Hernán De Battista

List of Publications by Year
in descending order

99 papers	1,585 citations	236925 25 h-index	345221 36 g-index
100 all docs	100 docs citations	100 times ranked	1200 citing authors

#	Article	IF	Citations
1	Dynamical sliding mode power control of wind driven induction generators. IEEE Transactions on Energy Conversion, 2000, 15, 451-457.	5.2	103
2	Sliding mode control of wind energy systems with DOIG-power efficiency and torsional dynamics optimization. IEEE Transactions on Power Systems, 2000, 15, 728-734.	6.5	72
3	Power conditioning for a wind–hydrogen energy system. Journal of Power Sources, 2006, 155, 478-486.	7.8	65
4	Dynamical Variable Structure Controller for Power Regulation of Wind Energy Conversion Systems. IEEE Transactions on Energy Conversion, 2004, 19, 756-763.	5.2	58
5	Safety Auxiliary Feedback Element for the Artificial Pancreas in Type 1 Diabetes. IEEE Transactions on Biomedical Engineering, 2013, 60, 2113-2122.	4.2	58
6	LPV Wind Turbine Control With Anti-Windup Features Covering the Complete Wind Speed Range. IEEE Transactions on Energy Conversion, 2014, 29, 259-266.	5.2	57
7	Stability preserving maps for finite-time convergence: Super-twisting sliding-mode algorithm. Automatica, 2013, 49, 534-539.	5.0	50
8	Hydrogen production from idle generation capacity of wind turbines. International Journal of Hydrogen Energy, 2008, 33, 4291-4300.	7.1	49
9	Automatic regulatory control in type 1 diabetes without carbohydrate counting. Control Engineering Practice, 2018, 74, 22-32.	5.5	49
10	Optimal sizing of a grid-assisted wind-hydrogen system. Energy Conversion and Management, 2018, 166, 402-408.	9.2	46
11	Limiting interactions in decentralized control of MIMO systems. Journal of Process Control, 2006, 16, 473-483.	3.3	45
12	Postprandial blood glucose control using a hybrid adaptive PD controller with insulin-on-board limitation. Biomedical Signal Processing and Control, 2013, 8, 724-732.	5.7	38
13	Comprehensive analysis of a metabolic model for lipid production in Rhodosporidium toruloides. Journal of Biotechnology, 2018, 280, 11-18.	3.8	35
14	Optimal gain-scheduled control of fixed-speed active stall wind turbines. IET Renewable Power Generation, 2008, 2, 228-238.	3.1	34
15	Reaction rate reconstruction from biomass concentration measurement in bioreactors using modified second-order sliding mode algorithms. Bioprocess and Biosystems Engineering, 2012, 35, 1615-1625.	3.4	34
16	LPV-based active power control of wind turbines covering the complete wind speed range. Renewable Energy, 2016, 99, 996-1007.	8.9	33
17	Sliding mode scheme for adaptive specific growth rate control in biotechnological fed-batch processes. International Journal of Control, 2005, 78, 128-141.	1.9	32
18	Postprandial response improvement via safety layer in closed-loop blood glucose controllers. Biomedical Signal Processing and Control, 2015, 16, 80-87.	5.7	32

