Shubhabrata Datta

List of Publications by Year
in descending order

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113 papers	1,847 citations	257450 24 h-index	345221 36 g-index
116 all docs	116 docs citations	116 times ranked	1076 citing authors

#	Article	IF	Citations
1	Fundamentals of Machine Learning. Management and Industrial Engineering, 2022, , 1-27.	0.4	2
2	Mining the Genesis of Sliver Defects Through Rough and Fuzzy Set Theories. Management and Industrial Engineering, 2022, , 97-120.	0.4	0
3	Biomechanical Analysis on Vancouver Periprosthetic Fracture in Femur Using the Finite Element Modeling. Advances in Mechatronics and Mechanical Engineering, 2022, , 88-93.	1.0	0
4	Design of hybrid PEEK composite with improved tribo-mechanical properties for biomedical applications â€“ A machine learning approach. Materials Today: Proceedings, 2022, , .	1.8	0
5	Metal and composite bone plates for B1 periprosthetic femoral fracture in healthy and osteoporotic condition: A comparative biomechanical study. International Journal of Artificial Organs, 2022, 45, 704-714.	1.4	1
6	Designing UHMWPE hybrid composites using machine learning and metaheuristic algorithms. Composite Structures, 2021, 267, 113898.	5.8	11
7	Designing optimized ternary catalytic alloy electrode for efficiency improvement of semiconductor gas sensors using a machine learning approach. Decision Making: Applications in Management and Engineering, 2021, 4, 126-139.	5.5	6
8	Thermal and viscoelastic behaviour of graphene nanoplatelets/flax fibre/epoxy composites. Plastics, Rubber and Composites, 2021, 50, 219-227.	2.0	8
9	Optimizing the Tribological Properties of UHMWPE Nanocompositesâ€”An Artificial Intelligence based approach. Lecture Notes in Mechanical Engineering, 2021, , 831-843.	0.4	2
10	Design of the ultrahigh molecular weight polyethylene composites with multiple nanoparticles: An artificial intelligence approach. Journal of Composite Materials, 2020, 54, 179-192.	2.4	26
11	Effect of graphene on the properties of flax fabric reinforced epoxy composites. Advanced Composite Materials, 2020, 29, 443-458.	1.9	57
12	A biomechanical study on the laminate stacking sequence in composite bone plates for vancouver femur B1 fracture fixation. Computer Methods and Programs in Biomedicine, 2020, 196, 105680.	4.7	14
13	Designing age-hardenable Al alloys using ANFIS and GA. IOP Conference Series: Materials Science and Engineering, 2020, 912, 052005.	0.6	0
14	Design of Alumina Reinforced Aluminium Alloy Composites with Improved Tribo-Mechanical Properties: A Machine Learning Approach. Transactions of the Indian Institute of Metals, 2020, 73, 3059-3069.	1.5	20
15	Design of Ti composite with bioactive surface for dental implant. Materials and Manufacturing Processes, 2020, 35, 643-651.	4.7	8
16	Analysing the frictional properties of micro dimpled surface created by milling machine under lubricated condition. Tribology International, 2020, 146, 106260.	5.9	13
17	Design of Patient Specific Spinal Implant (Pedicle Screw Fixation) using FE Analysis and Soft Computing Techniques. Current Medical Imaging, 2020, 16, 371-382.	0.8	8
18	Salute to the genetic tambourine man. Materials and Manufacturing Processes, 2020, 35, 609-610.	4.7	1

