Gerardo Escobar

List of Publications by Citations

146 papers	3,525 citations	26 h-index	57 g-index
175 ext. papers	4,460 ext. citations	5.2 avg, IF	5.17 L-index

#	Paper	IF	Citations
146	Interconnection and damping assignment passivity-based control of port-controlled Hamiltonian systems. *Automatica*, **2002**, 38, 585-596	5.7	935
145	Repetitive-Based Controller for a UPS Inverter to Compensate Unbalance and Harmonic Distortion. *IEEE Transactions on Industrial Electronics*, **2007**, 54, 504-510	8.9	176
144	A Hamiltonian viewpoint in the modeling of switching power converters. *Automatica*, **1999**, 35, 445-452	5.7	153
143	Analysis and design of direct power control (DPC) for a three phase synchronous rectifier via output regulation subspaces. *IEEE Transactions on Power Electronics*, **2003**, 18, 823-830	7.2	123
142	An experimental comparison of several nonlinear controllers for power converters. *IEEE Control Systems*, **1999**, 19, 66-82	2.9	123
141	An Adaptive Control for UPS to Compensate Unbalance and Harmonic Distortion Using a Combined Capacitor/Load Current Sensing. *IEEE Transactions on Industrial Electronics*, **2007**, 54, 839-847	8.9	104
140	An adaptive passivity-based controller for a unity power factor rectifier. *IEEE Transactions on Control Systems Technology*, **2001**, 9, 637-644	4.8	95
139	. *IEEE Transactions on Control Systems Technology*, **2010**, 18, 688-698	4.8	87
138	A Comparative Performance Study of an Interleaved Boost Converter Using Commercial Si and SiC Diodes for PV Applications. *IEEE Transactions on Power Electronics*, **2013**, 28, 289-299	7.2	85
137	A robustly stable output feedback saturated controller for the boost DC-to-DC converter. *Systems and Control Letters*, **2000**, 40, 1-8	2.4	83
136	An adaptive controller in stationary reference frame for D-statcom in unbalanced operation. *IEEE Transactions on Industrial Electronics*, **2004**, 51, 401-409	8.9	82
135	. *IEEE Transactions on Power Electronics*, **2012**, 27, 2835-2845	7.2	80
134	A Repetitive-Based Controller for the Compensation of $6ellpm 1$ Harmonic Components. *IEEE Transactions on Industrial Electronics*, **2008**, 55, 3150-3158	8.9	80
133	A Single-Phase Asymmetrical T-Type Five-Level Transformerless PV Inverter. *IEEE Journal of Emerging and Selected Topics in Power Electronics*, **2018**, 6, 140-150	5.6	67
132	Fixed-Reference-Frame Phase-Locked Loop for Grid Synchronization Under Unbalanced Operation. *IEEE Transactions on Industrial Electronics*, **2011**, 58, 1943-1951	8.9	67
131	. *IEEE Transactions on Industrial Electronics*, **2013**, 60, 5019-5028	8.9	61
130	A Negative Feedback Repetitive Control Scheme for Harmonic Compensation. *IEEE Transactions on Industrial Electronics*, **2006**, 53, 1383-1386	8.9	50

