Julio R Banga

List of Publications by Year
in descending order

222 papers	8,707 citations	46918 47 h-index	58464 82 g-index
240 all docs	240 docs citations	240 times ranked	6209 citing authors

#	Article	IF	Citations
1	AutoRepar: A method to obtain identifiable and observable reparameterizations of dynamic models with mechanistic insights. International Journal of Robust and Nonlinear Control, 2023, 33, 5039-5057.	2.1	7
2	A protocol for dynamic model calibration. Briefings in Bioinformatics, 2022, 23, .	3.2	54
3	An efficient ant colony optimization framework for HPC environments. Applied Soft Computing Journal, 2022, 114, 108058.	4.1	8
4	PEtab—Interoperable specification of parameter estimation problems in systems biology. PLoS Computational Biology, 2021, 17, e1008646.	1.5	55
5	Automated Biocircuit Design with SYNBADm. Methods in Molecular Biology, 2021, 2229, 119-136.	0.4	0
6	Editorial: Biological Control Systems and Disease Modeling. Frontiers in Bioengineering and Biotechnology, 2021, 9, 677976.	2.0	2
7	Structural identifiability and observability of compartmental models of the COVID-19 pandemic. Annual Reviews in Control, 2021, 51, 441-459.	4.4	50
8	Synthetic Gene Circuit Analysis and Optimization. Methods in Molecular Biology, 2021, 2189, 89-103.	0.4	2
9	Spark implementation of the enhanced Scatter Search metaheuristic: Methodology and assessment. Swarm and Evolutionary Computation, 2020, 59, 100748.	4.5	9
10	Using optimal control to understand complex metabolic pathways. BMC Bioinformatics, 2020, 21, 472.	1.2	15
11	A dual-parameter identification approach for data-based predictive modeling of hybrid gene regulatory network-growth kinetics in Pseudomonas putida mt-2. Bioprocess and Biosystems Engineering, 2020, 43, 1671-1688.	1.7	2
12	Benchmarking optimization methods for parameter estimation in large kinetic models. Bioinformatics, 2019, 35, 830-838.	1.8	90
13	Full observability and estimation of unknown inputs, states and parameters of nonlinear biological models. Journal of the Royal Society Interface, 2019, 16, 20190043.	1.5	75
14	Hybrid parallel multimethod hyperheuristic for mixed-integer dynamic optimization problems in computational systems biology. Journal of Supercomputing, 2019, 75, 3471-3498.	2.4	3
15	Distilling Robust Design Principles of Biocircuits Using Mixed Integer Dynamic Optimization. Processes, 2019, 7, 92.	1.3	11
16	Parameter estimation in models of biological oscillators: an automated regularised estimation approach. BMC Bioinformatics, 2019, 20, 82.	1.2	17
17	Computational Methods Enabling Next-Generation Bioprocesses. Processes, 2019, 7, 214.	1.3	2
18	Multiobjective optimization of gene circuits for metabolic engineering. IFAC-PapersOnLine, 2019, 52, 13-16.	0.5	5

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19	A Comparison of Methods for Quantifying Prediction Uncertainty in Systems Biology. IFAC-PapersOnLine, 2019, 52, 45-51.	0.5	12
20	Input-Dependent Structural Identifiability of Nonlinear Systems. , 2019, 3, 272-277.		33
21	GenSSI 2.0: multi-experiment structural identifiability analysis of SBML models. Bioinformatics, 2018, 34, 1421-1423.	1.8	75
22	Optimality and identification of dynamic models in systems biology: an inverse optimal control framework. Bioinformatics, 2018, 34, 2433-2440.	1.8	21
23	Multimethod optimization in the cloud: A case‐study in systems biology modelling. Concurrency Computation Practice and Experience, 2018, 30, e4488.	1.4	3
24	Towards cloud-based parallel metaheuristics. International Journal of High Performance Computing Applications, 2018, 32, 693-705.	2.4	10
25	PREMER: A Tool to Infer Biological Networks. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2018, 15, 1193-1202.	1.9	6
26	Sufficiently Exciting Inputs for Structurally Identifiable Systems Biology Models. IFAC-PapersOnLine, 2018, 51, 16-19.	0.5	9
27	Critical Assessment of Parameter Estimation Methods in Models of Biological Oscillators. IFAC-PapersOnLine, 2018, 51, 72-75.	0.5	0
28	Mixed Integer Multiobjective Optimization Approaches for Systems and Synthetic Biology. IFAC-PapersOnLine, 2018, 51, 58-61.	0.5	2
29	Optimization-based prediction of fold bifurcations in nonlinear ODE models. IFAC-PapersOnLine, 2018, 51, 485-490.	0.5	4
30	Multimethod Optimization for Reverse Engineering of Complex Biological Networks. , 2018, , .		1
31	Abstract 1296: CanPathPro—development of a platform for predictive pathway modelling using genetically engineered mouse models. , 2018, , .		0
32	Implementing cloud-based parallel metaheuristics: an overview. Journal of Computer Science and Technology(Argentina), 2018, 18, e26.	0.5	1
33	Parameter estimation in large-scale systems biology models: a parallel and self-adaptive cooperative strategy. BMC Bioinformatics, 2017, 18, 52.	1.2	300
34	A cloud-based enhanced differential evolution algorithm for parameter estimation problems in computational systems biology. Cluster Computing, 2017, 20, 1937-1950.	3.5	20
35	Automated Design Framework for Synthetic Biology Exploiting Pareto Optimality. ACS Synthetic Biology, 2017, 6, 1180-1193.	1.9	33
36	Using the Cloud for Parameter Estimation Problems: Comparing Spark vs MPI with a Case-Study. , 2017, , .		11