#	ARTICLE	IF	CITATIONS
19	Robust exact differentiators with predefined convergence time. Automatica, 2021, 134, 109858.	5.0	31
20	Smooth sliding-mode observers for specific growth rate and substrate from biomass measurement. Journal of Process Control, 2009, 19, 1314-1323.	3.3	30
21	Nonlinear PI control of fed-batch processes for growth rate regulation. Journal of Process Control, 2012, 22, 789-797.	3.3	29
22	Specific growth rate estimation in (fed-)batch bioreactors using second-order sliding observers. Journal of Process Control, 2011, 21, 1049-1055.	3.3	28
23	Control of a grid-assisted wind-powered hydrogen production system. International Journal of Hydrogen Energy, 2010, 35, 5786-5792.	7.1	26
24	Second-order sliding mode observer for multiple kinetic rates estimation in bioprocesses. Control Engineering Practice, 2013, 21, 1259-1265.	5.5	26
25	Artificial Pancreas: Clinical Study in Latin America Without Premeal Insulin Boluses. Journal of Diabetes Science and Technology, 2018, 12, 914-925.	2.2	26
26	Evaluation of hydrogen production capabilities of a grid-assisted wind–H2 system. Applied Energy, 2011, 88, 1857-1863.	10.1	24
27	Power dispatch assessment of a wind farm and a hydropower plant: A case study in Argentina. Energy Conversion and Management, 2019, 180, 391-400.	9.2	24
28	Globally stabilizing control of fed-batch processes with Haldane kinetics using growth rate estimation feedback. Journal of Process Control, 2006, 16, 865-875.	3.3	23
29	Harmonic series compensators in power systems: their control via sliding mode. IEEE Transactions on Control Systems Technology, 2000, 8, 939-947.	5.2	21
30	New concept in maximum power tracking for the control of a photovoltaic/hydrogen system. International Journal of Hydrogen Energy, 2012, 37, 14951-14958.	7.1	20
31	Advanced Control for Constrained Processes and Systems. , 2011, , .		18
32	Hybrid control of a photovoltaic-hydrogen energy system. International Journal of Hydrogen Energy, 2008, 33, 3455-3459.	7.1	17
33	Artificial pancreas clinical trials: Moving towards closed-loop control using insulin-on-board constraints. Biomedical Signal Processing and Control, 2018, 45, 1-9.	5.7	17
34	Sliding mode observer for biomass estimation in a biohydrogen production process. International Journal of Hydrogen Energy, 2012, 37, 10089-10094.	7.1	15
35	Energy-based approach to the output feedback control of wind energy systems. International Journal of Control, 2003, 76, 299-308.	1.9	14
36	Flexible power control of fuel cells using sliding mode techniques. Journal of Power Sources, 2012, 205, 281-289.	7.8	14

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37	Open-loop glucose control: Automatic IOB-based super-bolus feature for commercial insulin pumps. Computer Methods and Programs in Biomedicine, 2018, 159, 145-158.	4.7	14
38	Disturbance-tailored super-twisting algorithms: Properties and design framework. Automatica, 2019, 101, 318-329.	5.0	14
39	Hypoglycemia prevention: PID-type controller adaptation for glucose rate limiting in Artificial Pancreas System. Biomedical Signal Processing and Control, 2022, 71, 103106.	5.7	14
40	Comments on â€œVariable-Structure PID Control to Prevent Integrator Windupâ€. IEEE Transactions on Industrial Electronics, 2004, 51, 736-738.	7.9	13
41	Global stabilisation of continuous bioreactors: Tools for analysis and design of feeding laws. Automatica, 2018, 89, 340-348.	5.0	13
42	Potentials of constrained sliding mode control as an intervention guide to manage COVID19 spread. Biomedical Signal Processing and Control, 2021, 67, 102557.	5.7	13
43	Output overshoots in systems with integral action operating in sliding mode. Automatica, 1999, 35, 1141-1147.	5.0	12
44	Sliding mode compensation to preserve dynamic decoupling of stable systems. Chemical Engineering Science, 2007, 62, 4705-4716.	3.8	12
45	Second-order sliding mode observer for biomass concentration and growth rate estimation in batch photo-bioreactors. International Journal of Hydrogen Energy, 2014, 39, 8772-8779.	7.1	12
46	Geometric invariance and reference conditioning ideas for control of overflow metabolism. Journal of Process Control, 2009, 19, 1617-1626.	3.3	10
47	Artificial Pancreas: Evaluating the ARG Algorithm Without Meal Announcement. Journal of Diabetes Science and Technology, 2019, 13, 1035-1043.	2.2	10
48	Product-based sliding mode observer for biomass and growth rate estimation in Luedekingâ€"Piret like processes. Chemical Engineering Research and Design, 2016, 105, 24-30.	5.6	9
49	Wind turbine load analysis of a full range LPV controller. Renewable Energy, 2020, 145, 2741-2753.	8.9	9
50	Sliding Mode Compensation for Windup and Direction of Control Problems in Two-Inputâ‰Two-Output Proportionalâ‰Integral Controllers. Industrial & Engineering Chemistry Research, 2002, 41, 3179-3185.	3.7	7
51	Partial decoupling of non-minimum phase processes with bounds on the remaining coupling. Chemical Engineering Science, 2006, 61, 7706-7716.	3.8	7
52	Stabilisation of grid assistance for a renewable hydrogen generation system by minâ€projection strategy. IET Control Theory and Applications, 2016, 10, 183-189.	2.1	7
53	Remote Glucose Monitoring Platform for Multiple Simultaneous Patients at Coronavirus Disease 2019 Intensive Care Units: Case Report Including Adults and Children. Diabetes Technology and Therapeutics, 2021, 23, 471-473.	4.4	7
54	A new approach to reaching mode of VSS using trajectory planning. Automatica, 2001, 37, 763-767.	5.0	6

