Henk Polinder

List of Publications by Year
in descending order

179 papers	6,397 citations	186209 28 h-index	85498 71 g-index
180 all docs	180 docs citations	180 times ranked	3974 citing authors

#	Article	IF	Citations
1	Wind turbine drivetrains: state-of-the-art technologies and future development trends. Wind Energy Science, 2022, 7, 387-411.	1.2	44
2	Input torque measurements for wind turbine gearboxes using fiber-optic strain sensors. Wind Energy Science, 2022, 7, 505-521.	1.2	4
3	The application of the spectral domain modeling to the power take-off sizing of heaving wave energy converters. Applied Ocean Research, 2022, 122, 103110.	1.8	7
4	A numerical study on the performance of the point absorber Wave Energy Converter integrated with an adjustable draft system. Ocean Engineering, 2022, 254, 111347.	1.9	6
5	Magnetic Signature Reduction by Converter Switching Frequency Modulation in Degaussing Systems. IEEE Access, 2022, 10, 74103-74110.	2.6	2
6	The Influence of Sizing of Wave Energy Converters on the Techno-Economic Performance. Journal of Marine Science and Engineering, 2021, 9, 52.	1.2	16
7	Improving Annual Energy Production of Doubly-Fed Induction Generators. IEEE Transactions on Energy Conversion, 2021, 36, 3405-3413.	3.7	3
8	Design in principle of crane vessel for flexible fully assembled wind turbine installation. , 2021, , .		2
9	The Influence of Linear Permanent Magnet Generator Sizing on the Techno-Economic Performance of a Wave Energy Converter. , 2021, , .		5
10	Sizing and Control of a Hybrid Ship Propulsion System Using Multi-Objective Double-Layer Optimization. IEEE Access, 2021, 9, 72587-72601.	2.6	16
11	Thermal Cycling in Converter IGBT Modules with Different Cooling Systems in Pitch- and Active Stall-Controlled Tidal Turbines. Energies, 2021, 14, 6457.	1.6	1
12	Torque measurements from MW wind turbine Gearboxes: a system identification approach. Journal of Physics: Conference Series, 2020, 1618, 022027.	0.3	1
13	Lifetime Analysis of IGBT Power Modules in Passively Cooled Tidal Turbine Converters. Energies, 2020, 13, 1875.	1.6	7
14	The Fair Evaluation of Wave Energy Converters. , 2020, , .		1
15	Electromechanical Dynamics Analysis of Pole-Piece Rotors in Pseudo Direct-Drive Wind Turbine Generators. , 2020, , .		3
16	Dynamic Pricing for User-Based Rebalancing in Free-Floating Vehicle Sharing: A Real-World Case. Lecture Notes in Computer Science, 2020, , 443-456.	1.0	5
17	Deployment of Prognostics to Optimize Aircraft Maintenance â€“ A Literature Review. Journal of International Business Research and Marketing, 2020, 5, 26-37.	0.2	9
18	Online Parameter Estimation of PMSM in EV Powertrain Including Thermal Measurements. , 2019, , .		0

