

# Vivek Dua

## List of Publications by Year in descending order

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106  
papers

5,006  
citations

236612

25  
h-index

91712

69  
g-index

243  
all docs

243  
docs citations

243  
times ranked

2790  
citing authors

#	ARTICLE	IF	CITATIONS
1	Machine learning approach for the prediction of biomass pyrolysis kinetics from preliminary analysis. Journal of Environmental Chemical Engineering, 2022, 10, 108025.	3.3	23
2	Parameter estimation of partial differential equations using artificial neural network. Computers and Chemical Engineering, 2021, 147, 107221.	2.0	6
3	Multi Set-Point Explicit Model Predictive Control for Nonlinear Process Systems. Processes, 2021, 9, 1156.	1.3	5
4	Fair Shale Gas Water Cost Distribution Using Nash Bargaining Game. Chemical Engineering Research and Design, 2021, , .	2.7	3
5	A reformulation strategy for mixed-integer linear bi-level programming problems. Computers and Chemical Engineering, 2021, 153, 107409.	2.0	4
6	A game-theoretic optimisation approach to fair customer allocation in oligopolies. Optimization and Engineering, 2020, 21, 1459-1486.	1.3	8
7	A graph theory approach for scenario aggregation for stochastic optimisation. Computers and Chemical Engineering, 2020, 137, 106810.	2.0	7
8	An artificial neural network approach to recognise kinetic models from experimental data. Computers and Chemical Engineering, 2020, 135, 106759.	2.0	19
9	Closed-loop integration of planning, scheduling and multi-parametric nonlinear control. Computers and Chemical Engineering, 2019, 122, 172-192.	2.0	32
10	Nonlinear Model Predictive Control of Haemodialysis. Computer Aided Chemical Engineering, 2019, 46, 1285-1290.	0.3	0
11	Scenario tree reduction for optimisation under uncertainty using sensitivity analysis. Computers and Chemical Engineering, 2019, 125, 449-459.	2.0	10
12	A novel scenario aggregation framework based on network community detection methods. Computer Aided Chemical Engineering, 2019, 46, 811-816.	0.3	1
13	Parameter estimation using multiparametric programming for implicit Euler's method based discretization. Chemical Engineering Research and Design, 2019, 142, 62-77.	2.7	8
14	Optimal model-based control of non-viral siRNA delivery. Biotechnology and Bioengineering, 2018, 115, 1866-1877.	1.7	5
15	A rolling horizon approach for optimal management of microgrids under stochastic uncertainty. Chemical Engineering Research and Design, 2018, 131, 293-317.	2.7	37
16	On the development of kinetic models for solvent-free benzyl alcohol oxidation over a gold-palladium catalyst. Chemical Engineering Journal, 2018, 342, 196-210.	6.6	55
17	Fault Detection in Wastewater Treatment Systems Using Multiparametric Programming. Processes, 2018, 6, 231.	1.3	11
18	Uncertainty aware integration of planning, scheduling and multi-parametric control. Computer Aided Chemical Engineering, 2018, 44, 1171-1176.	0.3	2

