JesÃºs PicÃ³

List of Publications by Year
in descending order

102 papers	**1,962** citations	236925 **25** h-index	265206 **42** g-index
108 all docs	**108** docs citations	**108** times ranked	**1490** citing authors

#	Article	IF	Citations
1	Subspace identification of Bilinear and LPV systems for open- and closed-loop data. Automatica, 2009, 45, 372-381.	5.0	206
2	Stoichiometric modelling of cell metabolism. Journal of Bioscience and Bioengineering, 2008, 105, 1-11.	2.2	150
3	Online monitoring of batch processes using multi-phase principal component analysis. Journal of Process Control, 2006, 16, 1021-1035.	3.3	89
4	Multi-phase principal component analysis for batch processes modelling. Chemometrics and Intelligent Laboratory Systems, 2006, 81, 127-136.	3.5	88
5	Data understanding with PCA: Structural and Variance Information plots. Chemometrics and Intelligent Laboratory Systems, 2010, 100, 48-56.	3.5	74
6	Multiâ€phase analysis framework for handling batch process data. Journal of Chemometrics, 2008, 22, 632-643.	1.3	72
7	The best approaches in the on-line monitoring of batch processes based on PCA: Does the modelling structure matter?. Analytica Chimica Acta, 2009, 642, 59-68.	5.4	65
8	Comprehensive Pharmacokinetic Model of Insulin Glargine and Other Insulin Formulations. IEEE Transactions on Biomedical Engineering, 2005, 52, 1994-2005.	4.2	61
9	Bilinear modelling of batch processes. Part I: theoretical discussion. Journal of Chemometrics, 2008, 22, 299-308.	1.3	59
10	Safety Auxiliary Feedback Element for the Artificial Pancreas in Type 1 Diabetes. IEEE Transactions on Biomedical Engineering, 2013, 60, 2113-2122.	4.2	58
11	An interval approach for dealing with flux distributions and elementary modes activity patterns. Journal of Theoretical Biology, 2007, 246, 290-308.	1.7	55
12	Which Metabolic Pathways Generate and Characterize the Flux Space? A Comparison among Elementary Modes, Extreme Pathways and Minimal Generators. Journal of Biomedicine and Biotechnology, 2010, 2010, 1-13.	3.0	52
13	Stability preserving maps for finite-time convergence: Super-twisting sliding-mode algorithm. Automatica, 2013, 49, 534-539.	5.0	50
14	A procedure for the estimation over time of metabolic fluxes in scenarios where measurements are uncertain and/or insufficient. BMC Bioinformatics, 2007, 8, 421.	2.6	48
15	Analysis of linear systems with fuzzy parametric uncertainty. Fuzzy Sets and Systems, 2003, 135, 81-121.	2.7	42
16	Multi-objective optimization framework to obtain model-based guidelines for tuning biological synthetic devices: an adaptive network case. BMC Systems Biology, 2016, 10, 27.	3.0	35
17	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
18	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