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37	Parameter identifiability analysis and visualization in large-scale kinetic models of biosystems. BMC Systems Biology, 2017, 11, 54.	3.0	92
38	Structural Properties of Dynamic Systems Biology Models: Identifiability, Reachability, and Initial Conditions. Processes, 2017, 5, 29.	1.3	17
39	Data-driven reverse engineering of signaling pathways using ensembles of dynamic models. PLoS Computational Biology, 2017, 13, e1005379.	1.5	41
40	Dynamical compensation and structural identifiability of biological models: Analysis, implications, and reconciliation. PLoS Computational Biology, 2017, 13, e1005878.	1.5	24
41	Evaluation of Parallel Differential Evolution Implementations on MapReduce and Spark. Lecture Notes in Computer Science, 2017, , 397-408.	1.0	3
42	A parallel metaheuristic for large mixed-integer dynamic optimization problems, with applications in computational biology. PLoS ONE, 2017, 12, e0182186.	1.1	10
43	A Heuristic Method to Optimize High-Dimensional Expensive Problems: Application to the Dynamic Optimization of a Waste Water Treatment Plant. Mathematics in Industry, 2017, , 625-631.	0.1	0
44	Energy and Society. , 2017, , .		0
45	Design Principles of Biological Oscillators through Optimization: Forward and Reverse Analysis. PLoS ONE, 2016, 11, e0166867.	1.1	23
46	Implementing Parallel Differential Evolution on Spark. Lecture Notes in Computer Science, 2016, , 75-90.	1.0	23
47	PREMER: Parallel Reverse Engineering ofÂBiological Networks with Information Theory. Lecture Notes in Computer Science, 2016, , 323-329.	1.0	2
48	Exploring Design Principles of Gene Regulatory Networks via Pareto Optimality**We acknowledge funding from the Spanish MINECO (and the European Regional Development Fund) project SYNBIOFACTORY (grant number DPI2014-55276-C5-2-R).. IFAC-PapersOnLine, 2016, 49, 809-814.	0.5	6
49	SYNBADm: a tool for optimization-based automated design of synthetic gene circuits. Bioinformatics, 2016, 32, 3360-3362.	1.8	33
50	On the relationship between sloppiness and identifiability. Mathematical Biosciences, 2016, 282, 147-161.	0.9	66
51	AMIGO2, a toolbox for dynamic modeling, optimization and control in systems biology. Bioinformatics, 2016, 32, 3357-3359.	1.8	124
52	Metabolic engineering with multi-objective optimization of kinetic models. Journal of Biotechnology, 2016, 222, 1-8.	1.9	32
53	Parallel Metaheuristics in Computational Biology: An Asynchronous Cooperative Enhanced Scatter Search Method. Procedia Computer Science, 2015, 51, 630-639.	1.2	17
54	Enabling network inference methods to handle missing data and outliers. BMC Bioinformatics, 2015, 16, 283.	1.2	19

