Nirupam Chakraborti

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/11267269/publications.pdf

Version: 2024-02-01

66 papers	1,408 citations	279798 23 h-index	361022 35 g-index
66 all docs	66 docs citations	66 times ranked	697 citing authors

#	Article	IF	Citations
1	A data-driven surrogate-assisted evolutionary algorithm applied to a many-objective blast furnace optimization problem. Materials and Manufacturing Processes, 2017, 32, 1172-1178.	4.7	98
2	Genetic programming through bi-objective genetic algorithms with a study of a simulated moving bed process involving multiple objectives. Applied Soft Computing Journal, 2013, 13, 2613-2623.	7.2	80
3	Cuâ€•Zn separation by supported liquid membrane analyzed through Multi-objective Genetic Algorithms. Hydrometallurgy, 2011, 107, 112-123.	4.3	79
4	Analyzing Leaching Data for Low-Grade Manganese Ore Using Neural Nets and Multiobjective Genetic Algorithms. Materials and Manufacturing Processes, 2009, 24, 320-330.	4.7	74
5	Genetic Programming Evolved through Bi-Objective Genetic Algorithms Applied to a Blast Furnace. Materials and Manufacturing Processes, 2013, 28, 776-782.	4.7	65
6	Dynamic process modelling of iron ore sintering. Steel Research = Archiv FÃ¼r Das EisenhÃ¼ttenwesen, 1997, 68, 285-292.	0.3	48
7	Analyzing Feâ€"Zn system using molecular dynamics, evolutionary neural nets and multi-objective genetic algorithms. Computational Materials Science, 2009, 46, 821-827.	3.0	42
8	Multiobjective Optimization of Top Gas Recycling Conditions in the Blast Furnace by Genetic Algorithms. Materials and Manufacturing Processes, 2011, 26, 475-480.	4.7	42
9	Multiâ€Objective Genetic Algorithms and Genetic Programming Models for Minimizing Input Carbon Rates in a Blast Furnace Compared with a Conventional Analytic Approach. Steel Research International, 2014, 85, 219-232.	1.8	41
10	Modelling Noisy Blast Furnace Data using Genetic Algorithms and Neural Networks. Steel Research International, 2006, 77, 75-81.	1.8	36
11	Critical Assessment 3: The unique contributions of multi-objective evolutionary and genetic algorithms in materials research. Materials Science and Technology, 2014, 30, 1259-1262.	1.6	36
12	Identification of Factors Governing Mechanical Properties of TRIP-Aided Steel Using Genetic Algorithms and Neural Networks. Materials and Manufacturing Processes, 2008, 23, 130-137.	4.7	35
13	Analyzing Sparse Data for Nitride Spinels Using Data Mining, Neural Networks, and Multiobjective Genetic Algorithms. Materials and Manufacturing Processes, 2008, 24, 2-9.	4.7	33
14	Phases in Zn-coated Fe analyzed through an evolutionary meta-model and multi-objective Genetic Algorithms. Computational Materials Science, 2011, 50, 2502-2516.	3.0	30
15	Analyzing the Fluid Flow in Continuous Casting through Evolutionary Neural Nets and Multiâ€Objective Genetic Algorithms. Steel Research International, 2010, 81, 197-203.	1.8	29
16	Genetic algorithms based multi-objective optimization of an iron making rotary kiln. Computational Materials Science, 2009, 45, 181-188.	3.0	28
17	Dataâ€Driven Pareto Optimization for Microalloyed Steels Using Genetic Algorithms. Steel Research International, 2012, 83, 169-174.	1.8	28
18	Optimization of Cellular Automata Model for the Heating of Dual-Phase Steel by Genetic Algorithm and Genetic Programming. Materials and Manufacturing Processes, 2015, 30, 552-562.	4.7	28