#	ARTICLE	IF	CITATIONS
19	Multi-parametric mixed integer linear programming under global uncertainty. Computers and Chemical Engineering, 2018, 116, 279-295.	2.0	17
20	Fault detection of fermentation processes. Computer Aided Chemical Engineering, 2018, , 1171-1176.	0.3	3
21	Multi-parametric linear programming under global uncertainty. AIChE Journal, 2017, 63, 3871-3895.	1.8	12
22	Nonlinear Model-Based Process Operation under Uncertainty Using Exact Parametric Programming. Engineering, 2017, 3, 202-213.	3.2	12
23	Traveling Salesman Problem-Based Integration of Planning, Scheduling, and Optimal Control for Continuous Processes. Industrial & Engineering Chemistry Research, 2017, 56, 11186-11205.	1.8	16
24	Model-Based Parameter Estimation for Fault Detection Using Multiparametric Programming. Industrial & Engineering Chemistry Research, 2017, 56, 8000-8015.	1.8	17
25	A unified framework for model-based multi-objective linear process and energy optimisation under uncertainty. Applied Energy, 2017, 186, 539-548.	5.1	27
26	Optimal management of microgrids under uncertainty using scenario reduction. Computer Aided Chemical Engineering, 2017, 40, 2257-2262.	0.3	5
27	Closed loop integration of planning, scheduling and control via exact multi-parametric nonlinear programming. Computer Aided Chemical Engineering, 2017, 40, 1273-1278.	0.3	6
28	Data-Based Model Reduction for Refinery-Wide Optimization. , 2017, , 119-156.		0
29	Control relevant modelling for haemodialysis. Computer Aided Chemical Engineering, 2016, 38, 949-954.	0.3	1
30	Merging information from batch and continuous flow experiments for the identification of kinetic models of benzyl alcohol oxidation over Au-Pd catalyst. Computer Aided Chemical Engineering, 2016, 38, 961-966.	0.3	6
31	Hydrodynamic effects on three phase micro-packed bed reactor performance – Gold-palladium catalysed benzyl alcohol oxidation. Chemical Engineering Science, 2016, 149, 129-142.	1.9	53
32	Explicit model predictive control of hybrid systems and multiparametric mixed integer polynomial programming. AIChE Journal, 2016, 62, 3441-3460.	1.8	33
33	A joint model-based experimental design approach for the identification of kinetic models in continuous flow laboratory reactors. Computers and Chemical Engineering, 2016, 95, 202-215.	2.0	33
34	Modelling and Optimal Control of Non-Viral siRNA Delivery. Computer Aided Chemical Engineering, 2016, 38, 673-678.	0.3	2
35	Model-based design of experiments for the identification of kinetic models in microreactor platforms. Computer Aided Chemical Engineering, 2015, 37, 323-328.	0.3	4
36	Mixed integer polynomial programming. Computers and Chemical Engineering, 2015, 72, 387-394.	2.0	23

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37	Design of a Gene Metabolator under Uncertainty. Computer Aided Chemical Engineering, 2015, 37, 2141-2146.	0.3	0
38	Front Matter: Volume 3: Supply Chain Optimization, Part I. , 2014, , I-XIX.		0
39	Front Matter: Volume 6: Molecular Systems Engineering. , 2014, , I-XVII.		0
40	Front Matter: Volume 4: Supply Chain Optimization, Part II. , 2014, , I-XIX.		0
41	Index: Volume 2: Theory and Applications. , 2014, , 255-257.		0
42	Index: Volume 3: Supply Chain Optimization, Part I. , 2014, , 339-348.		0
43	Index: Volume 5: Energy Systems Engineering. , 2014, , 323-327.		0
44	Index: Volume 6: Molecular Systems Engineering. , 2014, , 307-317.		0
45	Index: Volume 7: Dynamic Process Modeling. , 2014, , 583-601.		0
46	Index: Volume 1: Theory, Algorithms, and Applications. , 2014, , 307-309.		0
47	Index: Volume 4: Supply Chain Optimization, Part II. , 2014, , 339-349.		1
48	Front Matter: Volume 7: Dynamic Process Modeling. , 2014, , I-XXV.		0
49	Front Matter: Volume 5: Energy Systems Engineering. , 2014, , I-XVII.		0
50	Front Matter: Volume 1: Theory, Algorithms, and Applications. , 2014, , i-xix.		0
51	Microreaction technology aided catalytic process design. Current Opinion in Chemical Engineering, 2013, 2, 338-345.	3.8	45
52	Increased apical Na <sup>+</sup> permeability in cystic fibrosis is supported by a quantitative model of epithelial ion transport. Journal of Physiology, 2013, 591, 3681-3692.	1.3	14
53	Approximate multi-parametric programming based B&B algorithm for MINLPs. Computers and Chemical Engineering, 2012, 42, 288-297.	2.0	9
54	A Simultaneous Approach for Parameter Estimation of a System of Ordinary Differential Equations, Using Artificial Neural Network Approximation. Industrial & Engineering Chemistry Research, 2012, 51, 1809-1814.	1.8	12