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19	Artificial intelligence based design of multiple friction modifiers dispersed castor oil and evaluating its tribological properties. Tribology International, 2019, 140, 105813.	5.9	36
20	Data-driven design of ternary alloy catalysts for enhanced oxide-based gas sensorsâ€™ performance. Computational Materials Science, 2019, 161, 255-260.	3.0	5
21	Computational intelligence based design of implant for varying bone conditions. International Journal for Numerical Methods in Biomedical Engineering, 2019, 35, e3191.	2.1	9
22	Computational intelligence-based design of lubricant with vegetable oil blend and various nano friction modifiers. Fuel, 2019, 241, 733-743.	6.4	37
23	An automated morphological classification of ferrite-martensite dual-phase microstructures. Measurement: Journal of the International Measurement Confederation, 2019, 137, 595-603.	5.0	11
24	MCDM towards knowledge incorporation in ANN models for phase transformation in continuous cooling of steel. Multidiscipline Modeling in Materials and Structures, 2019, 15, 170-186.	1.3	8
25	Designing dual-phase steels with improved performance using ANN and GA in tandem. Computational Materials Science, 2019, 157, 6-16.	3.0	45
26	Analyses of anti-wear and extreme pressure properties of castor oil with zinc oxide nano friction modifiers. Applied Surface Science, 2018, 449, 277-286.	6.1	91
27	Design of patient specific dental implant using FE analysis and computational intelligence techniques. Applied Soft Computing Journal, 2018, 65, 272-279.	7.2	58
28	Informatics Based Design of Bio-Lubricant with Nano Friction Modifiers and Evaluation of Its Tribological Properties. , 2018, , .		0
29	Intelligent design optimization of age-hardenable Al alloys. Computational Materials Science, 2018, 153, 315-325.	3.0	8
30	Design of novel age-hardenable aluminium alloy using evolutionary computation. Journal of Alloys and Compounds, 2017, 704, 373-381.	5.5	18
31	Incorporation of prior knowledge in neural network model for continuous cooling of steel using genetic algorithm. Applied Soft Computing Journal, 2017, 58, 297-306.	7.2	35
32	Analyses of Tribological Properties of Castor Oil With Various Carbonaceous Micro- and Nano-Friction Modifiers. Journal of Tribology, 2017, 139, .	1.9	35
33	Rough-Fuzzy-GA-based design of Al alloys having superior cryogenic performance. Materials and Manufacturing Processes, 2017, 32, 1075-1081.	4.7	9
34	In Search of the Attributes Responsible for Sliver Formation in Cold Rolled Steel Sheets. Journal of the Institution of Engineers (India): Series D, 2017, 98, 59-70.	1.0	1
35	Imprecise Knowledge and Fuzzy Modeling in Materials Domain. , 2017, , 170-183.		0
36	New training strategies for neural networks with application to quaternary Alâ€“Mgâ€“Scâ€“Cr alloy design problems. Applied Soft Computing Journal, 2016, 46, 260-266.	7.2	13

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37	Computational intelligence based design of age-hardenable aluminium alloys for different temperature regimes. Materials and Design, 2016, 92, 522-534.	7.0	35
38	Imprecise knowledge based design and development of titanium alloys for prosthetic applications. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 53, 350-365.	3.1	29
39	An Informatics Based Approach to Reduce the Grain Size of Cast Hadfield Steel. Journal of the Institution of Engineers (India): Series D, 2016, 97, 1-9.	1.0	3
40	Computational Materials Design. Advances in Chemical and Materials Engineering Book Series, 2016, , 1-12.	0.3	1
41	Imprecise Knowledge and Fuzzy Modeling in Materials Domain. Advances in Chemical and Materials Engineering Book Series, 2016, , 252-266.	0.3	0
42	Computational design and development of novel Al-Mg-Sc-Cr alloy. Multidiscipline Modeling in Materials and Structures, 2015, 11, 401-412.	1.3	6
43	Computational intelligence based designing of microalloyed pipeline steel. Computational Materials Science, 2015, 104, 60-68.	3.0	26
44	In silico Design of High Strength Aluminium Alloy Using Multi-objective GA. Lecture Notes in Computer Science, 2015, , 316-327.	1.3	5
45	Effect of prior cold work on tensile properties of Alâ€“6Mg alloy with minor scandium additions. Canadian Metallurgical Quarterly, 2014, 53, 486-493.	1.2	4
46	Informatics based design of prosthetic Ti alloys. Materials Technology, 2014, 29, B69-B75.	3.0	10
47	Optimization of mechanical property and shape recovery behavior of Ti-(â¼49 at.%) Ni alloy using artificial neural network and genetic algorithm. Materials & Design, 2013, 46, 227-234.	5.1	35
48	Understanding the Shape-Memory Behavior in Ti-(~49 At. Pct) Ni Alloy by Nanoindentation Measurement. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 1722-1729.	2.2	3
49	A genetic fuzzy based modeling of effective thermal conductivity for polymer composites. Journal of Intelligent and Fuzzy Systems, 2013, 25, 259-270.	1.4	3
50	Optimal Design of Titanium Alloys for Prosthetic Applications Using a Multiobjective Evolutionary Algorithm. Materials and Manufacturing Processes, 2013, 28, 741-745.	4.7	24
51	Segmentation of dual phase steel micrograph: An automated approach. Measurement: Journal of the International Measurement Confederation, 2013, 46, 2435-2440.	5.0	21
52	Soft computing techniques in advancement of structural metals. International Materials Reviews, 2013, 58, 475-504.	19.3	83
53	Genetic Algorithmâ€“Based Design and Development of Particle-Reinforced Silicone Rubber for Soft Tooling Process. Materials and Manufacturing Processes, 2013, 28, 753-760.	4.7	14
54	Developing an unsupervised classification algorithm for characterization of steel properties. International Journal of Quality and Reliability Management, 2012, 29, 368-383.	2.0	7

