Amaresh Chakrabarti

List of Publications by Year
in descending order

113	2,872	304602	243529
papers	citations	22 h-index	44 g-index

125	125	125	1411
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	SAPPhIRE: A Multistep Representation for Abductive Reasoning in Design Synthesis. , 2022, , 229-245.		1
2	A Conceptual Model for Smart Manufacturing Systems. Lecture Notes in Mechanical Engineering, 2021, , 75-86.	0.3	1
3	Analyzing the modes of reasoning in design using the SAPPhIRE model of causality and the Extended Integrated Model of Designing. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 2021, 35, 384-403.	0.7	2
4	Modeling and structuring design rationale to enable knowledge reuse. Systems Engineering, 2020, 23, 294-311.	1.6	4
5	A framework for knowledge management in manual assembly processes. Procedia CIRP, 2020, 88, 94-97.	1.0	2
6	A conceptual tool for environmentally benign design: development and evaluation of a â€œproof of conceptâ€• Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 2020, 34, 30-44.	0.7	6
7	Evaluating the effectiveness of InDeaTe tool in supporting design for sustainability. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 2020, 34, 45-54.	0.7	3
8	Toward Automatically Assessing the Novelty of Engineering Design Solutions. Journal of Computing and Information Science in Engineering, 2020, 20, .	1.7	8
9	From natural language text to rules: knowledge acquisition from formal documents for aircraft assembly. Journal of Engineering Design, 2019, 30, 417-444.	1.1	4
10	Fostering Creativity in Design - An Empirical Study on Improvement of Requirement-satisfaction with Introduction of InDeaTe Tool. Proceedings of the Design Society International Conference on Engineering Design, 2019, 1, 3631-3640.	0.6	2
11	Modelling of Causal Relations in Human Pathophysiology for Medical Education and Design Inspiration. Smart Innovation, Systems and Technologies, 2019, , 235-246.	0.5	1
12	â€˜ConcepTeâ€™: Supporting Environmentally Benign Design Decision-Making at Conceptual Stage. Smart Innovation, Systems and Technologies, 2019, , 335-344.	0.5	0
13	Evaluating the impact of Idea-Inspire 4.0 on analogical transfer of concepts. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 2018, 32, 431-448.	0.7	22
14	A systematic approach to assessing novelty, requirement satisfaction, and creativity. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 2018, 32, 390-414.	0.7	23
15	Synthesis of feedback-based design concepts for sensors. Research in Engineering Design - Theory, Applications, and Concurrent Engineering, 2017, 28, 131-151.	1.2	4
16	A Model for the Process of Idea Generation. Design Journal, 2017, 20, 239-257.	0.5	9
17	Idea Inspire 3.0â€”A Tool for Analogical Design. Smart Innovation, Systems and Technologies, 2017, , 475-485.	0.5	16
18	Influence of analogical domains and comprehensiveness in explanation of analogy on the novelty of designs. Research in Engineering Design - Theory, Applications, and Concurrent Engineering, 2017, 28, 381-410.	1.2	10

#	Article	IF	Citations
19	Comparing novelty of designs from biological-inspiration with those from brainstorming. Journal of Engineering Design, 2017, 28, 654-680.	1.1	33
20	An Integrated Framework for supporting decision making during early design stages on end-of-life disassembly. Journal of Cleaner Production, 2017, 168, 558-574.	4.6	24
21	Automatic expert knowledge acquisition from text for closing the knowledge loop in PLM. International Journal of Product Lifecycle Management, 2017, 10, 301.	0.1	4
22	A Real Time Automatic Ergonomic Measure in Identifying Postural Deviation for the Assessment of Manual Assembly. Smart Innovation, Systems and Technologies, 2017, , 479-488.	0.5	1
23	Supporting Environmentally-Benign Design: Environmental Impact Estimation and Uncertainty Categories with Respect to Life Cycle Assessment in Conceptual Design. Smart Innovation, Systems and Technologies, 2017, , 3-18.	0.5	3
24	Supporting Social Innovation: Application of InDeate Tool for Sustainable Service Designâ€"Case Study of Community Workshops. Smart Innovation, Systems and Technologies, 2017, , 139-151.	0.5	4
25	Supporting Sustainable Product Design: A Case Study with InDeaTe Tool and Template at Washington State University, Pullman, WA. Smart Innovation, Systems and Technologies, 2017, , 209-224.	0.5	3
26	Supporting Sustainable Service-System Design: A Case Study on Green-Roof Design with InDeaTe Template and Tool at Syracuse, New York. Smart Innovation, Systems and Technologies, 2017, , 19-33.	0.5	3
27	InDeaTeâ€"A Computer-Based Platform with a Systematic Design Template and a Database of Methods and Tools. Smart Innovation, Systems and Technologies, 2017, , 277-289.	0.5	2
28	Application of InDeaTe Design Tool for Designing Sustainable Productsâ€"Case Study of a Natural Water Cooler. Smart Innovation, Systems and Technologies, 2017, , 291-300.	0.5	3
29	Supporting Manufacturing System Design: A Case Study on Application of InDeaTe Design Tool for a Smart Manufacturing System Design. Smart Innovation, Systems and Technologies, 2017, , 325-335.	0.5	4
30	Towards Automatic Classification of Description of Analogies into SAPPhIRE Constructs. Smart Innovation, Systems and Technologies, 2017, , 643-655.	0.5	8
31	Challenges and Some Potential Strategies for Relating Engineering Issues with Their Causes in Text. Smart Innovation, Systems and Technologies, 2017, , 725-735.	0.5	0
32	Interactional Differences and Effects Between Collocated and Distributed Design. Smart Innovation, Systems and Technologies, 2017, , 933-944.	0.5	0
33	A Knowledge Flow Model to Capture Unstructured Product Development Processes. Knowledge and Process Management, 2016, 23, 91-109.	2.9	1
34	Discourse analysis based segregation of relevant document segments for knowledge acquisition. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 2016, 30, 446-465.	0.7	3
35	Innovation-supporting tools for novice designers: Converting existing artifacts and transforming new concepts. Advances in Mechanical Engineering, 2016, 8, 168781401665137.	0.8	3
36	A new model for estimating End-of-Life disassembly effort during early stages of product design. Clean Technologies and Environmental Policy, 2016, 18, 1585-1598.	2.1	11

