

# David Diaz Reigosa

## List of Publications by Year in descending order

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147  
papers

3,355  
citations

147801

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175258

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g-index

147  
all docs

147  
docs citations

147  
times ranked

1695  
citing authors

#	ARTICLE	IF	CITATIONS
1	A Simple Method for Identifying Mass Unbalance Using Vibration Measurement in Permanent Magnet Synchronous Motors. IEEE Transactions on Industrial Electronics, 2022, 69, 6441-6444.	7.9	17
2	Airgap Search Coil Based Identification of PM Synchronous Motor Defects. IEEE Transactions on Industrial Electronics, 2022, 69, 6551-6560.	7.9	31
3	Dq-Transformed Error and Current Sensing Error Effects on Self-Sensing Control. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2022, 10, 1935-1945.	5.4	4
4	$d$ - and $q$ -Axis Inductance Estimation and Self-Sensing Condition Monitoring Using $45^\circ$ Angle High-Frequency Injection. IEEE Transactions on Industry Applications, 2021, 57, 506-515.	4.9	17
5	Realizable Reference Antiwindup Implementation for Parallel Controller Structures. IEEE Journal of Emerging and Selected Topics in Power Electronics, 2021, 9, 5055-5068.	5.4	3
6	SynRM Sensorless Torque Estimation Using High-Frequency Signal Injection. IEEE Transactions on Industry Applications, 2021, 57, 6083-6092.	4.9	5
7	Sensorless Control of Wound Rotor Synchronous Motors Based on Rotor High-Frequency Signal Injection. IEEE Transactions on Industry Applications, 2021, 57, 6034-6043.	4.9	4
8	Permanent Magnet Synchronous Machine Torque Estimation Using Low Cost Hall-Effect Sensors. IEEE Transactions on Industry Applications, 2021, 57, 3735-3743.	4.9	7
9	Improving Harmonic Rejection Capability of OSG Based on $n$ -th Order Bandpass Filter for Single-Phase System. IEEE Access, 2021, 9, 81728-81739.	4.2	6
10	Online PI Current Controller Tuning Based on Machine High-Frequency Parameters. , 2021, , .		3
11	Demagnetization Detection in PMSMs Using Search Coils Exploiting Machine's Symmetry. , 2021, , .		1
12	Use HF Signal Injection for Simultaneous Rotor Angle, Torque and Temperature Estimation in PMSMs. , 2021, , .		2
13	Hall-Effect Sensors as Multipurpose Devices to Control, Monitor and Diagnose AC Permanent Magnet Synchronous Machines. , 2021, , .		1
14	Accurate Rotor Speed Estimation for Low-Power Wind Turbines. IEEE Transactions on Power Electronics, 2020, 35, 373-381.	7.9	8
15	Comparative Analysis of Magnet Thermal and Magnetization State Monitoring in PMSMs Based on High-Frequency Signal Injection. IEEE Transactions on Industry Applications, 2020, 56, 344-357.	4.9	5
16	Enhancement of Permanent-Magnet Synchronous Machines Torque Estimation Using Pulsating High-Frequency Current Injection. IEEE Transactions on Industry Applications, 2020, 56, 358-366.	4.9	21
17	Battery Internal Resistance Estimation Using a Battery Balancing System Based on Switched Capacitors. IEEE Transactions on Industry Applications, 2020, 56, 5363-5374.	4.9	18
18	Resolver Emulation for PMSMs Using Low Cost Hall-Effect Sensors. IEEE Transactions on Industry Applications, 2020, 56, 4977-4985.	4.9	4