129	. *IEEE Transactions on Industrial Electronics*, **2007**, 54, 567-573	8.9	46
128	Output-feedback global stabilization of a nonlinear benchmark system using a saturated passivity-based controller. *IEEE Transactions on Control Systems Technology*, **1999**, 7, 289-293	4.8	45
127	. *IEEE Transactions on Automatic Control*, **2001**, 46, 1209-1222	5.9	43
126	Regulation and tracking of the nonholonomic double integrator: A field-oriented control approach. *Automatica*, **1998**, 34, 125-131	5.7	38
125	Dissipativity-based adaptive and robust control of UPS in unbalanced operation. *IEEE Transactions on Power Electronics*, **2003**, 18, 1056-1062	7.2	38
124	Analysis and experimentation of nonlinear adaptive controllers for the series resonant converter. *IEEE Transactions on Power Electronics*, **2000**, 15, 536-544	7.2	36
123	Reactive power and imbalance compensation using STATCOM with dissipativity-based control. *IEEE Transactions on Control Systems Technology*, **2001**, 9, 718-727	4.8	33
122	Filters With Linear-Phase Properties for Repetitive Feedback. *IEEE Transactions on Industrial Electronics*, **2014**, 61, 405-413	8.9	32
121	A repetitive-based controller for the boost converter to compensate the harmonic distortion of the output Voltage. *IEEE Transactions on Control Systems Technology*, **2005**, 13, 500-508	4.8	32
120	A PWM method for single-phase cascade multilevel inverters to reduce leakage ground current in transformerless PV systems. *International Transactions on Electrical Energy Systems*, **2016**, 26, 2353-2369	2.2	26
119	Direct Power Control of a Three-Phase Rectifier Based on Positive Sequence Detection. *IEEE Transactions on Industrial Electronics*, **2014**, 61, 4084-4092	8.9	26
118	A Model-Based Controller for A Three-Phase Four-Wire Shunt Active Filter With Compensation of the Neutral Line Current. *IEEE Transactions on Power Electronics*, **2007**, 22, 2261-2270	7.2	25
117	Multisampling Maximum Power Point Tracker (MS-MPPT) to Compensate Irradiance and Temperature Changes. *IEEE Transactions on Sustainable Energy*, **2017**, 8, 1096-1105	8.2	23
116	Implementation of a $6n pm 1$ Repetitive Controller Subject to Fractional Delays. *IEEE Transactions on Industrial Electronics*, **2015**, 62, 444-452	8.9	23
115	An Adaptive Controller for the Shunt Active Filter Considering a Dynamic Load and the Line Impedance. *IEEE Transactions on Control Systems Technology*, **2009**, 17, 458-464	4.8	23
114	Dissipativity-based adaptive and robust control of UPS. *IEEE Transactions on Industrial Electronics*, **2001**, 48, 334-343	8.9	19
113	H5-HERIC based transformerless multilevel inverter for single-phase grid connected PV systems **2015**,		18
112	A Repetitive-Based Controller for a Power Factor Precompensator. *IEEE Transactions on Circuits and Systems I: Regular Papers*, **2007**, 54, 1968-1976	3.9	18

111	. *IEEE Transactions on Circuits and Systems Part 2: Express Briefs*, **2005**, 52, 466-470		18
110	A family of switching control strategies for the reduction of torque ripple in DTC. *IEEE Transactions on Control Systems Technology*, **2003**, 11, 933-939	4.8	16
109	A controller for a boost converter with harmonic reduction. *IEEE Transactions on Control Systems Technology*, **2004**, 12, 717-726	4.8	15
108	Maximum power point searching method for partial shaded PV strings **2012**,		14
107	Modeling of a three level converter used in a synchronous rectifier application		13
106	A comparative analysis of grid-tied single-phase transformerless five-level NPC-based inverters for photovoltaic applications **2016**,		12
105	Transformerless single-phase multilevel inverter for grid tied photovoltaic systems **2014**,		12
104	Practical implementation of an interleaved boost converter using SiC diodes for PV applications **2011**,		12
103	Control of a three level converter used as a synchronous rectifier		12
102	Effects of modulation techniques on leakage ground currents in a grid-tied transformerless HB-NPC inverter. *IET Renewable Power Generation*, **2019**, 13, 1250-1260	2.9	11
101	Analysis and experimental validation of a controller for a single-phase active power filter based on a 3L-NPC topology. *International Transactions on Electrical Energy Systems*, **2017**, 27, e2385	2.2	11
100	Compensation of Variable Fractional Delays in the $6kpm 1$ Repetitive Controller. *IEEE Transactions on Industrial Electronics*, **2015**, 62, 6448-6456	8.9	11
99	Performance evaluation of full SiC switching cell in an interleaved boost converter for PV applications **2011**,		11
98	Reactive Power Control for Single-Phase Grid-Tie Inverters Using Quasi-Sinusoidal Waveform. *IEEE Transactions on Sustainable Energy*, **2018**, 9, 3-11	8.2	10
97	A comparative performance study of an interleaved boost converter using commercialized Si and SiC diodes for PV applications **2011**,		10
96	Optimized Direct Power Control Strategy using Output Regulation Subspaces and Pulse Width Modulation. *Industrial Electronics Society (IECON), Annual Conference of IEEE*, **2006**,		10
95	A switching control strategy based on output regulation subspaces for the control of induction motors using a three-level inverter. *IEEE Power Electronics Letters*, **2003**, 1, 29-32		10
94	An improved algorithm for fault detection and location in multi-terminal transmission lines based on wavelet correlation modes. *Electric Power Systems Research*, **2021**, 192, 106953	3.5	10