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55	Sliding Mode Conditioning for Constrained Processes. Industrial & Engineering Chemistry Research, 2004, 43, 8251-8256.	3.7	6
56	Model-based scale-up methodology for aerobic fed-batch bioprocesses: application to polyhydroxybutyrate (PHB) production. Bioprocess and Biosystems Engineering, 2015, 38, 1179-1190.	3.4	6
57	On the stability of DC-to-DC converters in photovoltaic systems undergoing sliding motions. International Journal of Systems Science, 2004, 35, 637-647.	5.5	5
58	VSS global performance improvement based on AW concepts. Automatica, 2005, 41, 1099-1103.	5.0	5
59	Low-cost sliding-mode power controller of a stand-alone photovoltaic module. , 2010, , .		5
60	Modeling and estimation of production rate for the production phase of non-growth-associated high cell density processes. Bioprocess and Biosystems Engineering, 2015, 38, 1903-1914.	3.4	5
61	Artificial Pancreas: First Clinical Trials in Argentina 1 1Financial support from Nuria/Cellex Foundations and the Center for Diabetes Technology, University of Virginia.. IFAC-PapersOnLine, 2017, 50, 7731-7736.	0.9	5
62	Growth rate maximization in fed-batch processes using high order sliding controllers and observers based on cell density measurement. Journal of Process Control, 2018, 68, 23-33.	3.3	5
63	Stability and control of a partial nitritation reactor with biomass retention. Chemical Engineering Research and Design, 2019, 144, 318-333.	5.6	5
64	Automatic glycemic regulation for the pediatric population based on switched control and time-varying IOB constraints: an in silico study. Medical and Biological Engineering and Computing, 2020, 58, 2325-2337.	2.8	5
65	Specific growth rate observer for the growing phase of a Polyhydroxybutyrate production process. Bioprocess and Biosystems Engineering, 2015, 38, 557-567.	3.4	4
66	Closed-loop growth-rate regulation in fed-batch dual-substrate processes with additive kinetics based on biomass concentration measurement. Journal of Process Control, 2016, 44, 14-22.	3.3	4
67	Performance analysis of a variable structure controller for power regulation of WECS operating in the stall region. International Journal of Energy Research, 2001, 25, 1345-1357.	4.5	3
68	Dynamical Systems Coordination via Sliding Mode Reference Conditioning*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 11086-11091.	0.4	3
69	Decentralized Control with Minimum Dissolved Oxygen Guaranties in Aerobic Fed-Batch Cultivations. Industrial & Engineering Chemistry Research, 2013, 52, 18014-18021.	3.7	3
70	Output Feedback Linearization of Turbidostats After Time Scaling. IEEE Transactions on Control Systems Technology, 2019, 27, 1668-1676.	5.2	3
71	In silico optimization of lipid production in Rhodosporidium toruloides by gene knockout strategies. IFAC-PapersOnLine, 2019, 52, 94-99.	0.9	3
72	Reference Conditioning Anti-windup for the Biomolecular Antithetic Controller. IFAC-PapersOnLine, 2019, 52, 156-162.	0.9	3