#	ARTICLE	IF	CITATIONS
19	Wireless Torque Pulsations Measurement System for PMSMs. IEEE Transactions on Industry Applications, 2020, 56, 6467-6476.	4.9	9
20	Magnetic Resolver Using Hall-Effect Sensors. , 2020, , .		1
21	Thermal monitoring of LiFePO4 batteries using switching harmonics. IEEE Transactions on Industry Applications, 2020, , 1-1.	4.9	3
22	Permanent Magnets Aging in Variable Flux Permanent Magnet Synchronous Machines. IEEE Transactions on Industry Applications, 2020, 56, 2462-2471.	4.9	7
23	SPMSMs Sensorless Torque Estimation Using High-Frequency Signal Injection. IEEE Transactions on Industry Applications, 2020, 56, 2700-2708.	4.9	16
24	Comparative Analysis of High Frequency Signal Injection Based Torque Estimation Methods for SPMSM, IPMSM and SynRM. Energies, 2020, 13, 592.	3.1	4
25	SPMSMs HFI Based Self-Sensing Using Intentional Magnetic Saturation. IEEE Access, 2020, 8, 228731-228739.	4.2	3
26	Magnet Temperature Estimation Methodology by Using Magnet Flux Linkage Observer for Variable Leakage Flux IPMSM. IEJ Journal of Industry Applications, 2020, 9, 723-730.	1.1	10
27	Magnet Temperature Estimation in Variable Leakage Flux Permanent Magnet Synchronous Machines Using the Magnet Flux Linkage. , 2020, , .		9
28	Enhanced Torque Estimation in Variable Leakage Flux PMSM Combining High and Low Frequency Signal Injection. , 2020, , .		5
29	Sensorless Control of Wound Rotor Synchronous Motors Based on Rotor High-Frequency Signal Injection. , 2020, , .		1
30	Permanent Magnet Synchronous Machine Non-Uniform Demagnetization Detection Using Zero-Sequence Magnetic Field Density. IEEE Transactions on Industry Applications, 2019, 55, 3823-3833.	4.9	20
31	Magnet Temperature Estimation in Permanent Magnet Synchronous Machines Using the High Frequency Inductance. IEEE Transactions on Industry Applications, 2019, 55, 2750-2757.	4.9	45
32	Online Detection and Classification of Rotor and Load Defects in PMSMs Based on Hall Sensor Measurements. IEEE Transactions on Industry Applications, 2019, 55, 3803-3812.	4.9	56
33	SynRM Sensorless Torque Estimation Using High Frequency Signal Injection. , 2019, , .		6
34	Battery internal resistance estimation using a battery balancing system based on switched capacitors. , 2019, , .		1
35	SPMSMs Sensorless Torque Estimation Using High Frequency Signal Injection. , 2019, , .		4
36	Resolver Emulation for PMSMs Using Low Cost Hall Effect Sensors. , 2019, , .		5

#	ARTICLE	IF	CITATIONS
37	Permanent Magnet Synchronous Machine Torque Estimation Using Low Cost Hall-Effect Sensors. , 2019, , .		5
38	Analysis and Control of the Inductorless Boost Rectifier for Small-Power Wind-Energy Converters. IEEE Transactions on Industry Applications, 2019, 55, 689-700.	4.9	12
39	Design of a Cooperative Voltage Harmonic Compensation Strategy for Islanded Microgrids Combining Virtual Admittance and Repetitive Controller. IEEE Transactions on Industry Applications, 2019, 55, 680-688.	4.9	40
40	Online Detection of Rotor Eccentricity and Demagnetization Faults in PMSMs Based on Hall-Effect Field Sensor Measurements. IEEE Transactions on Industry Applications, 2019, 55, 2499-2509.	4.9	76
41	Impact of Machine Magnetization State on Permanent Magnet Losses in Permanent Magnet Synchronous Machines. IEEE Transactions on Industry Applications, 2019, 55, 344-353.	4.9	13
42	Detection of Demagnetization in Permanent Magnet Synchronous Machines Using Hall-Effect Sensors. IEEE Transactions on Industry Applications, 2018, 54, 3338-3349.	4.9	32
43	Permanent Magnet Synchronous Machine Drive Control Using Analog Hall-Effect Sensors. IEEE Transactions on Industry Applications, 2018, 54, 2358-2369.	4.9	33
44	Influence of PM Coating on PM Magnetization State Estimation Methods Based on Magnetoresistive Effect. IEEE Transactions on Industry Applications, 2018, 54, 2141-2150.	4.9	10
45	Wireless Torque Pulsations Measurement System for PMSMs. , 2018, , .		1
46	Scalability and Key Tradeoffs of Variable Flux PM Machines for EV Traction Motor Systems. , 2018, , .		16
47	Thermal monitoring of LiFePO4 batteries using switching harmonics. , 2018, , .		2
48	Permanent Magnets Aging in Variable Flux Permanent Magnet Synchronous Machines. , 2018, , .		2
49	Magnet Thermal and Magnetization State Monitoring in PMSMs Based on Magnet Resistivity Estimation. , 2018, , .		0
50	PMSMs Torque Estimation Using Pulsating HF Current Injection. , 2018, , .		11
51	On-line Detection and Classification of Rotor and Load Defects in PMSMs based on Hall Sensor Measurements. , 2018, , .		2
52	Magnet Temperature Estimation in Permanent Magnet Synchronous Machines Using the High Frequency Inductance. , 2018, , .		3
53	Realizable References Anti-Windup Implementation for Parallel Controllers in Multiple Reference Frames. , 2018, , .		3
54	Permanent Magnet Synchronous Machine Non-Uniform Demagnetization Detection Using Zero-Sequence Magnetic Field Density. , 2018, , .		1

