

# Michele Degano

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/7031897/publications.pdf>

Version: 2024-02-01

119  
papers

1,682  
citations

361296

20  
h-index

395590

33  
g-index

119  
all docs

119  
docs citations

119  
times ranked

1109  
citing authors

#	ARTICLE	IF	CITATIONS
1	Sensitivity Analysis of Torque Ripple Reduction of Synchronous Reluctance and Interior PM Motors. IEEE Transactions on Industry Applications, 2015, 51, 187-195.	3.3	113
2	Design and Losses Analysis of a High Power Density Machine for Flooded Pump Applications. IEEE Transactions on Industry Applications, 2018, 54, 3260-3270.	3.3	60
3	Considerations on the Development of an Electric Drive for a Secondary Flight Control Electromechanical Actuator. IEEE Transactions on Industry Applications, 2019, 55, 3544-3554.	3.3	55
4	An Accurate Wide-Speed Range Control Method of IPMSM Considering Resistive Voltage Drop and Magnetic Saturation. IEEE Transactions on Industrial Electronics, 2020, 67, 2630-2641.	5.2	53
5	Selection Criteria and Robust Optimization of a Traction PM-Assisted Synchronous Reluctance Motor. IEEE Transactions on Industry Applications, 2015, 51, 4383-4391.	3.3	49
6	4-MW Class High-Power-Density Generator for Future Hybrid-Electric Aircraft. IEEE Transactions on Transportation Electrification, 2021, 7, 2952-2964.	5.3	49
7	Improved Damper Cage Design for Salient-Pole Synchronous Generators. IEEE Transactions on Industrial Electronics, 2017, 64, 1958-1970.	5.2	45
8	Considerations on the Effects That Core Material Machining Has on an Electrical Machine's Performance. IEEE Transactions on Energy Conversion, 2018, 33, 1154-1163.	3.7	43
9	A Multiport Power Conversion System for the More Electric Aircraft. IEEE Transactions on Transportation Electrification, 2020, 6, 1707-1720.	5.3	43
10	A Novel Concept of Ribless Synchronous Reluctance Motor for Enhanced Torque Capability. IEEE Transactions on Industrial Electronics, 2020, 67, 2553-2563.	5.2	41
11	Improved Finite-State Model Predictive Current Control With Zero-Sequence Current Suppression for OEW-SPMSM Drives. IEEE Transactions on Power Electronics, 2020, 35, 4996-5006.	5.4	39
12	Synchronous Reluctance Machines: A Comprehensive Review and Technology Comparison. Proceedings of the IEEE, 2022, 110, 382-399.	16.4	38
13	Speed Ripple Reduction of Direct-Drive PMSM Servo System at Low-Speed Operation Using Virtual Cogging Torque Control Method. IEEE Transactions on Industrial Electronics, 2021, 68, 160-174.	5.2	37
14	Improved Model Predictive Current Control for SPMSM Drives Using Current Update Mechanism. IEEE Transactions on Industrial Electronics, 2021, 68, 1938-1948.	5.2	31
15	Comparative study of permanent magnet-synchronous and permanent magnet-flux switching machines for high torque to inertia applications. , 2017, , .		30
16	Synchronous Reluctance Motor Iron Losses: Considering Machine Nonlinearity at MTPA, FW, and MTPV Operating Conditions. IEEE Transactions on Energy Conversion, 2018, 33, 1402-1410.	3.7	30
17	A Resolver-to-Digital Conversion Method Based on Third-Order Rational Fraction Polynomial Approximation for PMSM Control. IEEE Transactions on Industrial Electronics, 2019, 66, 6383-6392.	5.2	26
18	Investigation of AC Copper and Iron Losses in High-Speed High-Power Density PMSM. , 2018, , .		25

