Sharad Bhartiya

List of Publications by Year
in descending order

93	1,195	361413	454955
papers	citations	20 h-index	30 g-index

94	94	94	1012
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A novel approach to multiparametric quadratic programming. Automatica, 2011, 47, 2112-2117.	5.0	107
2	A multiple model approach for predictive control of nonlinear hybrid systems. Journal of Process Control, 2008, 18, 131-148.	3.3	106
3	A gap metric based multiple model approach for nonlinear switched systems. Journal of Process Control, 2012, 22, 1743-1754.	3.3	40
4	Neural network-based software sensor: training set design and application to a continuous pulp digester. Control Engineering Practice, 2005, 13, 135-143.	5.5	38
5	Multiple feedback loops are key to a robust dynamic performance of tryptophan regulation in Escherichia coli. FEBS Letters, 2004, 563, 234-240.	2.8	37
6	Fundamental thermal-hydraulic pulp digester model with grade transition. AICHE Journal, 2003, 49, 411-425.	3.6	35
7	Structured kinetic model to represent the utilization of multiple substrates in complex media during rifamycin B fermentation. Biotechnology and Bioengineering, 2006, 93, 779-790.	3.3	32
8	Development of inferential measurements using neural networks. ISA Transactions, 2001, 40, 307-323.	5.7	30
9	Multi-objective optimization of integrated biodiesel production and separation system. Fuel, 2019, 243, 519-532.	6.4	28
10	Dynamic model of Escherichia coli tryptophan operon shows an optimal structural design. FEBS Journal, 2003, 270, 2644-2651.	0.2	27
11	Implementation of integral feedback control in biological systems. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2015, 7, 301-316.	6.6	27
12	Model-based optimisation of biodiesel production from microalgae. Computers and Chemical Engineering, 2016, 89, 222-249.	3.8	27
13	Hybrid system identification using a structural approach and its model based control: An experimental validation. Nonlinear Analysis: Hybrid Systems, 2009, 3, 87-100.	3.5	26
14	Multiple feedback loop design in the tryptophan regulatory network of Escherichia coli suggests a paradigm for robust regulation of processes in series. Journal of the Royal Society Interface, 2006, 3, 383-391.	3.4	25
15	State estimation of nonlinear dynamical systems using nonlinear update based Unscented Gaussian Sum Filter. Journal of Process Control, 2014, 24, 1425-1443.	3.3	25
16	Characterization of the adaptive response and growth upon hyperosmotic shock in Saccharomyces cerevisiae. Molecular BioSystems, 2011, 7, 1138.	2.9	24
17	Global optimization of mixed-integer nonlinear (polynomial) programming problems: the Bernstein polynomial approach. Computing (Vienna/New York), 2012, 94, 325-343.	4.8	24
18	Profile control in distributed parameter systems using lexicographic optimization based MPC. Journal of Process Control, 2009, 19, 100-109.	3.3	23

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19	Nonlinear inferential multi-rate control of Kappa number at multiple locations in a continuous pulp digester. Journal of Process Control, 2006, 16, 1037-1053.	3.3	22
20	Optimal Grade Transition in Polymerization Reactors:Â A Comparative Case Studyâ€. Industrial & Engineering Chemistry Research, 2006, 45, 3583-3592.	3.7	21
21	Systems biology of GAL regulon in Saccharomyces cerevisiae. Wiley Interdisciplinary Reviews: Systems Biology and Medicine, 2010, 2, 98-106.	6.6	20
22	A computationally efficient robust tube based MPC for linear switched systems. Nonlinear Analysis: Hybrid Systems, 2016, 19, 60-76.	3.5	20
23	A Stabilizing Sub-Optimal Model Predictive Control for Quasi-Linear Parameter Varying Systems. , 2020, 4, 402-407.		20
24	Factorized approach to nonlinear MPC using a radial basis function model. AICHE Journal, 2001, 47, 358-368.	3.6	19
25	A reactive scheduling and control framework for integration of renewable energy sources with a reformer-based fuel cell system and an energy storage device. Journal of Process Control, 2020, 87, 147-165.	3.3	17
26	Integration of Supply and Demand Side Management Using Renewable Power Sources: Application on an Air Separation Plant. Industrial & Engineering Chemistry Research, 2021, 60, 3670-3686.	3.7	17
27	Autoregulation of regulatory proteins is key for dynamic operation ofGALswitch inSaccharomyces cerevisiae. FEBS Letters, 2004, 576, 119-126.	2.8	16
28	Multiple-model based predictive control of nonlinear hybrid systems based on global optimization using the Bernstein polynomial approach. Journal of Process Control, 2012, 22, 423-435.	3.3	16
29	Low soil moisture predisposes field-grown chickpea plants to dry root rot disease: evidence from simulation modeling and correlation analysis. Scientific Reports, 2021, 11, 6568.	3.3	16
30	An Efficient and Stabilizing Model Predictive Control of Switched Systems. IEEE Transactions on Automatic Control, 2017, 62, 3401-3407.	5.7	15
31	A steady-state modeling approach to validate an in vivo mechanism of the GAL regulatory network in Saccharomyces cerevisiae. FEBS Journal, 2004, 271, 4064-4074.	0.2	14
32	Optimization of integrated microalgal biorefinery producing fuel and valueâ€added products. Biofuels, Bioproducts and Biorefining, 2017, 11, 1030-1050.	3.7	13
33	A model-based study delineating the roles of the two signaling branches ofSaccharomyces cerevisiae, Sho1 and Sln1, during adaptation to osmotic stress. Physical Biology, 2009, 6, 036019.	1.8	10
34	Effect of Loop Configuration on Steam Drum Level Control for a Multiple Drum Interconnected Loops Pressure Tube Type Boiling Water Reactor. IEEE Transactions on Nuclear Science, 2009, 56, 3712-3725.	2.0	10
35	An Improved Gaussian Sum Unscented Kalman Filter. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 355-362.	0.4	10
36	Constrained Unscented Gaussian Sum Filter for state estimation of nonlinear dynamical systems. Computers and Chemical Engineering, 2016, 91, 352-364.	3.8	10