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19	Tunnel-Vision on Economic Linear Propulsion?. , 2019, , .		1
20	North Sea Wave Database (NSWD) and the Need for Reliable Resource Data: A 38 Year Database for Metocean and Wave Energy Assessments. Atmosphere, 2019, 10, 551.	1.0	11
21	Sliding Mode Control with Neural Network for Active Magnetic Bearing System. , 2019, , .		3
22	Deployment of Prognostics to Optimize Aircraft Maintenance - A Literature Review. Proceedings of the Annual Conference of the Prognostics and Health Management Society Prognostics and Health Management Society Conference, 2019, 11, .	0.2	4
23	Comparison of Levelized Cost of Energy of Superconducting Direct Drive Generators for a 10-MW Offshore Wind Turbine. IEEE Transactions on Applied Superconductivity, 2018, 28, 1-5.	1.1	23
24	Availability of Wind Turbine Converters With Extreme Modularity. IEEE Transactions on Sustainable Energy, 2018, 9, 1772-1782.	5.9	8
25	Fast Rotor Loss Calculations in Fractional-Slot Permanent Magnet Machines. , 2018, , .		1
26	Comparing Different Materials for Rotor-Can in Flooded Generators. , 2018, , .		2
27	A Study on Passive Cooling in Subsea Power Electronics. IEEE Access, 2018, 6, 67543-67554.	2.6	7
28	Lifetime Comparison of Power Semiconductors in Three-Level Converters for 10-MW Wind Turbine Systems. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2018, 6, 1366-1377.	3.7	23
29	Short Circuits of a 10-MW High-Temperature Superconducting Wind Turbine Generator. IEEE Transactions on Applied Superconductivity, 2017, 27, 1-5.	1.1	16
30	Topology Comparison of Superconducting Generators for 10-MW Direct-Drive Wind Turbines: Cost of Energy Based. IEEE Transactions on Applied Superconductivity, 2017, 27, 1-7.	1.1	21
31	FE based multi-objective optimization of a 3.2MW brushless doubly-fed induction machine. , 2017, , .		3
32	Potential of Partially Superconducting Generators for Large Direct-Drive Wind Turbines. IEEE Transactions on Applied Superconductivity, 2017, 27, 1-11.	1.1	16
33	Computationally efficient calculation of skew effects in brushless doublyâ€fed induction machines. IET Electric Power Applications, 2017, 11, 303-311.	1.1	5
34	Effects of Armature Winding Segmentation With Multiple Converters on the Short Circuit Torque of 10-MW Superconducting Wind Turbine Generators. IEEE Transactions on Applied Superconductivity, 2017, 27, 1-5.	1.1	10
35	Achieving Sensorless Control for the Brushless Doubly Fed Induction Machine. IEEE Transactions on Energy Conversion, 2017, 32, 1611-1619.	3.7	29
36	Evaluating Harmonic Distortions in Brushless Doubly Fed Induction Machines. IEEE Transactions on Magnetics, 2017, 53, 1-10.	1.2	19

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37	Brushless doublyâ€fed induction machines for wind turbines: developments and research challenges. IET Electric Power Applications, 2017, 11, 991-1000.	1.1	62
38	Energy consumption of electric powertrain architectures: A comparative study. , 2017, , .		5
39	Optimization and comparison of superconducting generator topologies for a 10 MW wind turbine application. International Journal of Applied Electromagnetics and Mechanics, 2017, 53, S191-S202.	0.3	7
40	Comparison of modular wind turbine generators considering structural aspects. , 2017, , .		0
41	Harmonics study of nested-loop rotors in brushless doubly-fed induction machines. , 2016, , .		8
42	Design optimisation of high performance fractional-slot distributed winding PM Synchronous machines for In-wheel application in Electric Vehicles. , 2016, , .		0
43	Saturation in Brushless Doubly-Fed Induction Machines. , 2016, , .		7
44	Evaluating the cost of energy of a 10 MW direct-drive wind turbine with superconducting generators. , 2016, , .		3
45	A starter/generator unit for aerospace applications-concept to prototype. , 2016, , .		0
46	Modeling and Optimization of Brushless Doubly-Fed Induction Machines Using Computationally Efficient Finite-Element Analysis. IEEE Transactions on Industry Applications, 2016, 52, 4525-4534.	3.3	28
47	Brushless Doubly Fed Induction Machines: Magnetic Field Analysis. IEEE Transactions on Magnetics, 2016, 52, 1-10.	1.2	35
48	A finite element post-processing for skew effects in brushless doubly-fed induction machines. , 2016, , .		1
49	Modularity in wind tÃ¼rbine generator systems â€" Opportunities and challenges. , 2016, , .		8
50	Comparing the Brushless DFIM to other Generator Systems for Wind Turbine Drive-Trains. Journal of Physics: Conference Series, 2016, 753, 112014.	0.3	7
51	A Review of Methods to Increase the Availability of Wind Turbine Generator Systems. CPSS Transactions on Power Electronics and Applications, 2016, 1, 66-82.	2.9	5
52	Ripple Field AC Losses in 10-MW Wind Turbine Generators With a MgB₂Superconducting Field Winding. IEEE Transactions on Applied Superconductivity, 2016, 26, 1-5.	1.1	12
53	Long-term research challenges in wind energy â€" a research agenda by the European Academy of Wind Energy. Wind Energy Science, 2016, 1, 1-39.	1.2	162
54	Performance Analysis Based on Parameter Identification. Energy Procedia, 2015, 78, 3019-3024.	1.8	0