93	Model based controller for an LCL coupling filter for transformerless grid connected inverters in PV applications **2013**,		9
92	Phase-locked loop for grid synchronization under unbalanced operation and harmonic distortion **2011**,		9
91	Regulation and compensation of source harmonics for the boost converter-based power factor precompensator		9
90	A Discrete-Time Frequency-Locked Loop for Single-Phase Grid Synchronization Under Harmonic Distortion. *IEEE Transactions on Power Electronics*, **2020**, 35, 4647-4657	7.2	9
89	Modelling and control of a hybrid power filter to compensate harmonic distortion under unbalanced operation. *IET Power Electronics*, **2017**, 10, 782-791	2.2	8
88	Inverter-side current control of a single-phase inverter grid connected trough an LCL filter **2014**,		8
87	PV current sensorless MPPT for a single-phase PV inverter **2011**,		8
86	A Fast-Dynamic Control Scheme for a Power-Electronics-Based PV Emulator. *IEEE Journal of Photovoltaics*, **2021**, 11, 485-495	3.7	8
85	Comparative evaluation of L and LCL filters in transformerless grid tied converters for active power injection **2014**,		7
84	Control of single-phase inverter connected to the grid through an LCL filter **2012**,		7
83	Fixed reference frame phase-locked loop (FRF-PLL) for unbalanced line voltage conditions. *Power Electronics Specialist Conference (PESC), IEEE*, **2008**,		7
82	An adaptive direct power control for three-phase pwm rectifier in the unbalanced case. *Power Electronics Specialist Conference (PESC), IEEE*, **2008**,		7
81	. *IEEE Transactions on Industrial Electronics*, **2021**, 68, 5966-5977	8.9	7
80	Design of an inverter-side current reference and controller for a single-phase LCL-based grid-connected inverter. *International Transactions on Electrical Energy Systems*, **2018**, 28, e2476	2.2	7
79	Analysis and Validation for an Inverter-side Current Controller in LCL Grid-connected Power Systems. *Journal of Modern Power Systems and Clean Energy*, **2020**, 8, 387-398	4	6
78	A modified repetitive-based controller for an active filter to compensate harmonics 6k+/1. *Power Electronics Specialist Conference (PESC), IEEE*, **2008**,		6
77	. *IEEE Transactions on Smart Grid*, **2020**, 11, 2182-2194	10.7	6
76	Mitigation of Leakage-Ground Currents in Transformerless Grid-Tied Inverters via Virtual-Ground Connection. *IEEE Journal of Emerging and Selected Topics in Power Electronics*, **2020**, 8, 3111-3123	5.6	6