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55	New Approach for Feature Selection of Thermomechanically Processed HSLA Steel using Pruned-Modular Neural Networks. Journal of the Institution of Engineers (India): Series D, 2012, 93, 73-86.	1.0	0
56	Design of particle-reinforced polyurethane mould materials for soft tooling process using evolutionary multi-objective optimization algorithms. Soft Computing, 2012, 16, 989-1008.	3.6	3
57	Investigating the role of metallic fillers in particulate reinforced flexible mould material composites using evolutionary algorithms. Applied Soft Computing Journal, 2012, 12, 28-39.	7.2	29
58	Effective properties of particle reinforced polymeric mould material towards reducing cooling time in soft tooling process. Journal of Applied Polymer Science, 2012, 124, 2567-2581.	2.6	5
59	Investigating the Role of Nonmetallic Fillers in Particulate-Reinforced Mold Composites using EAs. Materials and Manufacturing Processes, 2011, 26, 541-549.	4.7	7
60	Designing cold rolled IF steel sheets with optimized tensile properties using ANN and GA. Computational Materials Science, 2011, 50, 2331-2337.	3.0	53
61	Improvement of Soft Tooling Process Through Particle Reinforcement with Polyurethane Mould. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2011, 33, 332-342.	1.6	3
62	Dynamic discreduction using Rough Sets. Applied Soft Computing Journal, 2011, 11, 3887-3897.	7.2	21
63	Experimental investigation on equivalent properties of particle reinforced silicone rubber: Improvement of soft tooling process. Journal of Reinforced Plastics and Composites, 2011, 30, 1429-1444.	3.1	4
64	Studies on effective thermal conductivity of particle-reinforced polymeric flexible mould material composites. Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications, 2011, 225, 149-159.	1.1	0
65	STUDY OF NANOMECHANICAL PROPERTIES OF Ni-Ti SHAPE MEMORY ALLOY BY INSTRUMENTED INDENTATION TECHNIQUE. International Journal of Nanoscience, 2011, 10, 955-959.	0.7	0
66	Developing rules bases on the influence of welding parameters in FCAW process from ANN model. International Journal of Mechatronics and Manufacturing Systems, 2010, 3, 155.	0.1	7
67	Classifying tensile strength of HSLA steel: an investigation through neural networks using Mahalanobis Distance. International Journal of Mechatronics and Manufacturing Systems, 2010, 3, 97.	0.1	2
68	Effect of quaternary zirconium addition on mechanical properties of Al-6Mg-Sc (0.2-0.6%) alloy studied by ANN technique. International Journal of Mechatronics and Manufacturing Systems, 2010, 3, 144.	0.1	4
69	Multi-Objective Optimization of Particle Reinforced Silicone Rubber Mould Material for Soft Tooling Process. Lecture Notes in Computer Science, 2010, , 414-423.	1.3	0
70	Editorial: The Remaining Articles of the Kolkata Conference. Materials and Manufacturing Processes, 2009, 24, 108-108.	4.7	2
71	Effect of copper and microalloying (Ti, B) addition on tensile properties of HSLA steels predicted by ANN technique. Ironmaking and Steelmaking, 2009, 36, 125-132.	2.1	11
72	Extraction of knowledge from high strength steel data using soft computing techniquesâ€"an overview. Statistical Analysis and Data Mining, 2009, 1, 329-337.	2.8	7

