices 2010 ,		6
78	Exploitation of iron B-H local hysteresis for the rotor position detection of a PM motor 2009 ,		6
77	Very-High-Speed Miniaturized Permanent Magnet Motors: Modeling and Experimental Validation 2019 ,		6
76	Current Control Strategy for Dynamic Winding Reconfiguration of Slotless Brushless DC Motors. <i>IEEE Transactions on Industry Applications</i> , 2019 , 55, 417-425	4-3	6
75	Feasibility of a Dielectric Elastomer Augmented Aorta. <i>Advanced Science</i> , 2021 , 8, 2001974	13.6	6
74	Optimal design of a squeeze film actuator for friction feedback 2013 ,		5
73	Validation by measurements of a windage losses model for very-high-speed machines 2017 ,		5
72	An analytical solution for the rotor eddy current losses in a slotless PM motor: the case of current layer excitation 2009 ,		5
71	Adaptive control of ultrasonic motors using the maximum power point tracking method 2008 ,		5

70	Design of Compact Bearingless Disc Drive Systems. <i>IEEE Transactions on Industry Applications</i> , 2020 , 56, 4870-4881	4-3	5
69	Optimization of Shape and Topology for Slotless Windings in BLDC Machines 2018 ,		5
68	Back-EMF and rotor angular velocity estimation for a reaction sphere actuator 2014 ,		4
67	Design considerations for a contactless battery charger 2014 ,		4
66	Analysis of BLDC motor with zigzag and rhombic winding 2010 ,		4
65	Optimization design of a linear actuator using a genetic algorithm 2009 ,		4
64	Skin and proximity effects for coreless transformers 2011 ,		4
63	Towards multi-finger haptic devices: A computer keyboard with adjustable force feedback 2011 ,		4
62	Analytical Force Determination in an Electromagnetic Actuator. <i>IEEE Transactions on Magnetics</i> , 2008 , 44, 2181-2185	2	4
61	Brushless DC Motor for a Solar Airplane Application: Comparison between Simulations and Measurements 2008 ,		4
60	Efficiency Optimisation of Slotless Magnetic Bearing Machines. <i>IEEE Transactions on Industry Applications</i> , 2021 , 1-1	4-3	4
59	Balanced Metal Detector Based on Optimized Frequencies and Spatial Phase Profile Responses to Differentiate Metal Rods. <i>IEEE Magnetics Letters</i> , 2017 , 8, 1-5	1.6	3
58	Towards the material limit and field concentration smoothing in multilayer dielectric elastomer actuators. <i>Smart Materials and Structures</i> , 2020 , 29, 045044	3-4	3
57	Equivalent piezoelectric actuator circuits and comparison 2014 ,		3
56	Empirical modeling of a squeeze film haptic actuator 2012 ,		3
55	Indirect rotor position detection method based on angular admittance modulation of optimally designed piezoelectric ultrasonic motors 2010 ,		3
54	Design of a contactless energy transfer system for desktop peripherals 2010 ,		3
53	Kalman filter to measure position and speed of a linear actuator 2011 ,		3

52	Self-sensing of linear short-stroke actuators for multi-finger haptic interfaces using induced high frequency oscillations 2012,		3
51	An analytical determination of the torque-speed and efficiency-speed characteristics of a BLDC motor 2009,		3
50	Eddy current power losses in a toroidal laminated core with rectangular cross section 2009,		3
49	Torque measurement methods for very high-speed motors. <i>COMPEL - the International Journal for Computation and Mathematics in Electrical and Electronic Engineering</i> , 2010 , 29, 1172-1183	0.7	3
48	Evaluation of dielectric elastomers to develop materials suitable for actuation. <i>Soft Matter</i> , 2021,	3.6	3
47	Novel Optimized Shape and Topology for Slotless Windings in BLDC Machines. <i>IEEE Transactions on Industry Applications</i> , 2020 , 56, 1275-1283	4.3	3
46	Very-High-Speed Miniaturized Permanent Magnet Motors: Design and Optimization 2019,		3
45	Characterization and Verification of Eddy-Current Position Sensing for Magnetic Levitation. <i>IEEE Transactions on Industry Applications</i> , 2021 , 1-1	4.3	3
44	An optimized self-sensing piezoelectric cantilever for micro-robotic applications. <i>Journal of Micro-Bio Robotics</i> , 2019 , 15, 91-103	1.4	2
43	Empirical Modeling of a Squeeze Film Haptic Actuator. <i>IEEE Transactions on Industry Applications</i> , 2014 , 50, 1809-1816	4.3	2
42	Analysis of a new topology of flexible PCB winding for slotless BLDC machines 2014,		2
41	Thermal modeling of a BLDC motor for a kick scooter 2012,		2
40	Design of a Miniature Short-Stroke Constant-Force Linear Actuator. <i>Applied Mechanics and Materials</i> , 2013 , 416-417, 109-114	0.3	2
39	Miniature Short-Stroke Linear Actuator. <i>IEEE Industry Applications Magazine</i> , 2011 , 17, 14-19	0.6	2
38	Optimal design and sensorless position control of a piezoelectric motor integrated into a mechatronic cylinder lock 2010,		2
37	Optimal design of an in-wheel BLDC motor for a kick scooter 2010,		2
36	Modeling and design of a hybrid MEMS motor 2010,		2
35	Extension of the local observability down to zero speed of BLDC motor state-space models using iron B-H local hysteresis 2011,		2