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55	Influence of Magnetoresistance and Temperature on Permanent Magnet Condition Estimation Methods Using High-Frequency Signal Injection. IEEE Transactions on Industry Applications, 2018, 54, 4218-4226.	4.9	9
56	Passive Islanding Detection Using Inverter Nonlinear Effects. IEEE Transactions on Power Electronics, 2017, 32, 8434-8445.	7.9	49
57	Comparative Analysis of BEMF and Pulsating High-Frequency Current Injection Methods for PM Temperature Estimation in PMSMs. IEEE Transactions on Power Electronics, 2017, 32, 3691-3699.	7.9	74
58	Permanent Magnet Temperature Estimation in PM Synchronous Motors Using Low-Cost Hall Effect Sensors. IEEE Transactions on Industry Applications, 2017, 53, 4515-4525.	4.9	48
59	Thermal and magnetization state monitoring of PMSM drives using HF signal injection. , 2017, , .		3
60	Control and Emulation of Small Wind Turbines Using Torque Estimators. IEEE Transactions on Industry Applications, 2017, 53, 4863-4876.	4.9	22
61	Rotor Temperature Estimation in Doubly-Fed Induction Machines Using Rotating High-Frequency Signal Injection. IEEE Transactions on Industry Applications, 2017, 53, 3652-3662.	4.9	33
62	Permanent magnet synchronous machine drive control using analog hall-effect sensors. , 2017, , .		6
63	Influence of magnetoresistance and temperature on permanent magnet condition estimation methods using high frequency signal injection. , 2017, , .		3
64	On-line detection of rotor eccentricity for PMSMs based on hall-effect field sensor measurements. , 2017, , .		6
65	Detection of demagnetization in permanent magnet synchronous machines using hall-effect sensors. , 2017, , .		5
66	Inductorless boost rectifier for small power wind energy converters. , 2016, , .		1
67	Rotor temperature estimation in doubly-fed induction machines using rotating high frequency signal injection. , 2016, , .		1
68	Influence of stator configuration on high frequency signal injection based permanent magnet temperature estimation methods in PMSMs. , 2016, , .		2
69	Sensorless speed control of a small wind turbine using the rectifier voltage ripple. , 2016, , .		3
70	Evaluation of high frequency signal injection islanding detection based methods under non-linear-loads scenarios. , 2016, , .		2
71	Permanent magnet temperature estimation in PM synchronous motors using low cost hall effect sensors. , 2016, , .		8
72	Permanent-Magnet Temperature Distribution Estimation in Permanent-Magnet Synchronous Machines Using Back Electromotive Force Harmonics. IEEE Transactions on Industry Applications, 2016, 52, 3093-3103.	4.9	50