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55	LVRT performance of brushless doubly fed induction machines â€" A comparison. , 2015, , .		9
56	Effects of rotor skew on the performance of brushless doubly-fed induction machine. , 2015, , .		5
57	Effects of an electromagnetic shield and armature teeth on the short-circuit performance of a direct drive superconducting generator for 10 MW wind turbines. , 2015, , .		5
58	Brushless doubly-fed induction machines: Torque ripple. , 2015, , .		7
59	Finite element based multi-objective optimization of a brushless Doubly-Fed Induction Machine. , 2015, , .		8
60	Finite element modeling of brushless doubly-fed induction machine based on magneto-static simulation. , 2015, , .		9
61	Comparison of 10 MW superconducting generator topologies for direct-drive wind turbines. , 2015, , .		2
62	Computationally efficient 3D FEM rotor eddy-current loss calculation for permanent magnet synchronous machines. , 2015, , .		5
63	Electromagnetomechanical Coupled Vibration Analysis of a Direct-Drive Off-Shore Wind Turbine Generator. Journal of Computational and Nonlinear Dynamics, 2015, 10, .	0.7	9
64	Analysis and neutral voltage based detection of inter-turn faults in high-speed permanent magnet machines with parallel strands. IEEE Transactions on Industrial Electronics, 2015, , 1-1.	5.2	19
65	In-Situ Experimental Modal Analysis of a Direct-Drive Wind Turbine Generator. Conference Proceedings of the Society for Experimental Mechanics, 2015, , 157-165.	0.3	1
66	Design and testing of a high-speed aerospace permanent magnet starter/generator. , 2015, , .		9
67	Review of analytical methods to extract magnetic parameters of an inductively coupled circuit. , 2015, , .		1
68	Power Density Limits and Design Trends of High-Speed Permanent Magnet Synchronous Machines. IEEE Transactions on Transportation Electrification, 2015, 1, 266-276.	5.3	64
69	A review of failure mechanisms in wind turbine generator systems. , 2015, , .		24
70	Design of an MgB2race track coil for a wind generator pole demonstration. Journal of Physics: Conference Series, 2014, 507, 032001.	0.3	19
71	Brushless Doubly-Fed Induction Machines: Magnetic field modelling. , 2014, , .		14
72	Model Reduction Methods for Magnetic Fields Based on Modal Analysis. IEEE Transactions on Magnetics, 2014, 50, 1-4.	1.2	3