#	Article	IF	Citations
19	Algorithms for design optimization of chemistry of hard magnetic alloys using experimental data. Journal of Alloys and Compounds, 2016, 682, 454-467.	5.5	28
20	Mechanical properties of micro-alloyed steels studied using a evolutionary deep neural network. Materials and Manufacturing Processes, 2020, 35, 611-624.	4.7	27
21	Identification and Optimization of AB₂Phases Using Principal Component Analysis, Evolutionary Neural Nets, and Multiobjective Genetic Algorithms. Materials and Manufacturing Processes, 2009, 24, 274-281.	4.7	25
22	Combined machine learning and CALPHAD approach for discovering processing-structure relationships in soft magnetic alloys. Computational Materials Science, 2018, 150, 202-211.	3.0	25
23	A genetic algorithm based heat transfer analysis of a bloom re-heating furnace. Steel Research = Archiv FÃ¼r Das EisenhÃ¼ttenwesen, 2000, 71, 396-402.	0.3	24
24	Evolutionary Data-Driven Modeling. , 2013, , 71-95.		23
25	Heat and mass transfer limitations in gasification of carbon by carbon dioxide. Steel Research = Archiv FÃ¼r Das EisenhÃ¼ttenwesen, 1991, 62, 143-151.	0.3	22
26	Data-Driven Multiobjective Analysis of Manganese Leaching from Low Grade Sources Using Genetic Algorithms, Genetic Programming, and Other Allied Strategies. Materials and Manufacturing Processes, 2011, 26, 415-430.	4.7	22
27	Modeling of recrystallization in cold rolled copper using inverse cellular automata and genetic algorithms. Computational Materials Science, 2009, 45, 96-103.	3.0	20
28	Multiâ€Objective Genetic Algorithm to Optimize Variable Drawbead Geometry for Tailor Welded Blanks Made of Dissimilar Steels. Steel Research International, 2014, 85, 1597-1607.	1.8	20
29	Evolutionary Data Driven Modeling and Multi Objective Optimization of Noisy Data Set in Blast Furnace Iron Making Process. Steel Research International, 2018, 89, 1800121.	1.8	20
30	Interfacial energy of copper clusters in Fe-Si-B-Nb-Cu alloys. Scripta Materialia, 2019, 162, 331-334.	5.2	20
31	Determination of Anisotropic Yield Coefficients by a Data-Driven Multiobjective Evolutionary and Genetic Algorithm. Materials and Manufacturing Processes, 2015, 30, 403-413.	4.7	19
32	A novel method of determining interatomic potential for Al and Al-Li alloys and studying strength of Al-Al3Li interphase using evolutionary algorithms. Computational Materials Science, 2021, 190, 110258.	3.0	18
33	Blast furnace charging optimization using multi-objective evolutionary and genetic algorithms. Materials and Manufacturing Processes, 2017, 32, 1179-1188.	4.7	17
34	A Novel Multi-objective Genetic Algorithms-Based Calculation of Hillâ€™s Coefficients. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 2704-2707.	2.2	16
35	A study on the kinetics of iron oxide reduction by solid carbon. Steel Research = Archiv FÃ¼r Das EisenhÃ¼ttenwesen, 1993, 64, 340-345.	0.3	15
36	Designing Cu-Zr Glass Using Multiobjective Genetic Algorithm and Evolutionary Neural Network Metamodelsâ€"Based Classical Molecular Dynamics Simulation. Materials and Manufacturing Processes, 2013, 28, 733-740.	4.7	15