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73	Virtual Admittance Loop for Voltage Harmonic Compensation in Microgrids. IEEE Transactions on Industry Applications, 2016, 52, 3348-3356.	4.9	46
74	Permanent-Magnet Magnetization State Estimation Using High-Frequency Signal Injection. IEEE Transactions on Industry Applications, 2016, 52, 2930-2940.	4.9	26
75	Sensitivity Analysis of High-Frequency Signal Injection-Based Temperature Estimation Methods to Machine Assembling Tolerances. IEEE Transactions on Industry Applications, 2016, 52, 4798-4805.	4.9	18
76	Influence of PM coating on PM magnetization state estimation methods based on magnetoresistive effect. , 2016, , .		3
77	Permanent magnet temperature distribution estimation in PMSMs using BEMF harmonics. , 2015, , .		9
78	Sensitivity analysis of high frequency signal injection based temperature estimation methods to machine, assembling tolerances. , 2015, , .		3
79	Operation and control of MMCs using cells with power transfer capability. , 2015, , .		23
80	Wireless permanent magnet temperature & field distribution measurement system for IPMSMs. , 2015, , .		41
81	Permanent magnet magnetization state estimation using high frequency signal injection. , 2015, , .		3
82	Islanding Detection in Three-Phase and Single-Phase Systems Using Pulsating High-Frequency Signal Injection. IEEE Transactions on Power Electronics, 2015, 30, 6672-6683.	7.9	24
83	Permanent-Magnet Temperature Estimation in PMSMs Using Pulsating High-Frequency Current Injection. IEEE Transactions on Industry Applications, 2015, 51, 3159-3168.	4.9	123
84	PMSM Magnetization State Estimation Based on Stator-Reflected PM Resistance Using High-Frequency Signal Injection. IEEE Transactions on Industry Applications, 2015, 51, 3800-3810.	4.9	55
85	Strategies for the Connection of Distributed Power Generation Units to Distorted Networks. IEEE Transactions on Industry Applications, 2015, 51, 4111-4120.	4.9	8
86	Virtual admittance loop for voltage harmonic compensation in microgrids. , 2015, , .		1
87	Zero/low speed magnet magnetization state estimation using high frequency injection for a fractional slot variable flux-intensifying interior permanent magnet synchronous machine. , 2014, , .		14
88	Variable-Flux Machine Torque Estimation and Pulsating Torque Mitigation During Magnetization State Manipulation. IEEE Transactions on Industry Applications, 2014, 50, 3414-3422.	4.9	54
89	PMSM magnetization state estimation based on stator-reflected PM resistance using high frequency signal injection. , 2014, , .		6
90	Quadrature signal generator based on all-pass filter for single-phase synchronization. , 2014, , .		8