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73	Rough Set Approach to Predict the Strength and Ductility of TRIP Steel. Materials and Manufacturing Processes, 2009, 24, 150-154.	4.7	13
74	Simulating Time Temperature Transformation Diagram of Steel Using Artificial Neural Network. Materials and Manufacturing Processes, 2009, 24, 169-173.	4.7	27
75	Genetic algorithm-based search on the role of variables in the work hardening process of multiphase steels. Computational Materials Science, 2009, 45, 158-166.	3.0	32
76	Genetic algorithm based optimization for multi-physical properties of HSLA steel through hybridization of neural network and desirability function. Computational Materials Science, 2009, 45, 104-110.	3.0	38
77	Effect of Scandium Additions on the Tensile Properties of Cast Al-6Mg alloys. Journal of Materials Engineering and Performance, 2008, 17, 902-907.	2.5	21
78	Compositionâ€“Processingâ€“Property Correlation of Cold-Rolled IF Steel Sheets Using Neural Network. Materials and Manufacturing Processes, 2008, 24, 100-105.	4.7	25
79	Effect of scandium on the microstructure and ageing behaviour of cast Alâ€“6Mg alloy. Materials Characterization, 2008, 59, 1661-1666.	4.4	45
80	Artificial Neural Network (ANN)-Based Model for In Situ Prediction of Porosity of Nanostructured Porous Silicon. Materials and Manufacturing Processes, 2008, 24, 83-87.	4.7	18
81	Modeling the properties of TRIP steel using AFIS: A distributed approach. Computational Materials Science, 2008, 43, 501-511.	3.0	23
82	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
83	A New Model for Multilayer Ceramic Composites. Materials and Manufacturing Processes, 2008, 23, 513-527.	4.7	8
84	Designing the Multiphase Microstructure of Steel for Optimal TRIP Effect: A Multiobjective Genetic Algorithm Based Approach. Materials and Manufacturing Processes, 2008, 24, 31-37.	4.7	11
85	Editorial: The Kolkata Conference. Materials and Manufacturing Processes, 2008, 24, 1-1.	4.7	6
86	A New Theoretical Model for Development of Damage Tolerant Composites. Transactions of the Indian Ceramic Society, 2008, 67, 63-74.	1.0	2
87	Design of the Directly Air-cooled Pearlite-free Multiphase Steel from CCT Diagrams Developed Using ANN and Dilatometric Methods. ISIJ International, 2008, 48, 649-657.	1.4	12
88	Designing High Strength Multi-phase Steel for Improved Strengthâ€“Ductility Balance Using Neural Networks and Multi-objective Genetic Algorithms. ISIJ International, 2007, 47, 1195-1203.	1.4	49
89	Exploring the non-linearity in empirical modelling of a steel system using statistical and neural network models. International Journal of Production Research, 2007, 45, 699-717.	7.5	14
90	Exploring the effects of chemical composition in hot rolled steel product using Mahalanobis distance scale under Mahalanobisâ€“Taguchi system. Computational Materials Science, 2007, 38, 671-677.	3.0	40