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37	Model predictive control of a laboratory gas turbine. , 2016, , .		10
38	Linear Machine Solution to Point Location Problem. IEEE Transactions on Automatic Control, 2017, 62, 1403-1410.	5.7	10
39	Substrate specificity of lipases in alkoxycarbonylation reaction: QSAR model development and experimental validation. Biotechnology and Bioengineering, 2006, 94, 554-564.	3.3	9
40	Influence of plasma macronutrient levels on hepatic metabolism: role of regulatory networks in homeostasis and disease states. RSC Advances, 2016, 6, 14344-14371.	3.6	9
41	Dynamic Modeling and Control of an Integrated Reformer-Membrane-Fuel Cell System. Processes, 2018, 6, 169.	2.8	9
42	Selection of Steam Drum Level Control Method for Multiple Drum Interacting Loops Pressure Tube-Type BWR. IEEE Transactions on Nuclear Science, 2011, 58, 479-489.	2.0	8
43	Adaptive robust model predictive control of nonlinear systems using tubes based on interval inclusions. , 2014, , .		8
44	Modeling and Predictive Control of an Integrated Reformerâ€“Membraneâ€“Fuel Cellâ€“Battery Hybrid Dynamic System. Industrial & Engineering Chemistry Research, 2019, 58, 11392-11406.	3.7	8
45	Dynamic Modeling and Simulation of a Hybrid Solar Thermal Power Plant. Industrial & Engineering Chemistry Research, 2019, 58, 7531-7550.	3.7	8
46	Benefits of factorized RBF-based NMPC. Computers and Chemical Engineering, 2002, 26, 1185-1199.	3.8	7
47	Linear Machine: A Novel Approach to Point Location Problem. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 445-450.	0.4	7
48	Optimal strategies for transitions in simulated moving bed chromatography. Computers and Chemical Engineering, 2016, 84, 83-95.	3.8	7
49	Parameter estimation and optimal control of a batch transesterification reactor: An experimental study. Chemical Engineering Research and Design, 2020, 157, 1-12.	5.6	7
50	A Computationally Efficient Scheme for Model Predictive Control of Nonlinear Hybrid Systems Using Generalized Outer Approximation. Industrial & Engineering Chemistry Research, 2009, 48, 5767-5778.	3.7	6
51	Integrated microalgae biorefinery: Impact of product demand profile and prospect of carbon capture. Biofuels, Bioproducts and Biorefining, 2017, 11, 1065-1076.	3.7	6
52	Mathematical Model Predictions of a Plugging Phenomenon in an Industrial Single-Vessel Pulp Digester. Industrial & Engineering Chemistry Research, 2004, 43, 5225-5232.	3.7	5
53	Impact of protein co-production on techno-economic feasibility of microalgal biodiesel. Computer Aided Chemical Engineering, 2016, 38, 1803-1808.	0.5	5
54	Optimization Based Constrained Gaussian Sum Unscented Kalman Filterâˆ—â€”The authors thank the Department of Science and Technology, India, for partial financial assistance under grant 13DST057.. IFAC-PapersOnLine, 2016, 49, 59-64.	0.9	5