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91	Permanent magnet temperature estimation in PMSMs using pulsating high frequency current injection. , 2014, , .		12
92	Strategies for the connection of distributed power generation units to distorted networks. , 2014, , .		1
93	Active Islanding Detection for Multiple Parallel-Connected Inverter-Based Distributed Generators Using High-Frequency Signal Injection. IEEE Transactions on Power Electronics, 2014, 29, 1192-1199.	7.9	106
94	Islanding detection in three-phase and single-phase systems using pulsating high frequency signal injection. , 2014, , .		0
95	Coordinated Operation of Parallel-Connected Inverters for Active Islanding Detection Using High-Frequency Signal Injection. IEEE Transactions on Industry Applications, 2014, 50, 3476-3484.	4.9	31
96	Sensorless Control of Doubly Fed Induction Generators Based on Stator High-Frequency Signal Injection. IEEE Transactions on Industry Applications, 2014, 50, 3382-3391.	4.9	54
97	Sensorless Control of Doubly Fed Induction Generators Based on Rotor High-Frequency Signal Injection. IEEE Transactions on Industry Applications, 2013, 49, 2593-2601.	4.9	40
98	Sensorless control of doubly-fed induction generators based on stator high frequency signal injection. , 2013, , .		1
99	Dynamic Behavior of Current Controllers for Selective Harmonic Compensation in Three-Phase Active Power Filters. IEEE Transactions on Industry Applications, 2013, 49, 1411-1420.	4.9	66
100	Synchronization in highly distorted three-phase grids using selective notch filters. , 2013, , .		12
101	Secondary Resistive Losses With High-Frequency Injection-Based Self-Sensing in IPM Machines. IEEE Transactions on Industry Applications, 2013, 49, 1499-1507.	4.9	24
102	Position Self-Sensing Evaluation of a FI-IPMSM Based on High-Frequency Signal Injection Methods. IEEE Transactions on Industry Applications, 2013, 49, 880-888.	4.9	63
103	Coordinated operation of parallel-connected inverters for active islanding detection using high frequency signal injection. , 2013, , .		6
104	Variable flux machine torque estimation and pulsating torque mitigation during magnetization state manipulation. , 2013, , .		6
105	Islanding detection in grid-connected power converters using harmonics due to the non-ideal behavior of the inverter. , 2013, , .		9
106	Magnet Temperature Estimation in Surface PM Machines During Six-Step Operation. IEEE Transactions on Industry Applications, 2012, 48, 2353-2361.	4.9	59
107	Sensorless control of doubly-fed induction generators based on rotor high frequency signal injection. , 2012, , .		7
108	Active islanding detection for multiple parallel- connected inverter-based distributed generators using high frequency signal injection. , 2012, , .		10

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109	Grid synchronization of three-phase converters using cascaded complex vector filter PLL. , 2012, , .		15
110	Active Islanding Detection Using High-Frequency Signal Injection. IEEE Transactions on Industry Applications, 2012, 48, 1588-1597.	4.9	155
111	A semiconductor H-bridge connection to avoid saturation in current transformers for differential protection. Electric Power Systems Research, 2012, 84, 120-127.	3.6	2
112	Secondary resistive losses with high-frequency injection-based self-sensing in IPM machines. , 2011, , .		19
113	Dynamic behavior of current controllers for selective harmonic compensation in three-phase active power filters. , 2011, , .		9
114	On the use of high frequency inductance vs. high frequency resistance for sensorless control of AC machines. , 2011, , .		18
115	Magnet temperature estimation in surface PM machines during six-step operation. , 2011, , .		4
116	Sensorless control of surface permanent magnet synchronous machines using the high frequency resistance. , 2011, , .		1
117	Active islanding detection using high frequency signal injection. , 2011, , .		15
118	Temperature Issues in Saliency-Tracking-Based Sensorless Methods for PM Synchronous Machines. IEEE Transactions on Industry Applications, 2011, 47, 1352-1360.	4.9	41
119	Impact of Saturation, Current Command Selection, and Leakage Flux on the Performance of Sensorless-Controlled Three-Pole Active Magnetic Bearings. IEEE Transactions on Industry Applications, 2011, 47, 1732-1740.	4.9	5
120	Novel Design of Flux-Intensifying Interior Permanent Magnet Synchronous Machine Suitable for Self-Sensing Control at Very Low Speed and Power Conversion. IEEE Transactions on Industry Applications, 2011, 47, 2004-2012.	4.9	66
121	Position self-sensing evaluation of a FIPMSM based on high frequency signal injection methods. , 2011, , .		1
122	Analysis of grid connected converters using a feed-forward disturbance decoupling current control. , 2010, , .		3
123	Impact of saturation and current command selection on the performance of sensorless controlled three-pole active magnetic bearings. , 2010, , .		0
124	Temperature issues in saliency-tracking based sensorless methods for PM synchronous machines. , 2010, , .		5
125	Current sampling and measurement in PWM operated AC drives and power converters. , 2010, , .		28
126	Modeling and Adaptive Decoupling of High-Frequency Resistance and Temperature Effects in Carrier-Based Sensorless Control of PM Synchronous Machines. IEEE Transactions on Industry Applications, 2010, 46, 139-149.	4.9	104