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55	Novel model reduction techniques for refinery-wide energy optimisation. Applied Energy, 2012, 89, 117-126.	5.1	28
56	Using Low-Grade Heat for Solvent Extraction based Efficient Water Desalination. Computer Aided Chemical Engineering, 2011, , 1703-1707.	0.3	2
57	An Artificial Neural Network approximation based decomposition approach for parameter estimation of system of ordinary differential equations. Computers and Chemical Engineering, 2011, 35, 545-553.	2.0	52
58	Disaggregationâ€‘aggregation based model reduction for refinery-wide optimization. Computers and Chemical Engineering, 2011, 35, 1838-1856.	2.0	16
59	Approximate Multi-Parametric Programming based B&B Algorithm for MINLPs. Computer Aided Chemical Engineering, 2011, 29, 798-802.	0.3	1
60	A mixed-integer programming approach for optimal configuration of artificial neural networks. Chemical Engineering Research and Design, 2010, 88, 55-60.	2.7	48
61	Modelling and multi-parametric control for delivery of anaesthetic agents. Medical and Biological Engineering and Computing, 2010, 48, 543-553.	1.6	9
62	A Decomposition Approach for Parameter Estimation of System of Ordinary Differential Equations. Computer Aided Chemical Engineering, 2010, , 361-366.	0.3	0
63	MPC on a chipâ€‘Recent advances on the application of multi-parametric model-based control. Computers and Chemical Engineering, 2008, 32, 754-765.	2.0	48
64	Optimal delivery of chemotherapeutic agents in cancer. Computers and Chemical Engineering, 2008, 32, 99-107.	2.0	80
65	Model Based Control for Drug Delivery Systems. , 2008, , 2276-2284.		3
66	Multiparametric Linear Programming. , 2008, , 2481-2484.		0
67	Multiparametric Mixed Integer Linear Programming. , 2008, , 2484-2490.		2
68	Parametric Linear Programming: Cost Simplex Algorithm. , 2008, , 2917-2920.		0
69	Parametric Mixed Integer Nonlinear Optimization. , 2008, , 2920-2924.		0
70	Bounds and Solution Vector Estimates for Parametric NLPS. , 2008, , 325-328.		0
71	Selfdual Parametric Method for Linear Programs. , 2008, , 3374-3375.		0
72	Parametric programming & control: from theory to practice. Computer Aided Chemical Engineering, 2007, 24, 569-574.	0.3	2