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55	Optimal programs of pathway control: dissecting the influence of pathway topology and feedback inhibition on pathway regulation. BMC Bioinformatics, 2015, 16, 163.	1.2	13
56	Enhanced parallel Differential Evolution algorithm for problems in computational systems biology. Applied Soft Computing Journal, 2015, 33, 86-99.	4.1	46
57	A consensus approach for estimating the predictive accuracy of dynamic models in biology. Computer Methods and Programs in Biomedicine, 2015, 119, 17-28.	2.6	23
58	BioPreDyn-bench: a suite of benchmark problems for dynamic modelling in systems biology. BMC Systems Biology, 2015, 9, 8.	3.0	61
59	Reaction network realizations of rational biochemical systems and their structural properties. Journal of Mathematical Chemistry, 2015, 53, 1657-1686.	0.7	12
60	Reverse engineering of logic-based differential equation models using a mixed-integer dynamic optimization approach. Bioinformatics, 2015, 31, 2999-3007.	1.8	21
61	Robust and efficient parameter estimation in dynamic models of biological systems. BMC Systems Biology, 2015, 9, 74.	3.0	110
62	MIDER: Network Inference with Mutual Information Distance and Entropy Reduction. PLoS ONE, 2014, 9, e96732.	1.1	99
63	Multicriteria global optimization for biocircuit design. BMC Systems Biology, 2014, 8, 113.	3.0	30
64	Global dynamic optimization approach to predict activation in metabolic pathways. BMC Systems Biology, 2014, 8, 1.	3.0	211
65	MEIGO: an open-source software suite based on metaheuristics for global optimization in systems biology and bioinformatics. BMC Bioinformatics, 2014, 15, 136.	1.2	131
66	Reverse engineering and identification in systems biology: strategies, perspectives and challenges. Journal of the Royal Society Interface, 2014, 11, 20130505.	1.5	194
67	High-Confidence Predictions in Systems Biology Dynamic Models. Advances in Intelligent Systems and Computing, 2014, , 161-171.	0.5	5
68	A Parallel Differential Evolution Algorithm for Parameter Estimation in Dynamic Models of Biological Systems. Advances in Intelligent Systems and Computing, 2014, , 173-181.	0.5	4
69	Optimization Based Design of Synthetic Oscillators from Standard Biological Parts. Lecture Notes in Computer Science, 2014, , 225-238.	1.0	2
70	Improved Parameter Estimation in Kinetic Models: Selection and Tuning of Regularization Methods. Lecture Notes in Computer Science, 2014, , 45-60.	1.0	5
71	Dynamics of an Interactive Network Composed of a Bacterial Two-Component System, a Transporter and K+ as Mediator. PLoS ONE, 2014, 9, e89671.	1.1	12
72	Simultaneous model discrimination and parameter estimation in dynamic models of cellular systems. BMC Systems Biology, 2013, 7, 76.	3.0	32

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73	Optimal regulatory programs for the control of metabolic pathways: The case of feedback inhibition. , 2013, , .		0
74	Reverse-Engineering Post-Transcriptional Regulation of Gap Genes in Drosophila melanogaster. PLoS Computational Biology, 2013, 9, e1003281.	1.5	38
75	Reverse Engineering Cellular Networks with Information Theoretic Methods. Cells, 2013, 2, 306-329.	1.8	54
76	COMPUTING ALL SPARSE KINETIC STRUCTURES FOR A LORENZ SYSTEM USING OPTIMIZATION. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2013, 23, 1350141.	0.7	5
77	On the Verification and Correction of Large-Scale Kinetic Models in Systems Biology. Lecture Notes in Computer Science, 2013, , 206-219.	1.0	1
78	Optimal Dynamic Experiments. , 2013, , 1569-1572.		0
79	CRNreals: a toolbox for distinguishability and identifiability analysis of biochemical reaction networks. Bioinformatics, 2012, 28, 1549-1550.	1.8	13
80	Robust and efficient numerical methods for the optimal control of spatially distributed biological systems. , 2012, , .		0
81	Global Optimization in Systems Biology: Stochastic Methods and Their Applications. Advances in Experimental Medicine and Biology, 2012, 736, 409-424.	0.8	24
82	A cooperative strategy for parameter estimation in large scale systems biology models. BMC Systems Biology, 2012, 6, 75.	3.0	51
83	Dynamic optimization of distributed biological systems using robust and efficient numerical techniques. BMC Systems Biology, 2012, 6, 79.	3.0	11
84	Characterizing Multistationarity Regimes in Biochemical Reaction Networks. PLoS ONE, 2012, 7, e39194.	1.1	27
85	Novel global sensitivity analysis methodology accounting for the crucial role of the distribution of input parameters: application to systems biology models. International Journal of Robust and Nonlinear Control, 2012, 22, 1082-1102.	2.1	40
86	Multi-Criteria Optimization of Regulation in Metabolic Networks. PLoS ONE, 2012, 7, e41122.	1.1	19
87	Prediction of activation of metabolic pathways via dynamic optimization. Computer Aided Chemical Engineering, 2011, 29, 1386-1390.	0.3	1
88	Use of a Generalized Fisher Equation for Global Optimization in Chemical Kinetics. Journal of Physical Chemistry A, 2011, 115, 8426-8436.	1.1	8
89	AMIGO, a toolbox for advanced model identification in systems biology using global optimization. Bioinformatics, 2011, 27, 2311-2313.	1.8	72
90	Inference of Transcriptional Control Design of Metabolic Networks. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 10448-10453.	0.4	0

