HernÃ¡n 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	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
2	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
3	Control no-híbrido 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
4	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
5	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
6	Predictive management approach for the coordination of wind and water-based power supplies. Energy, 2021, 219, 119535.	8.8	3
7	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
8	Robust exact differentiators with predefined convergence time. Automatica, 2021, 134, 109858.	5.0	31
9	Glucose Control for T1D Patients Based on Interval Models. Lecture Notes in Electrical Engineering, 2021, , 336-344.	0.4	0
10	Wind turbine load analysis of a full range LPV controller. Renewable Energy, 2020, 145, 2741-2753.	8.9	9
11	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
12	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
13	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
14	Output Feedback Linearization of Turbidostats After Time Scaling. IEEE Transactions on Control Systems Technology, 2019, 27, 1668-1676.	5.2	3
15	Artificial Pancreas: Evaluating the ARG Algorithm Without Meal Announcement. Journal of Diabetes Science and Technology, 2019, 13, 1035-1043.	2.2	10
16	Operating conditions analysis for a partial nitritation process with biomass retention.. IFAC-PapersOnLine, 2019, 52, 643-648.	0.9	0
17	In silico optimization of lipid production in Rhodosporidium toruloides by gene knockout strategies. IFAC-PapersOnLine, 2019, 52, 94-99.	0.9	3
18	Analysis of Transcriptional Feedback Strategy for Reducing Interaction in Gene Expression Processes. IFAC-PapersOnLine, 2019, 52, 526-531.	0.9	0

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19	Stability and control of a partial nitritation reactor with biomass retention. Chemical Engineering Research and Design, 2019, 144, 318-333.	5.6	5
20	The ARG algorithm: clinical trials in Argentina. , 2019, , 79-104.		0
21	Unannounced meal analysis of the ARG algorithm. , 2019, , .		1
22	Biomolecular signal tracker with fast time response.. IFAC-PapersOnLine, 2019, 52, 1-6.	0.9	2
23	Reference Conditioning Anti-windup for the Biomolecular Antithetic Controller. IFAC-PapersOnLine, 2019, 52, 156-162.	0.9	3
24	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
25	Disturbance-tailored super-twisting algorithms: Properties and design framework. Automatica, 2019, 101, 318-329.	5.0	14
26	Global stabilisation of continuous bioreactors: Tools for analysis and design of feeding laws. Automatica, 2018, 89, 340-348.	5.0	13
27	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
28	Automatic regulatory control in type 1 diabetes without carbohydrate counting. Control Engineering Practice, 2018, 74, 22-32.	5.5	49
29	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
30	Plasma Glucose Prediction and its Application to Low Glucose Suspension Systems. , 2018, , .		0
31	A global optimization approach for non-linear sliding mode control analysis and design. IFAC-PapersOnLine, 2018, 51, 128-133.	0.9	0
32	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
33	Comprehensive analysis of a metabolic model for lipid production in Rhodosporidium toruloides. Journal of Biotechnology, 2018, 280, 11-18.	3.8	35
34	Artificial Pancreas: Clinical Study in Latin America Without Premeal Insulin Boluses. Journal of Diabetes Science and Technology, 2018, 12, 914-925.	2.2	26
35	Optimal sizing of a grid-assisted wind-hydrogen system. Energy Conversion and Management, 2018, 166, 402-408.	9.2	46
36	Constraints on the insulin infusion for artificial pancreas clinical trials. , 2017, , .		1

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37	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
38	Obstacle avoidance under strict path following. , 2017, , .		0
39	Analysis of the coordinated operation of a hydroelectric power plant and a wind farm in Patagonia. , 2017, , .		1
40	Artificial Pancreas: Hypoglycemia prevention via constraints in the glycemia rate of change. , 2017, , .		1
41	LPV-based active power control of wind turbines covering the complete wind speed range. Renewable Energy, 2016, 99, 996-1007.	8.9	33
42	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
43	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
44	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
45	Production rate estimation in processes with high cell concentration. , 2015, , .		0
46	T1DM glycemic control: Effects of mixed meals and intra-patient variability in continuous insulin treatments. , 2015, , .		0
47	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
48	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
49	Postprandial response improvement via safety layer in closed-loop blood glucose controllers. Biomedical Signal Processing and Control, 2015, 16, 80-87.	5.7	32
50	Specific growth rate observer for the growing phase of a Polyhydroxybutyrate production process. Bioprocess and Biosystems Engineering, 2015, 38, 557-567.	3.4	4
51	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
52	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
53	Sufficient conditions for state observability in multi-substrate bioprocesses with additive growth dynamics. IEEE Latin America Transactions, 2014, 12, 928-934.	1.6	2
54	Stability preserving maps for finite-time convergence: Super-twisting sliding-mode algorithm. Automatica, 2013, 49, 534-539.	5.0	50