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73	Combination of cascade and feed-forward constrained control for stable partial nitritation with biomass retention. Journal of Process Control, 2020, 95, 55-66.	3.3	3
74	Predictive management approach for the coordination of wind and water-based power supplies. Energy, 2021, 219, 119535.	8.8	3
75	ADAPTIVE SLIDING MODE CONTROL OF FED-BATCH PROCESSES USING SPECIFIC GROWTH RATE ESTIMATION FEEDBACK. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 127-132.	0.4	2
76	On â€œFeedback Stabilization of Fed-Batch Bioreactors: Non-Monotonic Growth Kineticsâ€• Biotechnology Progress, 2008, 21, 651-652.	2.6	2
77	Collective Sliding-Mode Technique for Multivariable Bumpless Transfer. Industrial & Engineering Chemistry Research, 2008, 47, 2721-2727.	3.7	2
78	Sufficient conditions for state observability in multi-substrate bioprocesses with additive growth dynamics. IEEE Latin America Transactions, 2014, 12, 928-934.	1.6	2
79	Biomolecular signal tracker with fast time response.. IFAC-PapersOnLine, 2019, 52, 1-6.	0.9	2
80	A global optimization approach for sliding mode tuning and existence maps generation. International Journal of Dynamics and Control, 2021, 9, 658-670.	2.5	2
81	Constraints on the insulin infusion for artificial pancreas clinical trials. , 2017, , .		1
82	Analysis of the coordinated operation of a hydroelectric power plant and a wind farm in Patagonia. , 2017, , .		1
83	Artificial Pancreas: Hypoglycemia prevention via constraints in the glycemia rate of change. , 2017, , .		1
84	Unannounced meal analysis of the ARG algorithm. , 2019, , .		1
85	First Outpatient Clinical Trial of a Full Closed-Loop Artificial Pancreas System in South America. Journal of Diabetes Science and Technology, 2022, , 193229682210961.	2.2	1
86	A bumpless method for multivariable process controllers via sliding mode. , 0, , .		0
87	Specific Growth Rate Estimation in Bioreactors Using Second-Order Sliding Observers*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 251-256.	0.4	0
88	Specific Kinetic Rates Regulation in Multi-Substrate Fermentation Processes. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 42-47.	0.4	0
89	Production rate estimation in processes with high cell concentration. , 2015, , .		0
90	T1DM glycemic control: Effects of mixed meals and intra-patient variability in continuous insulin treatments. , 2015, , .		0

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91	Obstacle avoidance under strict path following. , 2017, , .		0
92	Plasma Glucose Prediction and its Application to Low Glucose Suspension Systems. , 2018, , .		0
93	A global optimization approach for non-linear sliding mode control analysis and design. IFAC-PapersOnLine, 2018, 51, 128-133.	0.9	0
94	Operating conditions analysis for a partial nitritation process with biomass retention.. IFAC-PapersOnLine, 2019, 52, 643-648.	0.9	0
95	Analysis of Transcriptional Feedback Strategy for Reducing Interaction in Gene Expression Processes. IFAC-PapersOnLine, 2019, 52, 526-531.	0.9	0
96	The ARG algorithm: clinical trials in Argentina. , 2019, , 79-104.		0
97	Glucose Control for T1D Patients Based on Interval Models. Lecture Notes in Electrical Engineering, 2021, , 336-344.	0.4	0
98	Pediatric glucose regulation without pre-meal insulin boluses: an approach based on switched control and time-varying IOB constraints. IFAC-PapersOnLine, 2020, 53, 16209-16214.	0.9	0
99	Control no-hÃbrido de glucemia ensayado en pacientes ambulatorios con Diabetes Tipo 1. RIAI - Revista Iberoamericana De Automatica E Informatica Industrial, 2022, 19, 318-329.	1.0	0