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91	Methods for checking structural identifiability of nonlinear biosystems: A critical comparison.. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 10585-10590.	0.4	2
92	9th IFAC International Symposium on Dynamics and Control of Process Systems (DYCOPS) & 11th IFAC International Symposium on Computer Applications in Biotechnology (CAB). Journal of Process Control, 2011, 21, 1359-1360.	1.7	0
93	Inference of complex biological networks: distinguishability issues and optimization-based solutions. BMC Systems Biology, 2011, 5, 177.	3.0	66
94	Fuzzy finite element analysis of heat conduction problems with uncertain parameters. Journal of Food Engineering, 2011, 103, 38-46.	2.7	49
95	Detailed kinetic model describing new oligosaccharides synthesis using different Î²-galactosidases. Journal of Biotechnology, 2011, 153, 116-124.	1.9	22
96	GenSSI: a software toolbox for structural identifiability analysis of biological models. Bioinformatics, 2011, 27, 2610-2611.	1.8	94
97	Structural Identifiability of Systems Biology Models: A Critical Comparison of Methods. PLoS ONE, 2011, 6, e27755.	1.1	335
98	AMIGO: A model identification toolbox based on global optimization and its applications in biosystems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 132-137.	0.4	3
99	Parametric Condition for Multistationarity in Biochemical Reaction Networks*. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 30-35.	0.4	0
100	Mixed-integer non-linear optimal control in systems biology and biotechnology: numerical methods and a software toolbox. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 314-319.	0.4	6
101	Multi-objective mixed integer strategy for the optimisation of biological networks. IET Systems Biology, 2010, 4, 236-248.	0.8	37
102	An iterative identification procedure for dynamic modeling of biochemical networks. BMC Systems Biology, 2010, 4, 11.	3.0	144
103	Efficient and robust multi-objective optimization of food processing: A novel approach with application to thermal sterilization. Journal of Food Engineering, 2010, 98, 317-324.	2.7	45
104	An evolutionary method for complex-process optimization. Computers and Operations Research, 2010, 37, 315-324.	2.4	111
105	A generalized Fisher equation and its utility in chemical kinetics. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 12777-12781.	3.3	18
106	SensSB: a software toolbox for the development and sensitivity analysis of systems biology models. Bioinformatics, 2010, 26, 1675-1676.	1.8	45
107	Investigating dynamics of inhibitory and feedback loops in ERK signalling using power-law models. Molecular BioSystems, 2010, 6, 2174.	2.9	24
108	Computational Procedures for Model Identification. Systems Biology, 2010, , 111-137.	0.1	3