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91	Age Hardening Behavior of Wrought Alâ€“Mgâ€“Sc Alloy. Materials and Manufacturing Processes, 2007, 23, 74-81.	4.7	18
92	Genetic Algorithms in Optimization of Strength and Ductility of Low-Carbon Steels. Materials and Manufacturing Processes, 2007, 22, 650-658.	4.7	51
93	Mapping the inputâ€“output relationship in HSLA steels through expert neural network. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 420, 254-264.	5.6	27
94	A Comparative Study for Modeling of Hot-Rolled Steel Plate Classification Using a Statistical Approach and Neural-Net Systems. Materials and Manufacturing Processes, 2006, 21, 747-755.	4.7	10
95	Study on the effect of trace zirconium addition on the microstructural evolution in Cuâ€“Znâ€“Al shape memory alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 391, 34-42.	5.6	9
96	On the degradation of shape memory effect in trace Ti-added Cuâ€“Znâ€“Al alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 393, 125-132.	5.6	13
97	Modeling the Effect of Copper on Hardness of Microalloyed Dual Phase Steel through Neural Network and Neuro-fuzzy Systems. ISIJ International, 2005, 45, 1345-1351.	1.4	7
98	Fuzzy Modeling of Strengthâ€“Compositionâ€“Process Parameter Relationships of HSLA Steels. Materials and Manufacturing Processes, 2005, 20, 761-776.	4.7	10
99	Certainty Factor Estimation Using Petri Neural Net for HSLA Steel. ISIJ International, 2005, 45, 121-126.	1.4	10
100	Kohonen Network Modelling for the Strength of Thermomechanically Processed HSLA Steel. ISIJ International, 2004, 44, 846-851.	1.4	23
101	Effect of thermomechanical processing and aging on microstructure and precipitation hardening in low carbon Cuâ€“B steel. Ironmaking and Steelmaking, 2004, 31, 312-318.	2.1	11
102	Optimizing parameters of supervised learning techniques (ANN) for precise mapping of the input-output relationship in TMCP steels. Scandinavian Journal of Metallurgy, 2004, 33, 310-315.	0.3	36
103	Beneficial effect of scandium addition on the corrosion behavior of Alâ€“Siâ€“Mgâ€“SiCp metal matrix composites. Composites Part A: Applied Science and Manufacturing, 2004, 35, 1003-1008.	7.6	23
104	Effect of Manganese Partitioning on Transformation Induced Plasticity Characteristics in Microalloyed Dual Phase Steels. ISIJ International, 2004, 44, 927-934.	1.4	16
105	On the formation of V-phase in mechanically alloyed AlSiMgâ€“SiCp metal matrix composites with trace scandium additions. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2002, 333, 67-71.	5.6	4
106	Effect of Thermomechanical Processing on the Microstructure and Properties of a Low Carbon Copper Bearing Steel.. ISIJ International, 2001, 41, 257-261.	1.4	20
107	Two way shape memory loss in Cuî—¸Znî—¸Al alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 300, 291-298.	5.6	10
108	Effect of composition and thermomechanical processing on the ageing characteristic of copper-bearing HSLA steel. Scandinavian Journal of Metallurgy, 2000, 29, 213-223.	0.3	12

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109	The reinforcement of an age-hardenable Alâ€“Cr matrix alloy in situ and by SiC/Al2O3 particles: tailoring of the interface. Composites Science and Technology, 2000, 60, 451-456.	7.8	7
110	Effect of Cold Work and Trace Rare-Earth Additions on the Aging Behavior of Alâ€“Cr Alloys Containing Zirconium. Materials Characterization, 2000, 44, 277-284.	4.4	11
111	Petri Neural Network Model for the Effect of Controlled Thermomechanical Process Parameters on the Mechanical Properties of HSLA Steels.. ISIJ International, 1999, 39, 986-990.	1.4	15
112	Al-Based Design of Hybrid Ionic Polymerâ€“Metal Composite with CNT and Graphene. Journal of the Institution of Engineers (India): Series D, 0, , 1.	1.0	1
113	Hydroxyapatite dispersed sulphonated PEEK composite membrane: Synthesis, structural and mechanical characterization. Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering, 0, , 095440892210767.	2.5	2