#	Article	IF	Citations
37	Tri-objective optimization of noisy dataset in blast furnace iron-making process using evolutionary algorithms. Materials and Manufacturing Processes, 2020, 35, 677-686.	4.7	15
38	Solving the Molecular Sequence Alignment Problem with Generalized Differential Evolution 3 (GDE3). , 2007, , .		13
39	Springback Reduction in Tailor Welded Blank with High Strength Differential by Using Multi-Objective Evolutionary and Genetic Algorithms. Steel Research International, 2015, 86, 1391-1402.	1.8	13
40	Multiple Criteria in a Top Gas Recycling Blast Furnace Optimized through ak-Optimality-Based Genetic Algorithm. Steel Research International, 2016, 87, 1284-1294.	1.8	13
41	Pareto-optimal analysis of Zn-coated Fe in the presence of dislocations using genetic algorithms. Computational Materials Science, 2012, 62, 266-271.	3.0	12
42	Strategies for Evolutionary Data Driven Modeling in Chemical and Metallurgical Systems. , 2014, , 89-122.		12
43	Sensitivity Analysis of the Finite Difference 2-D Cellular Automata Model for Phase Transformation during Heating. ISIJ International, 2015, 55, 285-292.	1.4	11
44	Re-evaluation of the Optimal Operating Conditions for the Primary End of an Integrated Steel Plant using Multi-objective Genetic Algorithms and Nash Equilibrium. Steel Research International, 2006, 77, 459-461.	1.8	8
45	Self-organizing maps for pattern recognition in design of alloys. Materials and Manufacturing Processes, 2017, 32, 1067-1074.	4.7	8
46	Optimization of annealing cycle parameters of dual phase and interstitial free steels by multiobjective genetic algorithms. Materials and Manufacturing Processes, 2017, 32, 1201-1208.	4.7	7
47	Data-Driven Bi-Objective Genetic Algorithms EvoNN and BioGP and Their Applications in Metallurgical and Materials Domain. Advances in Chemical and Materials Engineering Book Series, 2016, , 346-368.	0.3	7
48	Energy Optimization Studies for Integrated Steel Plant Employing Diverse Steel-Making Route: Models and Evolutionary Algorithms-Based Approach. Mineral Processing and Extractive Metallurgy Review, 2021, 42, 355-366.	5.0	6
49	Development of an Evolutionary Deep Neural Net for Materials Research. Minerals, Metals and Materials Series, 2020, , 817-828.	0.4	6
50	Consequence of natural gas injection in blast furnace: a critical appraisal using a thermodynamic and evolutionary computation approach. Canadian Metallurgical Quarterly, 2022, 61, 1-13.	1.2	6
51	Re-evaluation of heat transfer effects in carbon gasification reaction. Steel Research = Archiv FÃ¼r Das EisenhÃ¼ttenwesen, 1988, 59, 537-541.	0.3	5
52	Editorial: Mapping the Genetic Constellation. Materials and Manufacturing Processes, 2013, 28, 707-707.	4.7	5
53	Hybrid Multi-objective Optimization Approach in Water Flooding. Journal of Energy Resources Technology, Transactions of the ASME, 0, , 1-22.	2.3	5
54	Fluid Flow in a Tundish Optimized through Genetic Algorithms. Steel Research International, 2007, 78, 517-521.	1.8	4

#	Article	IF	Citations
55	Editorial: The Flight of the Fourth Genetic Bird. Materials and Manufacturing Processes, 2009, 24, 242-242.	4.7	4
56	Effect of Carbon Distribution During the Microstructure Evolution of Dual-Phase Steels Studied Using Cellular Automata, Genetic Algorithms, and Experimental Strategies. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 5890-5906.	2.2	4
57	Editorial: Following a Genetic Hunch. Materials and Manufacturing Processes, 2011, 26, 347-347.	4.7	3
58	Novel Strategies for Data-Driven Evolutionary Optimization. Intelligent Systems, Control and Automation: Science and Engineering, 2022, , 11-25.	0.5	3
59	Guest Editorial: Counting All Those Genetic Years. Materials and Manufacturing Processes, 2015, 30, 393-393.	4.7	2
60	Data-Driven Optimization of Blast Furnace Iron Making Process Using Evolutionary Deep Learning. Management and Industrial Engineering, 2022, , 47-81.	0.4	2
61	A Combined Experimental-Computational Approach to Design Optimization of High Temperature Alloys. , 2014, , .		2
62	Prediction of an iron oxide concentration in the induction smelting process. Steel Research = Archiv FÃ¼r Das EisenhÃ¼ttenwesen, 1993, 64, 103-109.	0.3	1
63	Editorial: The call of a genetic Tambourine man. Materials and Manufacturing Processes, 2017, 32, 1051-1051.	4.7	1
64	Atomistic simulation and evolutionary optimization of Fe-Cr nanoparticles. Materials and Manufacturing Processes, 2020, 35, 652-657.	4.7	1
65	Chapter 4 Evolutionary Algorithms In Ironmaking Applications. , 2016, , 81-112.		1
66	Optimization of Stability of Retained Austenite in TRIP-Aided Steel Using Data-Driven Models and Multi-Objective Genetic Algorithms. Materials Performance and Characterization, 2012, 1, MPC-2012-0001.	0.3	0