75	A combined controller for a PV simulator **2014**,		5
74	A fast dynamic photovoltaic simulator with instantaneous output impedance matching controller **2017**,		5
73	A model-based controller for a DC-DC boost converter with an LCL input filter **2015**,		5
72	Cascade three-phase PLL for unbalance and harmonic distortion operation (CSRF-PLL) **2014**,		5
71	Implementation of repetitive controllers subject to fractional delays **2013**,		5
70	Modifications to repetitive-based controllers using FIR filters for practical implementation **2009**,		5
69	A model-based controller for the cascade h-bridge multilevel converter used as a shunt active filter		5
68	A repetitive based controller for a shunt active filter to compensate for reactive power and harmonic distortion		5
67	Nonlinear Stability Analysis of the Conventional SRF-PLL and Enhanced SRF-EPLL. *IEEE Access*, **2021**, 9, 59446-59455	3.5	5
66	Grid Synchronisation Based on Frequency-Locked Loop Schemes. *Advances in Industrial Control*, **2012**, 133-159	0.3	4
65	A repetitive-based controller for the compensation of 6l ± 1 harmonic components **2007**,		4
64	A Model-Based Controller for the Cascade Multilevel Converter Used as a Shunt Active Filter. *Conference Record - IAS Annual Meeting (IEEE Industry Applications Society)*, **2007**,		4
63			4
62	. *IEEE Transactions on Industrial Electronics*, **2021**, 68, 6750-6761	8.9	4
61	Active Power Injection Control for Power Converters Connected to the Grid Through an L Filter. *Electric Power Components and Systems*, **2017**, 45, 660-671	1	3
60	Data-driven short-circuit detection and location in microgrids using micro-synchrophasors. *IET Generation, Transmission and Distribution*, **2020**, 14, 1353-1365	2.5	3
59	A comparative analysis of the 5L-AH6 and 5L-SC topologies for grid-connected transformer-less multilevel inverters for PV systems **2016**,		3
58	A generalized model-based controller for the n-level CHB multilevel converter used as a shunt active filter **2015**,		3

57	Controller for a reduced output current ripple DC-DC buck converter **2015**,		3
56	Multi-sampling maximum power point tracker (MS-MPPT) to compensate irradiation and temperature changes **2014**,		3
55	Adaptive PI Stabilisation of Switched Power Converters Described by Port-Hamiltonian Models. *Advances in Industrial Control*, **2012**, 355-388	0.3	3
54	A model-based controller for a half-bridge NPC used as an active power filter **2013**,		3
53	A model-based controller for a hybrid power filter to compensate harmonic distortion in unbalanced operation. *Power Electronics Specialist Conference (PESC), IEEE*, **2008**,		3
52	Power factor correction with an active filter using a repetitive controller **2006**,		3
51	Digital Implementation Issues for a Three-Phase Power Converter Development Using a Repetitive Control Scheme **2007**,		3
50	A novel model-based controller for a three-phase four-wire shunt active filter		3
49	An adaptive controller for a boost converter with harmonic reduction		3
48	An adaptive control for UPS to compensate unbalance and harmonic distortion using a combined capacitor/load current approach		3
47	To tune or not to tune?: A monitoring procedure to decide. *Automatica*, **1992**, 28, 179-184	5.7	3
46	. *IEEE Transactions on Industrial Electronics*, **2021**, 68, 175-185	8.9	3
45	Nonlinear Stabilizing Control Design for DCDC Converters Using Lifted Models. *IEEE Transactions on Industrial Electronics*, **2021**, 68, 10772-10783	8.9	3
44	Analysis of the Input Current-Ripple in the Series-Capacitor Boost Converter. *IEEE Transactions on Industrial Electronics*, **2021**, 68, 10303-10308	8.9	3
43	Model based current mode control design and experimental validation for a (3phi) rectifier under unbalanced grid voltage conditions. *Journal of Modern Power Systems and Clean Energy*, **2018**, 6, 777-790	4	2
42	A modulation scheme for a 3L-NPC converter in transformerless PV applications **2015**,		2
41	A model-based controller of a three-level stacked-cell grid connected converter **2015**,		2
40	A model-based controller for a single-phase active filter using a full bridge NPC **2014**,		2

