

# Fabrizio Garelli

## List of Publications by Year in descending order

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Version: 2024-02-01

67  
papers

755  
citations

516215

16  
h-index

580395

25  
g-index

68  
all docs

68  
docs citations

68  
times ranked

610  
citing authors

#	ARTICLE	IF	CITATIONS
1	Power conditioning for a wind-hydrogen energy system. Journal of Power Sources, 2006, 155, 478-486.	4.0	65
2	Automatic regulatory control in type 1 diabetes without carbohydrate counting. Control Engineering Practice, 2018, 74, 22-32.	3.2	49
3	Postprandial blood glucose control using a hybrid adaptive PD controller with insulin-on-board limitation. Biomedical Signal Processing and Control, 2013, 8, 724-732.	3.5	38
4	Comprehensive analysis of a metabolic model for lipid production in Rhodosporidium toruloides. Journal of Biotechnology, 2018, 280, 11-18.	1.9	35
5	Reaction rate reconstruction from biomass concentration measurement in bioreactors using modified second-order sliding mode algorithms. Bioprocess and Biosystems Engineering, 2012, 35, 1615-1625.	1.7	34
6	Reactive Sliding-Mode Algorithm for Collision Avoidance in Robotic Systems. IEEE Transactions on Control Systems Technology, 2013, 21, 2391-2399.	3.2	32
7	Postprandial response improvement via safety layer in closed-loop blood glucose controllers. Biomedical Signal Processing and Control, 2015, 16, 80-87.	3.5	32
8	Smooth sliding-mode observers for specific growth rate and substrate from biomass measurement. Journal of Process Control, 2009, 19, 1314-1323.	1.7	30
9	Specific growth rate estimation in (fed-)batch bioreactors using second-order sliding observers. Journal of Process Control, 2011, 21, 1049-1055.	1.7	28
10	Second-order sliding mode observer for multiple kinetic rates estimation in bioprocesses. Control Engineering Practice, 2013, 21, 1259-1265.	3.2	26
11	Artificial Pancreas: Clinical Study in Latin America Without Premeal Insulin Boluses. Journal of Diabetes Science and Technology, 2018, 12, 914-925.	1.3	26
12	Variable structure strategy to avoid amplitude and rate saturation in pitch control of a wind turbine. International Journal of Hydrogen Energy, 2010, 35, 5869-5875.	3.8	22
13	Sliding mode speed auto-regulation technique for robotic tracking. Robotics and Autonomous Systems, 2011, 59, 519-529.	3.0	22
14	Sliding mode reference conditioning for path following applied to an AUV.**This research is partially supported by EIFFEL scholarship from France Government, by CONICET (PIP0361 and 0237), MIN-CYT(PICT2394) and UNLP(I164), Argentina.. IFAC-PapersOnLine, 2016, 49, 8-13.	0.5	20
15	Adaptive PI control with robust variable structure anti-windup strategy for systems with rate-limited actuators: Application to compression systems. Control Engineering Practice, 2020, 96, 104282.	3.2	18
16	Advanced Control for Constrained Processes and Systems. , 2011, , .		18
17	Integrated sliding-mode algorithms in robot tracking applications. Robotics and Computer-Integrated Manufacturing, 2013, 29, 53-62.	6.1	17
18	Artificial pancreas clinical trials: Moving towards closed-loop control using insulin-on-board constraints. Biomedical Signal Processing and Control, 2018, 45, 1-9.	3.5	17

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19	A supervisory loop approach to fulfill workspace constraints in redundant robots. <i>Robotics and Autonomous Systems</i> , 2012, 60, 1-15.	3.0	16
20	Control-Oriented Model With Intra-Patient Variations for an Artificial Pancreas. <i>IEEE Journal of Biomedical and Health Informatics</i> , 2020, 24, 2681-2689.	3.9	16
21	Open-loop glucose control: Automatic IOB-based super-bolus feature for commercial insulin pumps. <i>Computer Methods and Programs in Biomedicine</i> , 2018, 159, 145-158.	2.6	14
22	Hypoglycemia prevention: PID-type controller adaptation for glucose rate limiting in Artificial Pancreas System. <i>Biomedical Signal Processing and Control</i> , 2022, 71, 103106.	3.5	14
23	A path conditioning method with trap avoidance. <i>Robotics and Autonomous Systems</i> , 2012, 60, 862-873.	3.0	13
24	Global stabilisation of continuous bioreactors: Tools for analysis and design of feeding laws. <i>Automatica</i> , 2018, 89, 340-348.	3.0	13
25	Potentials of constrained sliding mode control as an intervention guide to manage COVID19 spread. <i>Biomedical Signal Processing and Control</i> , 2021, 67, 102557.	3.5	13
26	Sliding mode compensation to preserve dynamic decoupling of stable systems. <i>Chemical Engineering Science</i> , 2007, 62, 4705-4716.	1.9	12
27	Robot coordination using task-priority and sliding-mode techniques. <i>Robotics and Computer-Integrated Manufacturing</i> , 2014, 30, 74-89.	6.1	12
28	Second-order sliding mode observer for biomass concentration and growth rate estimation in batch photo-bioreactors. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 8772-8779.	3.8	12
29	Artificial Pancreas: Evaluating the ARG Algorithm Without Meal Announcement. <i>Journal of Diabetes Science and Technology</i> , 2019, 13, 1035-1043.	1.3	10
30	Product-based sliding mode observer for biomass and growth rate estimation in Luedeking-Piret like processes. <i>Chemical Engineering Research and Design</i> , 2016, 105, 24-30.	2.7	9
31	Limiting vertical acceleration for ride comfort in active suspension systems. <i>Proceedings of the Institution of Mechanical Engineers Part I: Journal of Systems and Control Engineering</i> , 2018, 232, 223-232.	0.7	8
32	Partial decoupling of non-minimum phase processes with bounds on the remaining coupling. <i>Chemical Engineering Science</i> , 2006, 61, 7706-7716.	1.9	7
33	Model-based scale-up methodology for aerobic fed-batch bioprocesses: application to polyhydroxybutyrate (PHB) production. <i>Bioprocess and Biosystems Engineering</i> , 2015, 38, 1179-1190.	1.7	6
34	Modeling and estimation of production rate for the production phase of non-growth-associated high cell density processes. <i>Bioprocess and Biosystems Engineering</i> , 2015, 38, 1903-1914.	1.7	5
35	Growth rate maximization in fed-batch processes using high order sliding controllers and observers based on cell density measurement. <i>Journal of Process Control</i> , 2018, 68, 23-33.	1.7	5
36	Stability and control of a partial nitritation reactor with biomass retention. <i>Chemical Engineering Research and Design</i> , 2019, 144, 318-333.	2.7	5