#	Article	IF	Citations
37	Impact of Design Research on Practice: The IISc Experience. , 2016, , 119-131.		0
38	Results From the Breakout Sessions of Group B. , 2016, , 71-74.		2
39	Enhancing Domain Specific Sentiment Lexicon for Issue Identification. IFIP Advances in Information and Communication Technology, 2016, , 13-21.	0.5	1
40	Evaluation of Methods to Identify Assembly Issues in Text. IFIP Advances in Information and Communication Technology, 2016, , 495-504.	0.5	3
41	Comparison of disassembly effort and ergonomic hazards in dismantling electronic appliances by formal and informal recycling sectors in developing countries. International Journal of Product Lifecycle Management, 2015, 8, 111.	0.1	3
42	E-waste dismantling: Profitable at the cost of occupational hazard?. , 2015, , .		4
43	An empirical understanding of use of internal analogies in conceptual design. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 2015, 29, 147-160.	0.7	8
44	Research on Development of Liquid Composite Molding Parts: Situation and Framework. Smart Innovation, Systems and Technologies, 2015, , 495-505.	0.5	0
45	Implementation of an Algorithm to Classify Discourse Segments from Documents for Knowledge Acquisition. Smart Innovation, Systems and Technologies, 2015, , 433-441.	0.5	0
46	An Interface Between Life Cycle Assessment and Design. Smart Innovation, Systems and Technologies, 2015, , 251-259.	0.5	1
47	Identification of Distinct Events in an Assembly by Automatically Tracking Body Postures. Smart Innovation, Systems and Technologies, 2015, , 327-338.	0.5	1
48	Evaluating FuncSION: A software for automated synthesis of design solutions for stimulating ideation during mechanical conceptual design. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 2014, 28, 209-226.	0.7	5
49	Influences of design tools on the original and redesign processes. International Journal of Design Creativity and Innovation, 2014, 2, 20-50.	0.8	5
50	Theories and Models of Design: A Summary of Findings. , 2014, , 1-45.		6
51	A questioning based method to automatically acquire expert assembly diagnostic knowledge. CAD Computer Aided Design, 2014, 57, 1-14.	1.4	8
52	Ideas generated in conceptual design and their effects on creativity. Research in Engineering Design - Theory, Applications, and Concurrent Engineering, 2014, 25, 185-201.	1.2	31
53	What affects design outcomes of conceptual design?. International Journal of Design Engineering, 2014, 5, 289.	0.3	0
54	ACLODS: a holistic framework for product life cycle design. International Journal of Product Development, 2014, 19, 90.	0.2	12