39	Robust adaptive PI stabilization of a quadratic converter: Experimental results **2010**,		2
38	A direct power control for three-phase rectifier based on positive sequence detection **2011**,		2
37	A model-based controller for a three-phase four-leg shunt active filter with homopolar current compensation **2008**,		2
36	On ultimate boundedness around non-assignable equilibria of linear time-invariant systems. *Automatica*, **2008**, 44, 286-288	5.7	2
35	A repetitive-based controller in stationary reference frame for D-Statcom in unbalanced operation **2006**,		2
34	A hybrid active filter implementation of an overvoltage suppression scheme **2004**,		2
33	Passivity-based controller for harmonic compensation in distribution lines with nonlinear loads		2
32	Passivity-based controller for a three phase synchronous rectifier		2
31	An Architecture for Level-3 EV Battery Charger Stations Using Integrated Solid State Transformer (I-SST) **2020**,		2
30	Control Design and Experimental Validation of a HB-NPC as a Shunt Active Power Filter. *Energies*, **2020**, 13, 1691	3.1	1
29	A current controller for the modular multilevel converter operating under distorted grid voltage. *International Transactions on Electrical Energy Systems*, **2018**, 28, e2524	2.2	1
28	A phase-locked loop with saturated estimator for single-phase grid synchronization **2016**,		1
27	A combined method for anti-islanding in PV inverters **2016**,		1
26	A single-phase asymmetrical NPC inverter topology **2016**,		1
25	An improved current mode control of a three-phase rectifier based on positive-sequence detection **2015**,		1
24	Current control of a three-phase inverter grid connected through an LCL filter **2015**,		1
23	A current mode control for a single phase full bridge Power Factor Compensator **2014**,		1
22	An adaptive controller for a shunt active filter considering load and line impedances **2008**,		1

21	Practical modifications of a repetitive-based controller aimed to compensate 6⊞ 1 harmonics **2008** ,		1
20	On the passivity properties of a new family of repetitive (hyperbolic) controllers. *International Journal of Control*, **2008**, 81, 1424-1433	1.5	1
19	Power factor compensation of a controlled rectifier with non-sinusoidal generator voltage using passive components **2008**,		1
18	A repetitive-based controller for a single-phase shunt active filter **2006**,		1
17	A model-based controller for a three-phase four-wire shunt active filter with compensation of the neutral line current **2006**,		1
16	A Repetitive-Based Controller for a Power Factor Precompensator With Harmonic Compensation		1
15	From Real to Complex FLL With Unbalance and Harmonic Distortion Compensation. *IEEE Access*, **2021**, 9, 158710-158725	3.5	1
14	Reduced output current ripple DC-DC buck converter control **2016**,		1
13	A model-based controller for a single-phase n-level CHB multilevel converter. *International Journal of Electrical Power and Energy Systems*, **2021**, 125, 106454	5.1	1
12	A Modulation Strategy for a Single-Phase Transformerless Multilevel Inverter with Dual Bidirectional Switch **2018**,		1
11	Voltage and Current Switching-Ripple Cancelation in the Double Dual Boost Converter **2018**,		1
10	Step-Up seven-level neutral-point-clamped inverter based topology for TL-PVS. *IET Power Electronics*, **2020**, 13, 2847-2853	2.2	0
9	. *IEEE Transactions on Industrial Electronics*, **2021**, 1-1	8.9	0
8	Power Grid Dynamic Performance Enhancement via STATCOM Data-Driven Control. *Mathematics*, **2021**, 9, 2361	2.3	0
7	Differential and common-mode model-based controller for the double-dual buck transformerless inverter. *International Journal of Electrical Power and Energy Systems*, **2021**, 131, 107065	5.1	0
6	A model-based controller for a single-phase grid-tied modular multilevel inverter with regulation and balance of energy. *International Transactions on Electrical Energy Systems*, **2019**, 29, e12030	2.2	
5	. *IEEE Access*, **2021**, 9, 168004-168014	3.5	
4	DC-Link capacitors voltage balance in an HB-NPC five-level grid-tied inverter via the common-mode control component. *IEEE Journal of Emerging and Selected Topics in Power Electronics*, **2021**, 1-1	5.6	

3	. *IEEE Transactions on Power Delivery*, **2021**, 36, 1640-1650	4.3
2	A Single-Phase Globally Stable Frequency-Locked Loop Based on the Second-Order Harmonic Oscillator Model. *Electronics (Switzerland)*, **2021**, 10, 525	2.6
1	Direct Output-Voltage Control of Non-Minimum Phase Higher-Order DC-DC Converters. *IEEE Transactions on Industrial Electronics*, **2022**, 1-1	8.9