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19	Bilinear modelling of batch processes. Part II: a comparison of PLS softâ€sensors. Journal of Chemometrics, 2008, 22, 533-547.	1.3	32
20	Application of nonlinear time-scaling for robust controller design of reaction systems. International Journal of Robust and Nonlinear Control, 2002, 12, 57-69.	3.7	31
21	Topology analysis and visualization of Potyvirus protein-protein interaction network. BMC Systems Biology, 2014, 8, 129.	3.0	31
22	Smooth sliding-mode observers for specific growth rate and substrate from biomass measurement. Journal of Process Control, 2009, 19, 1314-1323.	3.3	30
23	Extended Metabolic Biosensor Design for Dynamic Pathway Regulation of Cell Factories. IScience, 2020, 23, 101305.	4.1	30
24	Nonlinear PI control of fed-batch processes for growth rate regulation. Journal of Process Control, 2012, 22, 789-797.	3.3	29
25	Flux-dependent graphs for metabolic networks. Npj Systems Biology and Applications, 2018, 4, 32.	3.0	29
26	Specific growth rate estimation in (fed-)batch bioreactors using second-order sliding observers. Journal of Process Control, 2011, 21, 1049-1055.	3.3	28
27	Self-tuning run to run optimization of fed-batch processes using unfold-PLS. AICHE Journal, 2007, 53, 1789-1804.	3.6	26
28	Second-order sliding mode observer for multiple kinetic rates estimation in bioprocesses. Control Engineering Practice, 2013, 21, 1259-1265.	5.5	26
29	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
30	Controller Design Under Fuzzy Pole-Placement Specifications: An Interval Arithmetic Approach. IEEE Transactions on Fuzzy Systems, 2006, 14, 822-836.	9.8	22
31	Engineered Control of Genetic Variability Reveals Interplay among Quorum Sensing, Feedback Regulation, and Biochemical Noise. ACS Synthetic Biology, 2017, 6, 1903-1912.	3.8	22
32	Validation of a constraint-based model of Pichia pastoris metabolism under data scarcity. BMC Systems Biology, 2010, 4, 115.	3.0	21
33	A dynamic non-isothermal model for a hydrocracking reactor: Model development by the method of continuous lumping and application to an industrial unit. Journal of Process Control, 2012, 22, 1956-1965.	3.3	21
34	Control of protein concentrations in heterogeneous cell populations. , 2013, , .		17
35	Metabolic flux understanding of Pichia pastoris grown on heterogenous culture media. Chemometrics and Intelligent Laboratory Systems, 2014, 134, 89-99.	3.5	15
36	Dynamic estimations of metabolic fluxes with constraint-based models and possibility theory. Journal of Process Control, 2012, 22, 1946-1955.	3.3	14

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37	Analysis of systems with variable parametric uncertainty using fuzzy functions. , 1999, , .		13
38	Guaranteed tuning of PID controllers for parametric uncertain systems. , 2004, , .		13
39	Global stabilisation of continuous bioreactors: Tools for analysis and design of feeding laws. Automatica, 2018, 89, 340-348.	5.0	13
40	A possibilistic framework for constraint-based metabolic flux analysis. BMC Systems Biology, 2009, 3, 79.	3.0	11
41	MCR-ALS on metabolic networks: Obtaining more meaningful pathways. Chemometrics and Intelligent Laboratory Systems, 2015, 142, 293-303.	3.5	11
42	PID controller tuning for unstable processes using a multi-objective optimisation design procedure. IFAC-PapersOnLine, 2016, 49, 284-289.	0.9	11
43	RBS and Promoter Strengths Determine the Cell-Growth-Dependent Protein Mass Fractions and Their Optimal Synthesis Rates. ACS Synthetic Biology, 2021, 10, 3290-3303.	3.8	11
44	Geometric invariance and reference conditioning ideas for control of overflow metabolism. Journal of Process Control, 2009, 19, 1617-1626.	3.3	10
45	Characterization of Gene Circuit Parts Based on Multiobjective Optimization by Using Standard Calibrated Measurements. ChemBioChem, 2019, 20, 2653-2665.	2.6	10
46	Revealing Time-Varying Joint Impedance With Kernel-Based Regression and Nonparametric Decomposition. IEEE Transactions on Control Systems Technology, 2020, 28, 224-237.	5.2	10
47	A geometric approach to robust performance of parametric uncertain systems. International Journal of Robust and Nonlinear Control, 2003, 13, 1271-1283.	3.7	8
48	Validation of an FBA model for Pichia pastoris in chemostat cultures. BMC Systems Biology, 2014, 8, 142.	3.0	7
49	Improvement of a CLE stochastic simulation of gene synthetic network with quorum sensing and feedback in a cell population. , 2015, , .		7
50	Estimation of recombinant protein production in Pichia pastoris based on a constraint-based model. Journal of Process Control, 2012, 22, 1139-1151.	3.3	6
51	PFA toolbox: a MATLAB tool for Metabolic Flux Analysis. BMC Systems Biology, 2016, 10, 46.	3.0	6
52	Multiobjective Identification of a Feedback Synthetic Gene Circuit. IEEE Transactions on Control Systems Technology, 2020, 28, 208-223.	5.2	6
53	Host-circuit interactions explain unexpected behavior of a gene circuit.. IFAC-PapersOnLine, 2018, 51, 86-89.	0.9	5
54	Iterative controller design by frequency scale experimental decomposition. , 0, , .		4