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55	Constrained iterative learning control of batch transesterification process under uncertainty. Control Engineering Practice, 2020, 103, 104580.	5.5	5
56	Experimental and steadyâ€state analysis of the GAL regulatory system in Kluyveromycesâ€ƒlactis. FEBS Journal, 2010, 277, 2987-3002.	4.7	4
57	An innovative approach for Steam Generator Pressure Control of a nuclear power plant. Nuclear Engineering and Design, 2011, 241, 5113-5126.	1.7	4
58	Explicit-Model Predictive Control: A simulation based scalability study. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 204-209.	0.4	4
59	A dual-terminal set based robust tube MPC for switched systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 93-98.	0.4	4
60	Interval constrained state estimation of nonlinear dynamical systems using unscented Gaussian sum filter. , 2014, , .		4
61	Analysis of osmoadaptation system in budding yeast suggests that regulated degradation of glycerol synthesis enzyme is key to near-perfect adaptation. Systems and Synthetic Biology, 2014, 8, 141-154.	1.0	4
62	An optimization-driven novel operation of simulated moving bed chromatographic separation. IFAC-PapersOnLine, 2016, 49, 165-170.	0.9	4
63	Iterative Learning Estimation with Lean Measurements. IFAC-PapersOnLine, 2016, 49, 71-76.	0.9	4
64	Unconstrained Nonlinear State Estimation for Tennessee Eastman Challenge Process. IFAC-PapersOnLine, 2017, 50, 12919-12924.	0.9	4
65	Predictive Control of Nonlinear Hybrid Systems Using Generalized Outer Approximation. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 3623-3628.	0.4	3
66	Mathematical modeling of fission yeast Schizosaccharomyces pombe cell cycle: exploring the role of multiple phosphatases. Systems and Synthetic Biology, 2011, 5, 115-129.	1.0	3
67	Dynamic analysis of the KlGAL regulatory system in Kluyveromyces lactis: a comparative study with Saccharomyces cerevisiae. Systems and Synthetic Biology, 2011, 5, 69-85.	1.0	3
68	Control-relevant Multiple Linear Modeling of Simulated Moving Bed Chromatography. IFAC-PapersOnLine, 2015, 48, 477-482.	0.9	3
69	Monte Carlo Gaussian Sum Filter For State Estimation of Nonlinear Dynamical Systemsâˆ—â€”The authors would like to thank Dept. of Science and Technology for partially funding this research under the grant 13DST057.. IFAC-PapersOnLine, 2016, 49, 65-70.	0.9	3
70	Nonlinear State and Parameter Estimation for Parabolic Trough Collector. IFAC-PapersOnLine, 2018, 51, 437-443.	0.9	3
71	Multiparametric Nonlinear MPC: A region free approach. IFAC-PapersOnLine, 2020, 53, 11374-11379.	0.9	3
72	Quantification of metabolism in Saccharomyces cerevisiae under hyperosmotic conditions using elementary mode analysis. Journal of Industrial Microbiology and Biotechnology, 2012, 39, 927-941.	3.0	2

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73	Nonlinear Update Based Unscented Gaussian Sum Filter. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 172-177.	0.4	2
74	Optimization Based Constrained Unscented Gaussian Sum Filter. Computer Aided Chemical Engineering, 2015, 37, 1715-1720.	0.5	2
75	Dynamic optimization of a batch transesterification process for biodiesel production. , 2016, , .		2
76	Plantwide Decentralized Controller Design for Hybrid Solar Thermal Power Plant. Frontiers in Control Engineering, 0, 3, .	0.6	2
77	A multiple linear modeling approach for nonlinear switched systems1. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 63-68.	0.4	1
78	Analysis of Integrated Insulin-mTOR Signalling Network -Diabetes Perspective. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 143-148.	0.4	1
79	Model-based Optimisation of Integrated Algae Biorefinery. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 1011-1018.	0.4	1
80	A Computationally Efficient Stabilizing Model Predictive Control of Switched Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 607-613.	0.4	1
81	Multi-Parametric Model Predictive Control Strategy on Laboratory SR-30 Gas Turbine. , 2015, , .		1
82	Dynamic modeling of an integrated reformer membrane fuel cell system. IFAC-PapersOnLine, 2017, 50, 10790-10795.	0.9	1
83	Multi-objective Optimization of a Batch Transesterification Reactor Considering Reactor and Methanol Separation Unit Together. Computer Aided Chemical Engineering, 2017, , 2203-2208.	0.5	1
84	Advanced control of a reformer based fuel cell system coupled with multiple, uncertain renewable energy sources and an energy storage system. IFAC-PapersOnLine, 2020, 53, 374-379.	0.9	1
85	Steam drum process dynamics and level control of a pressure tube BWR. Kerntechnik, 2010, 75, 352-362.	0.2	1
86	An optimal three fractions yielding simulated moving bed chromatographic separation: Triple switch SMBC. IFAC-PapersOnLine, 2020, 53, 11698-11703.	0.9	1
87	Rate and grade transition control using PI controller based supervisory and regulatory layers: Diacetone alcohol process case study. ISA Transactions, 2021, , .	5.7	1
88	PROFILE CONTROL IN DISTRIBUTED PARAMETER SYSTEMS USING LEXICOGRAPHIC OPTIMIZATION BASED MPC. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 111-116.	0.4	0
89	Optimal operating strategies for SMBC. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 457-462.	0.4	0
90	Projection based constrained nonlinear state estimation using Gaussian sum filters. , 2016, , .		0

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91	Analysis of an integrated reformer-membrane-fuel cell system with battery backup and switching controller : Start-up case. , 2019, , .		0
92	Dynamic Analysis of an Integrated Reformer-Membrane-Fuel Cell System with a Battery Backup and Switching Controller for Automotive Applications. Lecture Notes in Electrical Engineering, 2020, , 1-11.	0.4	0
93	Plantwide Control of Two Stage Desalting Process For Feed Rate and Grade Disturbances. IFAC-PapersOnLine, 2022, 55, 387-392.	0.9	0