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73	Controlled release of drugs from polymeric devices. Computer Aided Chemical Engineering, 2007, 24, 971-976.	0.3	1
74	Proactive Scheduling under Uncertainty: A Parametric Optimization Approach. Industrial & Engineering Chemistry Research, 2007, 46, 8044-8049.	1.8	46
75	Parametric global optimisation for bilevel programming. Journal of Global Optimization, 2007, 38, 609-623.	1.1	108
76	Optimal configuration of artificial neural networks. Computer Aided Chemical Engineering, 2006, , 1599-1604.	0.3	2
77	A global parametric programming optimisation strategy for multilevel problems. Computer Aided Chemical Engineering, 2006, 21, 215-220.	0.3	4
78	Stability analysis of nonlinear model predictive control: An optimization based approach. Computer Aided Chemical Engineering, 2006, 21, 1287-1292.	0.3	2
79	Optimal delivery of chemotherapeutic agents in cancer. Computer Aided Chemical Engineering, 2006, , 1643-1648.	0.3	2
80	MODEL BASED DRUG DELIVERY FOR ANESTHESIA. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 95-100.	0.4	0
81	Robust model-based predictive controller for hybrid system via parametric programming. Computer Aided Chemical Engineering, 2005, 20, 1249-1254.	0.3	3
82	Model based parametric control in anesthesia. Computer Aided Chemical Engineering, 2005, 20, 1015-1020.	0.3	1
83	Model based control for insulin delivery for type 1 diabetics via parametric programming. Computer Aided Chemical Engineering, 2004, 18, 1045-1050.	0.3	7
84	Global Optimization Issues in Multiparametric Continuous and Mixed-Integer Optimization Problems. Journal of Global Optimization, 2004, 30, 59-89.	1.1	70
85	Robust model-based tracking control using parametric programming. Computers and Chemical Engineering, 2004, 28, 195-207.	2.0	25
86	A bilevel programming framework for enterprise-wide process networks under uncertainty. Computers and Chemical Engineering, 2004, 28, 1121-1129.	2.0	120
87	Design of robust model-based controllers via parametric programming. Automatica, 2004, 40, 189-201.	3.0	104
88	On-Line Optimization via Off-Line Parametric Optimization! A Guided Tour to Parametric Programming and Control. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 1-7.	0.4	5
89	Global Optimization of Bilevel Programming Problems via Parametric Programming. Nonconvex Optimization and Its Applications, 2004, , 457-476.	0.1	8
90	Robust model-based Controllers via Parametric Programming. Computer Aided Chemical Engineering, 2002, 10, 541-546.	0.3	5

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91	A Hybrid Parametric/Stochastic Programming Approach for Mixed-Integer Nonlinear Problems under Uncertainty. Industrial & Engineering Chemistry Research, 2002, 41, 67-77.	1.8	31
92	The explicit model-based control law for continuous time systems via parametric programming - INV5105. , 2002, , .		4
93	On-line optimization via off-line parametric optimization tools. Computers and Chemical Engineering, 2002, 26, 175-185.	2.0	161
94	A multiparametric programming approach for mixed-integer quadratic engineering problems. Computers and Chemical Engineering, 2002, 26, 715-733.	2.0	190
95	The explicit linear quadratic regulator for constrained systems. Automatica, 2002, 38, 3-20.	3.0	2,616
96	Model predictive control: A multi-parametric programming approach. Computer Aided Chemical Engineering, 2000, 8, 301-306.	0.3	10
97	On-line optimization via off-line parametric optimization tools. Computers and Chemical Engineering, 2000, 24, 183-188.	2.0	87
98	An Algorithm for the Solution of Multiparametric Mixed Integer Linear Programming Problems. Annals of Operations Research, 2000, 99, 123-139.	2.6	198
99	A parametric mixed-integer global optimization framework for the solution of process engineering problems under uncertainty. Computers and Chemical Engineering, 1999, 23, S19-S22.	2.0	13
100	Algorithms for the Solution of Multiparametric Mixed-Integer Nonlinear Optimization Problems. Industrial & Engineering Chemistry Research, 1999, 38, 3976-3987.	1.8	104
101	Optimization Techniques for Process Synthesis and Material Design Under Uncertainty. Chemical Engineering Research and Design, 1998, 76, 408-416.	2.7	34
102	An outer-approximation algorithm for the solution of multiparametric MINLP problems. Computers and Chemical Engineering, 1998, 22, S955-S958.	2.0	21
103	Free-radical polymerizations associated with the Trommsdorff effect under semibatch reactor conditions. III. Experimental responses to step changes in initiator concentration. Journal of Applied Polymer Science, 1996, 59, 749-758.	1.3	17
104	The explicit control law for hybrid systems via parametric programming. , 0, , .		16
105	Design of robust model-based tracking controllers via parametric programming. , 0, , .		3
106	Bridging the Gap Between Production, Finances, and Risk in Supply Chain Optimization. , 0, , 1-44.		0