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55	Application of Functional Intervals to the Response Evaluation of Linear Time-Invariant Systems with Fuzzy Input. Reliable Computing, 2004, 10, 369-387.	0.8	4
56	Some issues on AI techniques in RT process control. Annual Reviews in Control, 1999, 23, 125-137.	7.9	3
57	Application of functional intervals to the stability analysis of fuzzy linear systems. , 0, , .		3
58	A New Sensor for Absorbance Measurement. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 403-408.	0.4	3
59	Dynamical Systems Coordination via Sliding Mode Reference Conditioning*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 11086-11091.	0.4	3
60	Sliding mode reference conditioning for coordination in swarms of non-identical multi-agent systems. , 2012, , .		3
61	Optimization Alternatives for Robust Model-based Design of Synthetic Biological Circuits**The research leading to these results has received funding from the European Union (FP7/2007-2013 under) Tj ETQq1 1 0.784314 rgBT /Ove	0.9	3
62	Multi-objective optimization for gene expression noise reduction in a synthetic gene circuit.**This work is partially supported by Spanish government and European Union (FEDER-CICYT) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 472 Td (DF thanks the support from the Ayudas para movilidad dentro del Programa para la FormaciÃ³n de Personal Investigador (FPI) de la UPV para estancias 2016. A.V. thanks the Max Planck Society, the CSBD and the MPI-CBG. The authors are. IFAC-PapersOnLine, 2017, 50, 4472-4477.	0.9	3
63	Output Feedback Linearization of Turbidostats After Time Scaling. IEEE Transactions on Control Systems Technology, 2019, 27, 1668-1676.	5.2	3
64	Reference Conditioning Anti-windup for the Biomolecular Antithetic Controller. IFAC-PapersOnLine, 2019, 52, 156-162.	0.9	3
65	POSSIBILISTIC ROBUST CONTROL FOR FUZZY PLANTS: CONTROLLING PERFORMANCE DEGRADATION. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 257-262.	0.4	2
66	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
67	On "Feedback Stabilization of Fed-Batch Bioreactors: Non-Monotonic Growth Kinetics". Biotechnology Progress, 2008, 21, 651-652.	2.6	2
68	UAV reference conditioning for formation control via set invariance and sliding modes*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 317-322.	0.4	2
69	Sufficient conditions for state observability in multi-substrate bioprocesses with additive growth dynamics. IEEE Latin America Transactions, 2014, 12, 928-934.	1.6	2
70	Parameter identification in synthetic biological circuits using multi-objective optimization * *This work is partially supported by Spanish government and European Union (FEDER-CICYT) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 152 Td (DF ValÃ¨ncia and Becas IberoamÃ©rica of Santander Group, Spain 2015. G.R.M. thanks the partial support provided by the postdoctoral fellowship BJT-304804/2014-2 from the National Council of Scientific and Technologic Developm. IFAC-PapersOnLine, 2016, 49, 77-82.	0.9	2
71	Fusion of genomic, proteomic and phenotypic data: the case of potyviruses. Molecular BioSystems, 2016, 12, 253-261.	2.9	2
72	Biomolecular signal tracker with fast time response.. IFAC-PapersOnLine, 2019, 52, 1-6.	0.9	2