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73	A novel analytical approach and finite element modelling of a BDFIM. , 2014, , .		10
74	Experimental determination of stator winding failure behavior. , 2014, , .		0
75	Hysteresis losses in MgB 2 superconductors exposed to combinations of low AC and high DC magnetic fields and transport currents. Physica C: Superconductivity and Its Applications, 2014, 506, 133-137.	0.6	15
76	Small wind power generation using automotive alternator. Renewable Energy, 2014, 66, 185-195.	4.3	16
77	Current Sharing Analysis of Parallel Strands in Low-Voltage High-Speed Machines. IEEE Transactions on Industrial Electronics, 2014, 61, 3064-3070.	5.2	66
78	Feasibility study of a superconducting motor for electrical helicopter propulsion. Journal of Physics: Conference Series, 2014, 507, 032038.	0.3	2
79	Influence of PWM switching frequency on the losses in PM machines. , 2014, , .		31
80	Efficient finite element based rotor loss calculation for permanent magnet synchronous machines. , 2014, , .		5
81	Effects of Magneto-Mechanical Coupling on Structural Modal Parameters. Conference Proceedings of the Society for Experimental Mechanics, 2014, , 11-18.	0.3	2
82	Machine selection and initial design of an aerospace starter/generator. , 2013, , .		22
83	Effect of Radial Cooling Ducts on the Electromagnetic Performance of the Permanent Magnet Synchronous Generators With Double Radial Forced Air Cooling for Direct-Driven Wind Turbines. IEEE Transactions on Magnetics, 2013, 49, 2974-2981.	1.2	37
84	Trends in Wind Turbine Generator Systems. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2013, 1, 174-185.	3.7	484
85	Stator winding proximity loss reduction techniques in high speed electrical machines. , 2013, , .		30
86	Validation of eddy current loss models for permanent magnet machines with fractional-slot concentrated windings. , 2013, , .		11
87	Principles of electrical design of permanent magnet generators for direct drive renewable energy systems. , 2013, , 30-50.		10
88	An Inductive Power Transfer through metal object. , 2013, , .		17
89	Influence of Stator Slotting on the Performance of Permanent-Magnet Machines With Concentrated Windings. IEEE Transactions on Magnetics, 2013, 49, 929-938.	1.2	39
90	Comparison of Energy Yield of Small Wind Turbines in Low Wind Speed Areas. IEEE Transactions on Sustainable Energy, 2013, 4, 42-49.	5.9	54

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91	High-Torque-Density High-Efficiency Flux-Switching PM Machine for Aerospace Applications. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2013, 1, 327-336.	3.7	45
92	Case study of the permanent magnet direct drive generator in the Zephyros wind turbine. , 2013, , 158-174.		2
93	Direct drive wave energy conversion systems: an introduction. , 2013, , 175-194.		14
94	Case study of the Archimedes Wave Swing (AWS) direct drive wave energy pilot plant. , 2013, , 195-218.		9
95	Analytical-numerical hybrid model for flux-switching permanent magnet machines. , 2013, , .		6
96	Electrical drives for direct drive renewable energy systems. , 2013, , .		19
97	Precise calculation and optimization of rotor eddy current losses in high speed permanent magnet machine. , 2012, , .		15
98	Rotor losses in laminated magnets and an anisotropic carbon fiber sleeve. , 2012, , .		6
99	Low cost axial flux PM generator for small wind turbines. , 2012, , .		9
100	Axial segmentation and magnets losses of SMPM machines using 2D FE method. , 2012, , .		6
101	Torque enhanced Flux-Switching PM machine for aerospace applications. , 2012, , .		11
102	Eddy current loss calculation in rotor back iron for concentrated winding PM generator. , 2012, , .		4
103	Optimization and comparison of electrical machines using particle swarm optimization. , 2012, , .		17
104	Optimization of the Winding Arrangement to Increase the Zero-Sequence Inductance of a Synchronous Machine With Multifunctional Converter Drive. IEEE Transactions on Industry Applications, 2012, 48, 2277-2286.	3.3	5
105	Planning and Designing Smart Grids: Philosophical Considerations. IEEE Technology and Society Magazine, 2012, 31, 34-43.	0.6	32
106	Philosophical considerations on the design of smart grids. , 2012, , .		3
107	Literature survey of eddy-current loss analysis in rotating electrical machines. IET Electric Power Applications, 2012, 6, 743.	1.1	20
108	Modeling for the design of fractional slot PM machines with concentrated windings protected from demagnetization during three-phase short circuit. , 2012, , .		7