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55	Safety Auxiliary Feedback Element for the Artificial Pancreas in Type 1 Diabetes. IEEE Transactions on Biomedical Engineering, 2013, 60, 2113-2122.	4.2	58
56	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
57	Second-order sliding mode observer for multiple kinetic rates estimation in bioprocesses. Control Engineering Practice, 2013, 21, 1259-1265.	5.5	26
58	Decentralized Control with Minimum Dissolved Oxygen Guaranties in Aerobic Fed-Batch Cultivations. Industrial & Engineering Chemistry Research, 2013, 52, 18014-18021.	3.7	3
59	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
60	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
61	Sliding mode observer for biomass estimation in a biohydrogen production process. International Journal of Hydrogen Energy, 2012, 37, 10089-10094.	7.1	15
62	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
63	Flexible power control of fuel cells using sliding mode techniques. Journal of Power Sources, 2012, 205, 281-289.	7.8	14
64	Nonlinear PI control of fed-batch processes for growth rate regulation. Journal of Process Control, 2012, 22, 789-797.	3.3	29
65	Dynamical Systems Coordination via Sliding Mode Reference Conditioning*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 11086-11091.	0.4	3
66	Evaluation of hydrogen production capabilities of a grid-assisted wind–H2 system. Applied Energy, 2011, 88, 1857-1863.	10.1	24
67	Specific growth rate estimation in (fed-)batch bioreactors using second-order sliding observers. Journal of Process Control, 2011, 21, 1049-1055.	3.3	28
68	Advanced Control for Constrained Processes and Systems. , 2011, , .		18
69	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
70	Control of a grid-assisted wind-powered hydrogen production system. International Journal of Hydrogen Energy, 2010, 35, 5786-5792.	7.1	26
71	Low-cost sliding-mode power controller of a stand-alone photovoltaic module. , 2010, , .		5
72	Smooth sliding-mode observers for specific growth rate and substrate from biomass measurement. Journal of Process Control, 2009, 19, 1314-1323.	3.3	30

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73	Geometric invariance and reference conditioning ideas for control of overflow metabolism. Journal of Process Control, 2009, 19, 1617-1626.	3.3	10
74	Hybrid control of a photovoltaic-hydrogen energy system. International Journal of Hydrogen Energy, 2008, 33, 3455-3459.	7.1	17
75	Hydrogen production from idle generation capacity of wind turbines. International Journal of Hydrogen Energy, 2008, 33, 4291-4300.	7.1	49
76	On â€œFeedback Stabilization of Fed-Batch Bioreactors: Non-Monotonic Growth Kineticsâ€. Biotechnology Progress, 2008, 21, 651-652.	2.6	2
77	Optimal gain-scheduled control of fixed-speed active stall wind turbines. IET Renewable Power Generation, 2008, 2, 228-238.	3.1	34
78	Collective Sliding-Mode Technique for Multivariable Bumpless Transfer. Industrial & Engineering Chemistry Research, 2008, 47, 2721-2727.	3.7	2
79	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
80	Sliding mode compensation to preserve dynamic decoupling of stable systems. Chemical Engineering Science, 2007, 62, 4705-4716.	3.8	12
81	Partial decoupling of non-minimum phase processes with bounds on the remaining coupling. Chemical Engineering Science, 2006, 61, 7706-7716.	3.8	7
82	Power conditioning for a windâ€"hydrogen energy system. Journal of Power Sources, 2006, 155, 478-486.	7.8	65
83	Limiting interactions in decentralized control of MIMO systems. Journal of Process Control, 2006, 16, 473-483.	3.3	45
84	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
85	VSS global performance improvement based on AW concepts. Automatica, 2005, 41, 1099-1103.	5.0	5
86	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
87	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
88	Dynamical Variable Structure Controller for Power Regulation of Wind Energy Conversion Systems. IEEE Transactions on Energy Conversion, 2004, 19, 756-763.	5.2	58
89	Sliding Mode Conditioning for Constrained Processes. Industrial & Engineering Chemistry Research, 2004, 43, 8251-8256.	3.7	6
90	Comments on â€œVariable-Structure PID Control to Prevent Integrator Windupâ€. IEEE Transactions on Industrial Electronics, 2004, 51, 736-738.	7.9	13

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91	Energy-based approach to the output feedback control of wind energy systems. International Journal of Control, 2003, 76, 299-308.	1.9	14
92	Sliding Mode Compensation for Windup and Direction of Control Problems in Two-Inputâˆ'Two-Output Proportionalâˆ'Integral Controllers. Industrial & Engineering Chemistry Research, 2002, 41, 3179-3185.	3.7	7
93	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
94	A new approach to reaching mode of VSS using trajectory planning. Automatica, 2001, 37, 763-767.	5.0	6
95	Harmonic series compensators in power systems: their control via sliding mode. IEEE Transactions on Control Systems Technology, 2000, 8, 939-947.	5.2	21
96	Dynamical sliding mode power control of wind driven induction generators. IEEE Transactions on Energy Conversion, 2000, 15, 451-457.	5.2	103
97	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
98	Output overshoots in systems with integral action operating in sliding mode. Automatica, 1999, 35, 1141-1147.	5.0	12
99	A bumpless method for multivariable process controllers via sliding mode. , 0, , .		0