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73	Fluorescence calibration and color equivalence for quantitative synthetic biology.. IFAC-PapersOnLine, 2019, 52, 129-134.	0.9	2
74	Stochastic Differential Equations for Practical Simulation of Gene Circuits. Methods in Molecular Biology, 2021, 2229, 41-90.	0.9	2
75	Localized BF-Type Networks for Identification and Adaptive Control of Discrete-Time Nonlinear Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1997, 30, 597-602.	0.4	1
76	Robust Adaptive Specific Growth Rate Control in Biotechnological Fed-Batch Processes. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 499-504.	0.4	1
77	A NONLINEAR OBSERVER FOR BIOPROCESSES USING LMI. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 393-398.	0.4	1
78	Control of overflow metabolism via sliding mode reference conditioning. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 12613-12618.	0.4	1
79	Dynamic Metabolic Flux Analysis for Online Estimation of Recombinant Protein Productivity in Pichia pastoris Cultures. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 629-634.	0.4	1
80	Contractivity of a genetic circuit with internal feedback and cell-to-cell communication * *This research was partially funded by grant FEDER-CICYT DPI2014-55276-C5-1-R. Yadira Boada thanks grant FPI/2013-3242 of the Universitat PolitÃ¨cnica de Valencia.. IFAC-PapersOnLine, 2016, 49, 213-218.	0.9	1
81	Multi-objective identification of synthetic circuits stochastic models using flow flcytometry data. , 2017, , .		1
82	Gene Expression Space Shapes the Bioprocess Trade-Offs among Titer, Yield and Productivity. Applied Sciences (Switzerland), 2021, 11, 5859.	2.5	1
83	A SOFTWARE PACKAGE FOR INTEGRAL SLURRY MILLING CONTROL IN CEMENT PRODUCTION PLANTS. , 1992, , 239-244.		1
84	Some issues on AI techniques in RT process control. Annual Reviews in Control, 1999, 23, 125-137.	7.9	1
85	Multi-Objective Optimization Tuning Framework for Kinetic Parameter Selection and Estimation. Methods in Molecular Biology, 2022, 2385, 65-89.	0.9	1
86	Modeling and Optimization of a Molecular Biocontroller for the Regulation of Complex Metabolic Pathways. Frontiers in Molecular Biosciences, 2022, 9, 801032.	3.5	1
87	Analysis of rulebase coherence in fuzzy control systems. Annual Review in Automatic Programming, 1994, 19, 79-84.	0.2	0
88	On a Coefficientwise Stability Margin Analysis for Perturbed Polynomials. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2000, 33, 113-118.	0.4	0
89	Application of local consistency techniques to the design of controllers with robust performance. , 0, , .		0
90	Guaranteed output prediction under uncertainty of glucose endogenous metabolism for diabetic type I patients. , 0, , .		0

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91	Intelligent robotic cell for Trencad/spl inodot//spl acute/s mosaics manufacturing. IEEE Transactions on Systems, Man and Cybernetics, Part C: Applications and Reviews, 2005, 35, 75-86.	2.9	0
92	Robust posibilistic control for nonlinear flat systems. Journal of Biotechnology, 2007, 131, S105.	3.8	0
93	Applications of possibilistic reasoning to intelligent system monitoring: a case study. , 2009, , .		0
94	Possibilistic validation of a constraint-based model under data Scirccity: application to Pichia pastoris cultures. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 19-23.	0.4	0
95	Possibilistic estimation of metabolic fluxes during a batch process accounting for extracellular dynamics. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 24-29.	0.4	0
96	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
97	Sliding Mode Reference Coordination of Constrained Feedback Systems. Mathematical Problems in Engineering, 2013, 2013, 1-11.	1.1	0
98	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
99	Closing the Loop. Diabetes Technology and Therapeutics, 2015, 17, S-27-S-38.	4.4	0
100	Analysis of Transcriptional Feedback Strategy for Reducing Interaction in Gene Expression Processes. IFAC-PapersOnLine, 2019, 52, 526-531.	0.9	0
101	Gene variant space for biosensor-based dynamic regulation. , 2021, , 485-491.		0
102	Reduction of population variability in protein expression: A control engineering approach. , 0, , .		0