#	ARTICLE	IF	CITATIONS
19	Thermal management of a permanent magnet motor for an directly coupled pump. , 2016, , .		24
20	Design and optimization of a high power density machine for flooded industrial pump. , 2016, , .		24
21	Enhanced Power Sharing Transient With Droop Controllers for Multithree-Phase Synchronous Electrical Machines. IEEE Transactions on Industrial Electronics, 2019, 66, 5600-5610.	5.2	24
22	A Novel Sizing Approach for Synchronous Reluctance Machines. IEEE Transactions on Industrial Electronics, 2021, 68, 2083-2095.	5.2	23
23	Segmented Hairpin Topology for Reduced Losses at High-Frequency Operations. IEEE Transactions on Transportation Electrification, 2022, 8, 688-698.	5.3	23
24	Control Strategy for Five-Phase Dual-Stator Winding Induction Starter/Generator System. IEEE Transactions on Industrial Electronics, 2020, 67, 2607-2617.	5.2	21
25	High-Speed Electric Drives: A Step Towards System Design. IEEE Open Journal of the Industrial Electronics Society, 2020, 1, 10-21.	4.8	21
26	Impact of Star Connection Layouts on the Control of Multiphase Induction Motor Drives Under Open-Phase Fault. IEEE Transactions on Power Electronics, 2021, 36, 3717-3726.	5.4	21
27	Permanent magnet volume minimization in permanent magnet assisted synchronous reluctance motors. , 2013, , .		18
28	Sensitivity analysis of torque ripple reduction of synchronous reluctance and interior PM motors. , 2013, , .		18
29	Synchronous reluctance machine analytical model optimization and validation through finite element analysis. , 2016, , .		18
30	Global design optimization strategy of a synchronous reluctance machine for light electric vehicles. , 2016, , .		18
31	Induction-Machine-Based Starter/Generator Systems: Techniques, Developments, and Advances. IEEE Industrial Electronics Magazine, 2020, 14, 4-19.	2.3	18
32	Rotor Design Optimization of Squirrel Cage Induction Motor - Part I: Problem Statement. IEEE Transactions on Energy Conversion, 2021, 36, 1271-1279.	3.7	18
33	Optimised Design of Permanent Magnet Assisted Synchronous Reluctance Machines for Household Appliances. IEEE Transactions on Energy Conversion, 2021, 36, 3084-3095.	3.7	18
34	High Speed Synchronous Reluctance Machines: Modeling, Design and Limits. IEEE Transactions on Energy Conversion, 2022, 37, 585-597.	3.7	17
35	Improved dead beat control of a shunt active filter for aircraft power systems. , 2010, , .		16
36	Influence of rotor endcaps on the electromagnetic performance of high-speed PM machine. IET Electric Power Applications, 2018, 12, 1142-1149.	1.1	16