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37	Automatic glycemic regulation for the pediatric population based on switched control and time-varying IOB constraints: an in silico study. <i>Medical and Biological Engineering and Computing</i> , 2020, 58, 2325-2337.	1.6	5
38	Specific growth rate observer for the growing phase of a Polyhydroxybutyrate production process. <i>Bioprocess and Biosystems Engineering</i> , 2015, 38, 557-567.	1.7	4
39	Closed-loop growth-rate regulation in fed-batch dual-substrate processes with additive kinetics based on biomass concentration measurement. <i>Journal of Process Control</i> , 2016, 44, 14-22.	1.7	4
40	Dynamical Systems Coordination via Sliding Mode Reference Conditioning*. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2011, 44, 11086-11091.	0.4	3
41	Decentralized Control with Minimum Dissolved Oxygen Guaranties in Aerobic Fed-Batch Cultivations. <i>Industrial &amp; Engineering Chemistry Research</i> , 2013, 52, 18014-18021.	1.8	3
42	Combination of cascade and feed-forward constrained control for stable partial nitrification with biomass retention. <i>Journal of Process Control</i> , 2020, 95, 55-66.	1.7	3
43	Collective Sliding-Mode Technique for Multivariable Bumpless Transfer. <i>Industrial &amp; Engineering Chemistry Research</i> , 2008, 47, 2721-2727.	1.8	2
44	Simulación de un algoritmo para controlar el nivel en tolva ante alimentaci3n discontinua de ca±a. <i>RIAI - Revista Iberoamericana De Automatica E Informatica Industrial</i> , 2009, 6, 54-60.	0.6	2
45	UAV reference conditioning for formation control via set invariance and sliding modes*. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2012, 45, 317-322.	0.4	2
46	Sufficient conditions for state observability in multi-substrate bioprocesses with additive growth dynamics. <i>IEEE Latin America Transactions</i> , 2014, 12, 928-934.	1.2	2
47	Switching algorithm for fast robotic tracking under joint speed constraints. , 2010, , .		1
48	Constraints on the insulin infusion for artificial pancreas clinical trials. , 2017, , .		1
49	Control of an Autonomous Underwater Vehicle subject to robustness constraints. <i>IFAC-PapersOnLine</i> , 2018, 51, 322-327.	0.5	1
50	First Outpatient Clinical Trial of a Full Closed-Loop Artificial Pancreas System in South America. <i>Journal of Diabetes Science and Technology</i> , 2022, , 193229682210961.	1.3	1
51	Practical constraint definition in safety schemes for artificial pancreas systems. <i>International Journal of Artificial Organs</i> , 2022, 45, 535-542.	0.7	1
52	Specific Growth Rate Estimation in Bioreactors Using Second-Order Sliding Observers*. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2010, 43, 251-256.	0.4	0
53	Sliding Mode Reference Coordination of Constrained Feedback Systems. <i>Mathematical Problems in Engineering</i> , 2013, 2013, 1-11.	0.6	0
54	Specific Kinetic Rates Regulation in Multi-Substrate Fermentation Processes. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2013, 46, 42-47.	0.4	0

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55	A reactive geometric-invariance approach for robot coordination. , 2014, , .		0
56	Production rate estimation in processes with high cell concentration. , 2015, , .		0
57	T1DM glycemic control: Effects of mixed meals and intra-patient variability in continuous insulin treatments. , 2015, , .		0
58	Plasma Glucose Prediction and its Application to Low Glucose Suspension Systems. , 2018, , .		0
59	A global optimization approach for non-linear sliding mode control analysis and design. IFAC-PapersOnLine, 2018, 51, 128-133.	0.5	0
60	Experimental validation of constraint mitigation algorithm in underwater robot depth control. Proceedings of the Institution of Mechanical Engineers Part I: Journal of Systems and Control Engineering, 2019, 233, 264-275.	0.7	0
61	Operating conditions analysis for a partial nitrification process with biomass retention.. IFAC-PapersOnLine, 2019, 52, 643-648.	0.5	0
62	Analysis of Transcriptional Feedback Strategy for Reducing Interaction in Gene Expression Processes. IFAC-PapersOnLine, 2019, 52, 526-531.	0.5	0
63	The ARC algorithm: clinical trials in Argentina. , 2019, , 79-104.		0
64	Interval Simulator of the Glucose-Insulin System. Communications in Computer and Information Science, 2019, , 686-695.	0.4	0
65	Glucose Control for T1D Patients Based on Interval Models. Lecture Notes in Electrical Engineering, 2021, , 336-344.	0.3	0
66	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.	0.5	0
67	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.	0.6	0