34	Conception of a piezoelectric linear motor for the generation of high linear forces 2011 ,		2
33	Finite element method based design and optimisation methodology for piezoelectric ultrasonic motors. <i>Mathematics and Computers in Simulation</i> , 2010 , 81, 446-459	3.3	2
32	Torque measurement methods for very high speed synchronous motors 2008 ,		2
31	Contactless system dedicated to colic stimulation 2008 ,		2
30	Development of Planar Microcoils for an Electromagnetic Linear Actuator Fabricated in Batch-Type Wafer Technology 2008 ,		2
29	Genetic Algorithm optimization for a surgical ultrasonic transducer 2008 ,		2
28	An analytical formula for the back emf of a slotted BLDG motor 2007 ,		2
27	An untethered mechanically-intelligent inchworm robot powered by a shape memory alloy oscillator. <i>Sensors and Actuators A: Physical</i> , 2021 , 332, 113115	3.9	2
26	Passive, Active and Loss Tradeoffs in High-Speed Bearingless Motors 2018 ,		2
25	Novel Generalised Notch Filter for Harmonic Vibration Suppression in Magnetic Bearing Systems. <i>IEEE Transactions on Industry Applications</i> , 2021 , 1-1	4.3	2
24	General Sensorless Method with Parameter Identification and Double Kalman Filter Applied to a Bistable Fast Linear Switched Reluctance Actuator for Textile Machine. <i>IEEJ Journal of Industry Applications</i> , 2019 , 8, 33-40	0.7	1
23	Ultrahigh-Voltage Switch for Bidirectional DCDC Converter Driving Dielectric Elastomer Actuator. <i>IEEE Transactions on Power Electronics</i> , 2020 , 35, 13172-13181	7.2	1
22	Design and characterization of a soft magneto-rheological miniature shock absorber for a controllable variable stiffness sole. <i>Archives of Electrical Engineering</i> , 2015 , 64, 547-558		1
21	3-Coil resonance structure wireless power transfer for 5kV implantable device 2015 ,		1
20	Quality factor and vibration amplitude estimation of a piezoelectric-actuated system using impedance measurements 2015 ,		1
19	Optimisation of the mover kinetic energy of a miniature linear actuator 2014 ,		1
18	Modeling and characterization of a MEMS synchronous generator 2014 ,		1
17	Modelling and design of complex geometry parts vibratory conveying 2014 ,		1

16	Modelling and compensation of thermal effects on an Ironless Inductive Position Sensor 2012,		1
15	Robust and efficient 3D model of an electromagnetic induction (EMI) sensor 2013,		1
14	Modelling and design of a contactless energy transfer system for a notebook battery charger 2010,		1
13	A miniature short stroke linear actuator and its position control for a haptic key 2009,		1
12	2012,		1
11	A new electrically assist scooter 2008,		1
10	Study of a hollow ultrasonic rotary motor 2008,		1
9	A square magnetic circuit analysis using Schwarz-Christoffel mapping. <i>Mathematics and Computers in Simulation</i> , 2006 , 71, 460-465	3-3	1
8	Integrated, Eddy-Current-Based Sensing of Rotor Position for Magnetic Levitation 2020,		1
7	Shape Optimization of Soft Magnetic Composites Using Level-Set Method. <i>IEEE Transactions on Magnetics</i> , 2021 , 57, 1-8	2	1
6	Battery Charger for Electric Vehicle Based on a Wireless Power Transmission 2016,		1
5	Critical Parasitic Elements of Coupled Inductors for Ultra-High Voltage Flyback Converters Used to Drive Capacitive Actuators 2019,		1
4	. <i>IEEE Transactions on Industry Applications</i> , 2021 , 57, 5145-5156	4-3	0
3	Erratum to Electromagnetic Analysis and Validation of an Ironless Inductive Position Sensor [May 13 1267-1275]. <i>IEEE Transactions on Instrumentation and Measurement</i> , 2013 , 62, 2356-2356	5-2	
2	Analysis and Modeling of Electrostatic Discharge in a Tactile Glass Featured Watch. <i>IEEE Transactions on Industry Applications</i> , 2007 , 43, 1091-1098	4-3	
1	LOD Homogenization of Multiscale Eddy Current Problem in Time Domain. <i>IEEE Transactions on Magnetics</i> , 2021 , 57, 1-4	2	