#	ARTICLE	IF	CITATIONS
37	Research and Realization of High-Power Medium-Voltage Active Rectifier Concepts for Future Hybrid-Electric Aircraft Generation. IEEE Transactions on Industrial Electronics, 2021, 68, 11684-11695.	5.2	16
38	A Digital Internal Model Current Controller for Salient Machines. IEEE Transactions on Industrial Electronics, 2021, 68, 4703-4717.	5.2	16
39	Control-Winding Direct Power Control Strategy for Five-Phase Dual-Stator Winding Induction Generator DC Generating System. IEEE Transactions on Transportation Electrification, 2020, 6, 73-82.	5.3	15
40	Rotor Position Tracking Control for Low Speed Operation of Direct-Drive PMSM Servo System. IEEE/ASME Transactions on Mechatronics, 2021, 26, 1129-1139.	3.7	15
41	Rectangular and Random Conductors: AC Losses Evaluations and Manufacturing Considerations. , 2020, , .		15
42	On the analytical estimation of the airgap field in synchronous reluctance machine. , 2014, , .		14
43	Four-Degree-of-Freedom Overmodulation Strategy for Five-Phase Space Vector Pulsewidth Modulation. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 1578-1590.	3.7	14
44	End barrier shape optimizations and sensitivity analysis of synchronous reluctance machines. , 2015, , .		13
45	Trade-off analysis and design of a high power density PM machine for flooded industrial pump. , 2016, , .		13
46	The Influence of Stator Material on the Power Density and Iron Loss of a High-Performance Starter-Generator for More Electric Aircraft. , 2018, , .		13
47	Design of PMSM for EMA Employed in Secondary Flight Control Systems. , 2018, , .		13
48	Rotor Design Optimization of Squirrel Cage Induction Motor - Part II: Results Discussion. IEEE Transactions on Energy Conversion, 2021, 36, 1280-1288.	3.7	13
49	Improved Thermal Modeling and Experimental Validation of Oil-Flooded High-Performance Machines With Slot-Channel Cooling. IEEE Transactions on Transportation Electrification, 2022, 8, 312-324.	5.3	13
50	High-Speed Synchronous Reluctance Machines: Materials Selection and Performance Boundaries. IEEE Transactions on Transportation Electrification, 2022, 8, 1228-1241.	5.3	13
51	Experimental Statistical Method Predicting AC Losses on Random Windings and PWM Effect Evaluation. IEEE Transactions on Energy Conversion, 2021, 36, 2287-2296.	3.7	13
52	Power-Sharing Control in Bearingless Multi-Sector and Multi-Three-Phase Permanent Magnet Machines. IEEE Transactions on Industrial Electronics, 2021, 68, 9070-9080.	5.2	12
53	Hairpin Windings: Sensitivity Analysis and Guidelines to Reduce AC Losses. , 2021, , .		12
54	Formula SAE electric competition: Electrical motor design. , 2013, , .		11

#	ARTICLE	IF	CITATIONS
55	Robust optimization of a traction PMASR motor according to given driving cycles. , 2014, , .		11
56	Squirrel Cage Induction Motor: A Design-Based Comparison Between Aluminium and Copper Cages. IEEE Open Journal of Industry Applications, 2021, 2, 110-120.	4.8	11
57	Analytical calculation of air-gap armature reaction field including slotting effects in fractional-slot concentrated-coil SPM multiphase machines. , 2011, , .		10
58	Analysis and Performance of Five-Phase Piecewise-Random-Switching-Frequency Space Vector Pulse Width Modulation. IEEE Transactions on Energy Conversion, 2021, 36, 2339-2347.	3.7	10
59	PM synchronous machine comparison for light electric vehicles. , 2014, , .		9
60	A Novel Newton-Raphson-Based Searching Method for the MTPA Control of Pmasynrm Considering Magnetic and Cross Saturation. , 2018, , .		9
61	Open and Short Circuit Post-Fault Control Strategies for Multi-Three-Phase Interior Permanent Magnet Machines. IEEE Transactions on Energy Conversion, 2022, 37, 163-174.	3.7	9
62	A Novel Flux Barrier Parametrization for Synchronous Reluctance Machines. IEEE Transactions on Energy Conversion, 2022, 37, 675-684.	3.7	9
63	Open-Circuit Air-Gap Magnetic Field Calculation of Interior Permanent Magnet Synchronous Motor With V-Shaped Segmented Skewed Poles Using Hybrid Analytical Method. IEEE Transactions on Magnetics, 2021, 57, 1-9.	1.2	9
64	Calculation Model of Armature Reaction Magnetic Field of Interior Permanent Magnet Synchronous Motor With Segmented Skewed Poles. IEEE Transactions on Energy Conversion, 2022, 37, 1115-1123.	3.7	9
65	The impact of impulsive voltage waveforms on the electrical insulation of actuators for more electrical aircraft (MEA). , 2017, , .		8
66	Modular Power Sharing Control for Bearingless Multithree Phase Permanent Magnet Synchronous Machine. IEEE Transactions on Industrial Electronics, 2022, 69, 6600-6610.	5.2	8
67	Analytical modeling of split-phase synchronous reluctance machines. , 2014, , .		7
68	Distributed current control for multi-three phase synchronous machines in fault conditions. , 2016, , .		7
69	Multi-Port Power Conversion Systems for the More Electric Aircraft. , 2018, , .		7
70	A Complete Equivalent Circuit for Linear Induction Motors With Laterally Asymmetric Secondary for Urban Railway Transit. IEEE Transactions on Energy Conversion, 2021, 36, 1014-1022.	3.7	7
71	Homothetic Design in Synchronous Reluctance Machines and Effects on Torque Ripple. IEEE Transactions on Energy Conversion, 2021, 36, 2195-2205.	3.7	7
72	Eccentric position diagnosis of static eccentricity fault of external rotor permanent magnet synchronous motor as an inâ€wheel motor. IET Electric Power Applications, 2020, 14, 2263-2272.	1.1	7