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109	DOTcvpSB, a software toolbox for dynamic optimization in systems biology. BMC Bioinformatics, 2009, 10, 199.	1.2	36
110	Exploring multiplicity conditions in enzymatic reaction networks. Biotechnology Progress, 2009, 25, 619-631.	1.3	14
111	Improved scatter search for the global optimization of computationally expensive dynamic models. Journal of Global Optimization, 2009, 43, 175-190.	1.1	43
112	Extended ant colony optimization for non-convex mixed integer nonlinear programming. Computers and Operations Research, 2009, 36, 2217-2229.	2.4	175
113	Dynamic Optimization of Nonlinear Processes with an Enhanced Scatter Search Method. Industrial & Engineering Chemistry Research, 2009, 48, 4388-4401.	1.8	101
114	Extensions of a Multistart Clustering Algorithm for Constrained Global Optimization Problems. Industrial & Engineering Chemistry Research, 2009, 48, 3014-3023.	1.8	16
115	An Extended Ant Colony Optimization Algorithm for Integrated Process and Control System Design. Industrial & Engineering Chemistry Research, 2009, 48, 6723-6738.	1.8	39
116	COMPUTATIONAL PROCEDURES FOR OPTIMAL MODEL IDENTIFICATION IN SYSTEMS BIOLOGY.. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 1247-1252.	0.4	0
117	Multi-Objective Optimization of Biological Networks for Prediction of Intracellular Fluxes. Advances in Soft Computing, 2009, , 197-205.	0.4	11
118	Global Sensitivity Analysis of a Biochemical Pathway Model. Advances in Soft Computing, 2009, , 233-242.	0.4	7
119	Optimal dynamic heat generation profiles for simultaneous estimation of thermal food properties using a hotwire probe: Computation, implementation and validation. Journal of Food Engineering, 2008, 84, 297-306.	2.7	8
120	The GLOBAL optimization method revisited. Optimization Letters, 2008, 2, 445-454.	0.9	77
121	Exponential observers for distributed tubular (bio)reactors. AICHE Journal, 2008, 54, 2943-2956.	1.8	19
122	Optimal tuning of thermodynamic–based decentralized PI control loops: Application to the Tennessee Eastman Process. AICHE Journal, 2008, 54, 2904-2924.	1.8	2
123	Robust feed-back control of travelling waves in a class of reaction–diffusion distributed biological systems. Physica D: Nonlinear Phenomena, 2008, 237, 2353-2364.	1.3	26
124	A Tabu search-based algorithm for mixed-integer nonlinear problems and its application to integrated process and control system design. Computers and Chemical Engineering, 2008, 32, 1877-1891.	2.0	54
125	Hierarchical design of decentralized control structures for the Tennessee Eastman Process. Computers and Chemical Engineering, 2008, 32, 1995-2015.	2.0	22
126	COMPUTING OPTIMAL DYNAMIC EXPERIMENTS FOR MODEL CALIBRATION IN PREDICTIVE MICROBIOLOGY. Journal of Food Process Engineering, 2008, 31, 186-206.	1.5	28

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127	Hybrid optimization method with general switching strategy for parameter estimation. BMC Systems Biology, 2008, 2, 26.	3.0	80
128	Optimization in computational systems biology. BMC Systems Biology, 2008, 2, 47.	3.0	218
129	Quality and Safety Models and Optimization as Part of Computer€Integrated Manufacturing. Comprehensive Reviews in Food Science and Food Safety, 2008, 7, 168-174.	5.9	27
130	Desarrollo De Una Librería De Componentes En Ecosimpro Para La Operación De Plantas De Procesamiento Térmico De Alimentos. RIAI - Revista Iberoamericana De Automatica E Informatica Industrial, 2008, 5, 51-65.	0.6	4
131	Computational procedures for optimal experimental design in biological systems. IET Systems Biology, 2008, 2, 163-172.	0.8	108
132	Parameter estimation and optimal experimental design. Essays in Biochemistry, 2008, 45, 195-210.	2.1	115
133	A LIBRARY OF SOFTWARE COMPONENTS FOR THE OPERATION OF THERMAL FOOD PROCESSING PLANTS. Acta Horticulturae, 2008, , 141-146.	0.1	0
134	OPTIMAL CONTROL of the SIMULATED MOVING BED (SMB) CHROMATOGRAPHIC SEPARATION PROCESS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 183-188.	0.4	3
135	OPTIMAL DYNAMIC EXPERIMENTAL DESIGN IN SYSTEMS BIOLOGY: APPLICATIONS IN CELL SIGNALING.. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 73-78.	0.4	0
136	A FORMAL FRAMEWORK FOR MULTIPLICITY DETECTION AND ITS IMPLICATIONS IN ROBUST CONTROL OF BIOCHEMICAL NETWORKS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 739-744.	0.4	1
137	Global Optimization for Integrated Design and Control of Computationally Expensive Process Models. Industrial & Engineering Chemistry Research, 2007, 46, 9148-9157.	1.8	22
138	Optimal Field Reconstruction of Distributed Process Systems from Partial Measurements. Industrial & Engineering Chemistry Research, 2007, 46, 530-539.	1.8	36
139	NBI-RPRGM for Multi-objective Optimization Design of Bio-Processes. ESAIM: Proceedings and Surveys, 2007, 20, 118-128.	0.4	1
140	A systematic approach to plant-wide control based on thermodynamics. Computers and Chemical Engineering, 2007, 31, 677-691.	2.0	37
141	Robust feed-back control of distributed chemical reaction systems. Chemical Engineering Science, 2007, 62, 2941-2957.	1.9	15
142	Optimal design of dynamic experiments for improved estimation of kinetic parameters of thermal degradation. Journal of Food Engineering, 2007, 82, 178-188.	2.7	49
143	Power-law models of signal transduction pathways. Cellular Signalling, 2007, 19, 1531-1541.	1.7	66
144	Scatter search for chemical and bio-process optimization. Journal of Global Optimization, 2007, 37, 481-503.	1.1	147