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109	Performance of axial flux permanent magnet generator for human power application. , 2012, , .		4
110	Structural comparison of permanent magnet direct drive generator topologies for 5MW wind turbines. , 2012, , .		18
111	Structural analysis and optimisation of transverse flux permanent magnet machines for 5 and 10â€‰MW direct drive wind turbines. Wind Energy, 2012, 15, 19-43.	1.9	8
112	Effect of design parameters on electromagnetic torque of PM machines with concentrated windings using nonlinear dynamic FEM. , 2011, , .		9
113	Electrical generators for maritime application. , 2011, , .		6
114	Improved model for design of permanent magnet machines with concentrated windings. , 2011, , .		7
115	Inductance calculations for PM machines with concentrated windings. , 2011, , .		5
116	Direct drive in wave energy conversion â€" AWS full scale prototype case study. , 2011, , .		19
117	Overview of and trends in wind turbine generator systems. , 2011, , .		49
118	Energy yield of small wind turbines in low wind speed areas. , 2011, , .		6
119	Composite materials for low loss rotor construction. , 2011, , .		8
120	Analytical and FE calculation of eddy-current losses in PM concentrated winding machines for wind turbines. , 2011, , .		8
121	Influence of slot/pole number combination on performances of permanent magnet machines with concentrated windings for ship application. , 2011, , .		7
122	Energy yield of two generator systems for small wind turbine application. , 2011, , .		5
123	A low conductivity composite rotor for fractional pitch concentrated winding machines. , 2011, , .		1
124	On the Speed Limits of Permanent-Magnet Machines. IEEE Transactions on Industrial Electronics, 2010, 57, 220-227.	5.2	174
125	Realization of the I/f control method for a high-speed permanent magnet motor. , 2010, , .		16
126	Structural Flexibility: A Solution for Weight Reduction of Large Direct-Drive Wind-Turbine Generators. IEEE Transactions on Energy Conversion, 2010, 25, 732-740.	3.7	57

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127	Structural mass minimization of large direct-drive wind generators using a buoyant rotor structure. , 2010, , .		10
128	Studying rotor eddy current loss of PM machines using nonlinear FEM including rotor motion. , 2010, , .		11
129	Modular sensorless control of high speed, fault tolerant machines. , 2010, , .		1
130	Modeling magnetic saturation for the design of exterior rotor permanent magnet machines. , 2010, , .		7
131	Enclosure design for a high-speed permanent magnet rotor. , 2010, , .		26
132	Comparison of an axial flux and a radial flux permanent magnet motor for solar race cars. , 2010, , .		10
133	Human powered axial flux permanent magnet machines: Review and comparison. , 2010, , .		6
134	Comparison of analytical and Finite Element calculation of eddy-current losses in PM machines. , 2010, , .		11
135	Motor drive for a novel high-speed micro-milling spindle. , 2009, , .		9
136	Ring-shaped transverse flux PM generator for large direct-drive wind turbines. , 2009, , .		29
137	Scaling laws for direct drive generators in wind turbines. , 2009, , .		23
138	Optimization of Multibrid Permanent-Magnet Wind Generator Systems. IEEE Transactions on Energy Conversion, 2009, 24, 82-92.	3.7	209
139	Design challenges and potentials of HTS synchronous motor for Superbus. , 2009, , .		0
140	Fault tolerant generator systems for wind turbines. , 2009, , .		34
141	A 50kW integrated fault tolerant permanent magnet machine and motor drive. Power Electronics Specialist Conference (PESC), IEEE, 2008, , .	0.0	18
142	Design of a Lightweight Transverse Flux Permanent Magnet Machine for Direct-Drive Wind Turbines. , 2008, , .		33
143	Structural mass in direct-drive permanent magnet electrical generators. IET Renewable Power Generation, 2008, 2, 3-15.	1.7	81
144	Promising Direct-Drive Generator System for Large Wind Turbines. , 2008, , .		53