#	ARTICLE	IF	CITATIONS
73	High Speed Permanent Magnet Assisted Synchronous Reluctance Machines " Part I: A General Design Approach. IEEE Transactions on Energy Conversion, 2022, 37, 2556-2566.	3.7	7
74	High frequency modelling method of EMI filters for hybrid Si - SiC matrix converters in aerospace applications. , 2013, , .		6
75	Sensitivity analysis for performance and power density improvements in salient-pole synchronous generators. , 2017, , .		6
76	Synchronous Reluctance Motor Iron Losses: Analytical Model and Optimization. , 2018, , .		6
77	Holistic electrical machine optimization for system integration. , 2017, , .		5
78	Eccentric Reluctance and Permanent Magnet Synchronous Machines Comparison. IEEE Transactions on Industry Applications, 2018, 54, 5760-5771.	3.3	5
79	A Homothetic Scaling Criteria for Synchronous Reluctance Machines Design. IEEE Transactions on Energy Conversion, 2021, 36, 547-559.	3.7	5
80	Optimized Sizing of IPM Machines for Automotive Traction Application. , 2019, , .		4
81	On Torque Improvement by Current Harmonic Injection in Isotropic and Anisotropic Multiphase Machines. IEEE Journal of Emerging and Selected Topics in Industrial Electronics, 2022, 3, 845-853.	3.0	4
82	Open and Closed Rotor Slots Design of Single and Double Cages Induction Motor. , 2021, , .		4
83	Influence of Manufacturing and Drive Effects in High-Speed, High-Power-Density PM Machine for Flooded Pump Application. , 2021, , .		4
84	Analysis and Design of Dual-Rotor Synchronous Reluctance Machine. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 4376-4383.	3.7	4
85	On the Use of Topology Optimization for Synchronous Reluctance Machines Design. Energies, 2022, 15, 3719.	1.6	4
86	Accurate Analytical Model for Synchronous Reluctance Machine With Multiple Flux Barriers Considering the Slotting Effect. IEEE Transactions on Magnetics, 2022, 58, 1-9.	1.2	4
87	A Complete Equivalent Circuit Model for Linear Induction Motor Considering Thrust, Vertical and Transversal Forces. , 2019, , .		3
88	Study of Regenerative Braking Effects in a Small Electric Race Car using Energetic Macroscopic Representation. , 2019, , .		3
89	Fault-Tolerant Electrical Machines for Transport Applications. , 2019, , .		3
90	Vibration Analysis of Permanent-Magnet-Assisted Synchronous Reluctance Machines. , 2019, , .		3