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127	Carrier-Signal Selection for Sensorless Control of PM Synchronous Machines at Zero and Very Low Speeds. IEEE Transactions on Industry Applications, 2010, 46, 167-178.	4.9	255
128	Magnet Temperature Estimation in Surface PM Machines Using High-Frequency Signal Injection. IEEE Transactions on Industry Applications, 2010, 46, 1468-1475.	4.9	139
129	Sensorless Control of Three-Pole Active Magnetic Bearings Using Saliency-Tracking-Based Methods. IEEE Transactions on Industry Applications, 2010, 46, 1476-1484.	4.9	21
130	Self-Sensing Comparison of Fractional Slot Pitch Winding Versus Distributed Winding for FW- and FI-IPMSMs Based on Carrier Signal Injection at Very Low Speed. IEEE Transactions on Industry Applications, 2010, 46, 2467-2474.	4.9	14
131	Novel design of flux-intensifying interior permanent magnet synchronous machine suitable for power conversion and self-sensing control at very low speed. , 2010, , .		15
132	Carrier signal injection alternatives for sensorless control of active magnetic bearings. , 2010, , .		9
133	Magnet temperature estimation in surface PM machines using high frequency signal injection. , 2009, , .		5
134	An improved control scheme based in droop characteristic control for microgrid converters. , 2009, , .		12
135	Sensorless control of three-pole active magnetic bearings using saliency-tracking based methods. , 2009, , .		3
136	Self-sensing comparison of fractional slot pitch winding vs. distributed winding for FW- and FI-IPMSMs based on carrier signal injection at very low speed. , 2009, , .		9
137	Interior Permanent-Magnet Synchronous Motor Design for Improving Self-Sensing Performance at Very Low Speed. IEEE Transactions on Industry Applications, 2009, 45, 1939-1946.	4.9	54
138	Improved model of photovoltaic sources considering ambient temperature and solar irradiation. , 2009, , .		10
139	A comparative analysis of pulsating vs. rotating vector carrier signal injection-based sensorless control. IEEE Applied Power Electronics Conference and Exposition, 2008, , .	0.0	79
140	Carrier Signal Selection for Sensorless Control of PM Synchronous Machines at Zero and Very Low Speeds. , 2008, , .		32
141	Measurement and Adaptive Decoupling of Cross-Saturation Effects and Secondary Saliencies in Sensorless Controlled IPM Synchronous Machines. IEEE Transactions on Industry Applications, 2008, 44, 1758-1767.	4.9	131
142	Modeling and Adaptive Decoupling of Transient Resistance and Temperature Effects in Carrier-Based Sensorless Control of PM Synchronous Machines. , 2008, , .		21
143	Automatic Self-Commissioning for Secondary-Saliencies Decoupling in Sensorless-Controlled AC Machines Using Structured Neural Networks. , 2007, , .		17
144	Measurement and Adaptive Decoupling of Cross-Saturation Effects and Secondary Saliencies in Sensorless-Controlled IPM Synchronous Machines. Conference Record - IAS Annual Meeting (IEEE) Tj ETQq0 0 0 rgBT, Overlook 10 Tf 00		

#	ARTICLE	IF	CITATIONS
145	Measurement and Adaptive Decoupling of Cross-Saturation Effects and Secondary Saliencies in Sensorless-Controlled IPM Synchronous Machines. Conference Record - IAS Annual Meeting (IEEE) Tj ETQq1 1 0.784314 rgBTi/Overlook	0.784314	14
146	Accuracy, Bandwidth, and Stability Limits of Carrier-Signal-Injection-Based Sensorless Control Methods. IEEE Transactions on Industry Applications, 2007, 43, 990-1000.	4.9	97
147	Accuracy and Bandwidth Limits of Carrier Signal Injection-Based Sensorless Control Methods. Conference Record - IAS Annual Meeting (IEEE Industry Applications Society), 2006, , .	0.0	14