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145	Identifiability and robust parameter estimation in food process modeling: Application to a drying model. Journal of Food Engineering, 2007, 83, 374-383.	2.7	29
146	Dynamic Optimization of a Simulated Moving Bed (SMB) Chromatographic Separation Process. Industrial & Engineering Chemistry Research, 2006, 45, 9033-9041.	1.8	10
147	Model based optimization of biochemical systems using multiple objectives: a comparison of several solution strategies. Mathematical and Computer Modelling of Dynamical Systems, 2006, 12, 469-487.	1.4	32
148	Improved Optimization Methods for the Multiobjective Design of Bioprocesses. Industrial & Engineering Chemistry Research, 2006, 45, 8594-8603.	1.8	19
149	Stabilization of inhomogeneous patterns in a diffusionâ€"reaction system under structural and parametric uncertainties. Journal of Theoretical Biology, 2006, 241, 295-306.	0.8	12
150	Computing optimal operating policies for the food industry. Journal of Food Engineering, 2006, 74, 13-23.	2.7	48
151	A hybrid approach for efficient and robust parameter estimation in biochemical pathways. BioSystems, 2006, 83, 248-265.	0.9	251
152	Novel metaheuristic for parameter estimation in nonlinear dynamic biological systems. BMC Bioinformatics, 2006, 7, 483.	1.2	221
153	Robust Parameter Estimation in a Model for Glucose Kinetics in Type 1 Diabetes Subjects. , 2006, 2006, 319-22.		5
154	A thermodynamic based plant-wide control design procedure of the tennessee eastman process. Computer Aided Chemical Engineering, 2006, , 1413-1418.	0.3	0
155	Robust parameter estimation in nonlinear dynamic process models. Computer Aided Chemical Engineering, 2005, , 37-42.	0.3	0
156	A software toolbox for the dynamic optimization of nonlinear processes. Computer Aided Chemical Engineering, 2005, 20, 121-126.	0.3	4
157	Dynamic Optimization of Complex Distributed Process Systems. Chemical Engineering Research and Design, 2005, 83, 724-729.	2.7	7
158	A systematic approach to plant-wide control based on thermodynamics. Computer Aided Chemical Engineering, 2005, 20, 1105-1110.	0.3	0
159	An efficient real-time dynamic optimization architecture for the control of non-isothermal tubular reactors. Computer Aided Chemical Engineering, 2005, , 1333-1338.	0.3	1
160	Dynamic optimization of bioprocesses: Efficient and robust numerical strategies. Journal of Biotechnology, 2005, 117, 407-419.	1.9	179
161	Dynamic Optimization of Single- and Multi-Stage Systems Using a Hybrid Stochasticâ€"Deterministic Method. Industrial & Engineering Chemistry Research, 2005, 44, 1514-1523.	1.8	45
162	A model-based approach to develop periodic thermal treatments for surface decontamination of strawberries. Postharvest Biology and Technology, 2004, 34, 39-52.	2.9	22