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145	A first-order energy storage requirements estimation for an Archimedes Wave Swing Park. , 2008, , .		2
146	Overcoming limits of high-speed PM machines. , 2008, , .		14
147	Comparative design of radial and transverse flux PM generators for direct-drive wind turbines. , 2008, , .		22
148	Promising Direct-Drive Generator System for Large Wind Turbines. EPE Journal (European Power) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 6	0.7	16
149	Common Mode DC-Bus Filter Design for Variable Speed Drive System via Transfer Ratio Measurements. , 2007, , .		2
150	10 MW Wind Turbine Direct-Drive Generator Design with Pitch or Active Speed Stall Control. , 2007, , .		83
151	Quantum Control for an Experimental Contactless Energy Transfer System for Multiple Users. , 2007, , .		9
152	Eddy-Current Losses in the Solid Back-Iron of PM Machines for different Concentrated Fractional Pitch Windings. , 2007, , .		38
153	Investigation of the Coupling Paths of a Galvanically Isolated AC/AC Converter. , 2007, , .		1
154	Current and Novel Electrical Generator Technology for Wave Energy Converters. , 2007, , .		39
155	Analytical Modeling of a Permanent-Magnet Synchronous Machine in a Flywheel. IEEE Transactions on Magnetics, 2007, 43, 1955-1967.	1.2	85
156	Noise propagation path identification of variable speed drive in time domain via common mode test mode. , 2007, , .		6
157	Comparison of Direct-Drive and Geared Generator Concepts for Wind Turbines. IEEE Transactions on Energy Conversion, 2006, 21, 725-733.	3.7	902
158	Design of an Inductive Contactless Power System for Multiple Users. Conference Record - IAS Annual Meeting (IEEE Industry Applications Society), 2006, , .	0.0	10
159	Modelling and test results of the Archimedes wave swing. Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, 2006, 220, 855-868.	0.8	87
160	Design, modelling and test results of the AWS PM linear generator. European Transactions on Electrical Power, 2005, 15, 245-256.	1.0	65
161	Reduced-Order Modelling of Wind Turbines. , 2005, , 555-585.		16
162	Basic Operation Principles and Electrical Conversion Systems of Wind Turbines. EPE Journal (European Power Electronics and Drives Journal), 2005, 15, 43-50.	0.7	67

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163	Conventional and TFPM Linear Generators for Direct-Drive Wave Energy Conversion. IEEE Transactions on Energy Conversion, 2005, 20, 260-267.	3.7	228
164	Wind Power and Voltage Control. , 2005, , 411-432.		4
165	Linear PM Generator System for Wave Energy Conversion in the AWS. IEEE Transactions on Energy Conversion, 2004, 19, 583-589.	3.7	296
166	Mastering highâ€density optical disks: a new concept design. Assembly Automation, 2004, 24, 406-415.	1.0	2
167	Representing wind turbine electrical generating systems in fundamental frequency simulations. IEEE Transactions on Energy Conversion, 2003, 18, 516-524.	3.7	267
168	Contribution of permanent-magnet volume elements to no-load voltage in machines. IEEE Transactions on Magnetics, 2003, 39, 1784-1792.	1.2	17
169	Varying magnetization orientation for permanent-magnet volume reduction in machines. IEEE Transactions on Magnetics, 2003, 39, 1793-1799.	1.2	7
170	Modeling of a linear pm machine including magnetic saturation and end effects: maximum force-to-current ratio. IEEE Transactions on Industry Applications, 2003, 39, 1681-1688.	3.3	83
171	General model for representing variable speed wind turbines in power system dynamics simulations. IEEE Transactions on Power Systems, 2003, 18, 144-151.	4.6	791
172	Magnet shaping for minimal magnet volume in machines. IEEE Transactions on Magnetics, 2002, 38, 2985-2987.	1.2	19
173	Voltage Control Methods with Grid Connected Wind Turbines: A Tutorial Review. Wind Engineering, 2001, 25, 353-365.	1.1	34
174	Eddy-current losses in the segmented surface-mounted magnets of a PM machine. IET Electric Power Applications, 1999, 146, 261.	1.4	110
175	Initialization of wind turbine models in power system dynamics simulations. , 0, , .		71
176	Linear generators for direct-drive wave energy conversion. , 0, , .		15
177	Modelling of a linear PM machine including magnetic saturation and end effects: Maximum force to current ratio. , 0, , .		14
178	Investigation of EMI noise transfer characteristic of variable speed drive system. , 0, , .		13
179	Tidal Turbine Generators. , 0, , .		5