#	ARTICLE	IF	CITATIONS
91	Influence of Rotor Design on Electromagnetic Performance in Interior Permanent Magnet Machines. , 2020, , .		3
92	Characteristic analysis and direct measurement for air gap magnetic field of external rotor permanent magnet synchronous motors in electric vehicles. IET Electric Power Applications, 2020, 14, 1784-1794.	1.1	3
93	Modelling of Voltage Distribution within Hairpin Windings. , 2021, , .		3
94	A Modified Multi-Winding DC-DC Flyback Converter for Photovoltaic Applications. Applied Sciences (Switzerland), 2021, 11, 11999.	1.3	3
95	High Speed Permanent Magnet Assisted Synchronous Reluctance Machines – Part II: Performance Boundaries. IEEE Transactions on Energy Conversion, 2022, 37, 2567-2577.	3.7	3
96	On the use of dimensioning equations for surface permanent magnet machines. , 2012, , .		2
97	A system level comparison of drive topologies for high speed electrical machines. , 2017, , .		2
98	Double Rotor Synchronous Reluctance Machine: Analysis towards Torque Capability. , 2018, , .		2
99	Response to Discussion of –A Modular Speed-Drooped System for High Reliability Integrated Modular Motor Drives– IEEE Transactions on Industry Applications, 2018, 54, 4994-4995.	3.3	2
100	Hardware-In-the-Loop Emulation of a Small Electric Race Car Using Energetic Macroscopic Representation. , 2019, , .		2
101	Sound-quality diagnosis method of permanent magnet synchronous motor for electric vehicles based on critical band analysis. IET Electric Power Applications, 2019, 13, 1613-1621.	1.1	2
102	Advantages of Communication in Double Three-Phase Surface Permanent Magnet Machines Fed by Independent Inverters. , 2019, , .		2
103	Influence of Constructive Parameters on the Performance of an Axial-Flux Induction Machine with Solid and Magnetically Anisotropic Rotor. , 2021, , .		2
104	Rotor Slot Design of Squirrel Cage Induction Motors With Improved Rated Efficiency and Starting Capability. IEEE Transactions on Industry Applications, 2022, 58, 3383-3393.	3.3	2
105	Traditional hydropower plant revamping based on a variable-speed surface permanent-magnet high-torque-density generator. , 2011, , .		1
106	Comparison of flux observers for sensorless control of permanent magnet assisted SynRel motors. , 2016, , .		1
107	Air-Cooling of a Hollow High-Speed Permanent Magnet Rotor. , 2019, , .		1
108	Post -Fault Compensation Control Strategy for Multi-Three-Phase PMSM under Open-Circuit and Short-Circuit Condition. , 2019, , .		1

#	ARTICLE	IF	CITATIONS
109	Advantages of a Double Three-Phase Winding Layout for a Dual Rotor E-Bike Motor Considering Third Current Harmonic Injection Technique. , 2020, , .		1
110	Multi-Sector Windings For Bearing Relief E-Machine: Saturation and Cross Coupling Effects. , 2020, , .		1
111	Influence of the Magnetic Load on High Speed Synchronous Reluctance Machines Design. , 2021, , .		1
112	A Comparison of Prediction Models with Machine Learning Algorithms for Traction Characteristics in Linear Traction Induction Motors. IEEJ Transactions on Electrical and Electronic Engineering, 2022, 17, 470-478.	0.8	1
113	Axial eccentric SynRel and SPM motors analytical models validation using 3D finite element. , 2017, , .		0
114	SMART: Modular Architecture for Reliable Transportation. , 2019, , .		0
115	A Comparison of Current Determination Strategies for the IPMSM Considering Magnetic Saturation, Core Losses and Resistance Variation. , 2021, , .		0
116	Permanent Magnet Reduction by Current Harmonics Injection for Surface Permanent Magnet Machines. , 2021, , .		0
117	Modelling, Analysis and Design Considerations of Multi-Phase Bearingless Permanent Magnet Synchronous Machine. , 2021, , .		0
118	Influence of Optimisation Target Functions on Synchronous Reluctance Machines Design. , 2020, , .		0
119	Decoupled Discrete Current Control for AC Drives at Low Sampling-to-Fundamental Frequency Ratios. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2023, 11, 1358-1369.	3.7	0