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163	Optimal sensor location and reduced order observer design for distributed process systems. Computers and Chemical Engineering, 2004, 28, 27-35.	2.0	79
164	Dissipative systems: from physics to robust nonlinear control. International Journal of Robust and Nonlinear Control, 2004, 14, 157-179.	2.1	29
165	Solving nonconvex climate control problems: pitfalls and algorithm performances. Applied Soft Computing Journal, 2004, 5, 35-44.	4.1	33
166	Reduced-Order Models for Nonlinear Distributed Process Systems and Their Application in Dynamic Optimization. Industrial & Engineering Chemistry Research, 2004, 43, 3353-3363.	1.8	31
167	Dynamic Optimization of Distributed Parameter Systems Using Second-Order Directional Derivatives. Industrial & Engineering Chemistry Research, 2004, 43, 6756-6765.	1.8	26
168	Multi-objective integrated design and control using stochastic global optimization methods. Computer Aided Chemical Engineering, 2004, 17, 555-581.	0.3	2
169	Nonlinear Multi-Criteria Optimization for the Integrated Design and Control of Bioprocesses. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 571-576.	0.4	0
170	Multi-objective optimization for the design of bio-processes. Computer Aided Chemical Engineering, 2004, , 283-288.	0.3	2
171	On systematic model reduction techniques for dynamic optimization and robust control of distributed process systems. Computer Aided Chemical Engineering, 2004, , 841-846.	0.3	2
172	Global Optimization of Bioprocesses using Stochastic and Hybrid Methods. Nonconvex Optimization and Its Applications, 2004, , 45-70.	0.1	17
173	Integrated Process Design and Control Via Global Optimization. Chemical Engineering Research and Design, 2003, 81, 507-517.	2.7	36
174	Integrated nonlinear optimization of bioprocesses via linear programming. AICHE Journal, 2003, 49, 3173-3187.	1.8	11
175	Dynamic optimization of double-sided cooking of meat patties. Journal of Food Engineering, 2003, 58, 173-182.	2.7	13
176	Improving food processing using modern optimization methods. Trends in Food Science and Technology, 2003, 14, 131-144.	7.8	143
177	Parameter Estimation in Biochemical Pathways: A Comparison of Global Optimization Methods. Genome Research, 2003, 13, 2467-2474.	2.4	706
178	Global optimization of climate control problems using evolutionary and stochastic algorithms. , 2003, , 331-342.		3
179	Optimal Sensor Location and Reduced Order Observer Design for Distributed Process Systems. Computer Aided Chemical Engineering, 2002, , 415-420.	0.3	4
180	A Combined Electromagnetic and Heat Transfer Model for Heating of Foods in Microwave Combination Ovens. Journal of Microwave Power and Electromagnetic Energy, 2002, 37, 97-111.	0.4	27

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181	ROBUST NONLINEAR CONTROL DESIGN OF DISTRIBUTED PROCESS SYSTEMS WITH INPUT CONSTRAINTS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2002, 35, 477-482.	0.4	2
182	Computation of Optimal Identification Experiments for Nonlinear Dynamic Process Models:â€‰ a Stochastic Global Optimization Approach. Industrial & Engineering Chemistry Research, 2002, 41, 2425-2430.	1.8	62
183	From irreversible thermodynamics to a robust control theory for distributed process systems. Journal of Process Control, 2002, 12, 507-517.	1.7	34
184	A novel, efficient and reliable method for thermal process design and optimization. Part I: theory. Journal of Food Engineering, 2002, 52, 227-234.	2.7	53
185	A novel, efficient and reliable method for thermal process design and optimization. Part II: applications. Journal of Food Engineering, 2002, 52, 235-247.	2.7	44
186	Restricted second order information for the solution of optimal control problems using control vector parameterization. Journal of Process Control, 2002, 12, 243-255.	1.7	32
187	On the Optimal Control of Contact-Cooking Processes. Food and Bioproducts Processing, 2001, 79, 145-151.	1.8	12
188	Optimal control of distributed processes using reduced order models. , 2001, , .		0
189	Integrated process design and control via global optimization: A wastewater treatment plant case study. , 2001, , .		2
190	Dynamic optimization of chemical and biochemical processes using restricted second-order information. Computers and Chemical Engineering, 2001, 25, 539-546.	2.0	85
191	Numerical strategies for optimal experimental design for parameter identification of non-linear dynamic (Bio-)chemical processes. Computer Aided Chemical Engineering, 2000, 8, 37-42.	0.3	4
192	Dynamic optimization of chemical and biochemical processes using restricted second order information. Computer Aided Chemical Engineering, 2000, 8, 481-486.	0.3	2
193	Optimal Control of Distributed Processes Using Restricted Second Order Information. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2000, 33, 881-886.	0.4	1
194	Passive control design for distributed process systems: Theory and applications. AICHE Journal, 2000, 46, 1593-1606.	1.8	26
195	Optimization of hybrid discrete/continuous dynamic systems. Computers and Chemical Engineering, 2000, 24, 2171-2182.	2.0	49
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