#	Article	IF	Citations
55	Supporting Analogical Transfer in Biologically Inspired Design. , 2014, , 201-220.		4
56	Segregating Discourse Segments from Engineering Documents for Knowledge Acquisition. IFIP Advances in Information and Communication Technology, 2014, , 417-426.	0.5	1
57	Training Future Engineers: What Can We Learn from Twelve Outstanding Innovators?. , 2014, , .		0
58	Understanding Internal Analogies in Engineering Design: Observations from a Protocol Study. Lecture Notes in Mechanical Engineering, 2013, , 211-222.	0.3	0
59	A Support for Protocol Analysis for Design Research. Design Issues, 2013, 29, 70-81.	0.2	7
60	A case for multiple views of function in design based on a common definition. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 2013, 27, 271-279.	0.7	13
61	Understanding influences on engineering creativity and innovation: a biographical study of 12 outstanding engineering designers and innovators. International Journal of Design Creativity and Innovation, 2013, 1, 56-68.	0.8	9
62	Physical Realizations: Transforming into Physical Embodiments of Concepts in the Design of Mechanical Movements. Advances in Mechanical Engineering, 2013, 5, 318173.	0.8	2
63	DTM at 25: Essays on Themes and Future Directions. , 2013, , .		7
64	System-Environment View in Designing. , 2013, , 59-70.		4
65	Analyzing Conflicts Between Product Assembly and Disassembly for Achieving Sustainability. Lecture Notes in Mechanical Engineering, 2013, , 557-567.	0.3	2
66	An Action Effectiveness Measure for Manufacturing Process Performance. , 2013, , 341-350.		0
67	Implementation and Initial Validation of a Knowledge Acquisition System for Mechanical Assembly. , 2013, , 267-277.		1
68	Designersâ€™ Perception on Information Processes. Lecture Notes in Mechanical Engineering, 2013, , 785-796.	0.3	0
69	Sustainability and Research into Interactions. Lecture Notes in Mechanical Engineering, 2013, , 491-503.	0.3	0
70	Learning from the past, peering into the future: 25 Years of AI EDAM. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 2012, 26, 3-6.	0.7	0
71	Bounded awareness and tacit knowledge: revisiting Challenger disaster. Journal of Knowledge Management, 2012, 16, 934-949.	3.2	11
72	Assessment of the Relationships Among Design Methods, Design Activities, and Creativity. Journal of Mechanical Design, Transactions of the ASME, 2012, 134, .	1.7	29

#	Article	IF	Citations
73	Comparison of the degree of creativity in the design outcomes using different design methods. Journal of Engineering Design, 2012, 23, 241-269.	1.1	75
74	Understanding Collaboration in Knowledge Processes in Indian Industry. , 2012, , 63-78.		0
75	Combining Product Information and Process Information to Build Virtual Assembly Situations for Knowledge Acquisition. , 2011, , .		1
76	Supporting process and product knowledge in biomimetic design. International Journal of Design Engineering, 2011, 4, 132.	0.3	5
77	Sustainability through remanufacturing in India: a case study on mobile handsets. Journal of Cleaner Production, 2011, 19, 1709-1722.	4.6	168
78	Assessing design creativity. Design Studies, 2011, 32, 348-383.	1.9	285
79	Computer-Based Design Synthesis Research: An Overview. Journal of Computing and Information Science in Engineering, 2011, 11, .	1.7	159
80	Development of a Catalogue of Physical Laws and Effects Using SAPPhIRE Model. , 2011, , 123-130.		5
81	Motivation as a Major Direction for Design Creativity Research. , 2011, , 49-56.		6
82	An Integrated Model of Designing. Journal of Computing and Information Science in Engineering, 2010, 10, .	1.7	39
83	A method for Estimating the Degree of Uncertainty With Respect to Life Cycle Assessment During Design. Journal of Mechanical Design, Transactions of the ASME, 2010, 132, .	1.7	8
84	A course for teaching design research methodology. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 2010, 24, 317-334.	0.7	12
85	A methodology for supporting â€œtransferâ€•in biomimetic design. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 2010, 24, 483-506.	0.7	80
86	Investigating noveltyâ€“outcome relationships in engineering design. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 2010, 24, 161-178.	0.7	48
87	Biologically inspired design. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 2010, 24, 453-454.	0.7	24
88	An Empirical Evaluation of Novelty-SAPPhIRE Relationship. , 2009, , .		4
89	DRM, a Design Research Methodology. , 2009, , .		658
90	Design and implementation of a generalized parametrizable modulator for a reconfigurable radio. , 2009, , .		3

#	Article	IF	Citations
91	Design Creativity Research. , 2009, , 17-39.		4
92	Developing Engineering Products Using Inspiration From Nature. Journal of Computing and Information Science in Engineering, 2008, 8, .	1.7	25
93	The effect of representation of triggers on design outcomes. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 2008, 22, 101-116.	0.7	69
94	A Method for Creative Behavioral Design Based on Analogy and Blending From Natural Things. , 2008, , .		9
95	Method of Design Through Structuring of Meanings. , 2008, , .		9
96	Understanding the Knowledge Needs of Designers During Design Process in Industry. Journal of Computing and Information Science in Engineering, 2008, 8, .	1.7	19
97	A method for structure sharing to enhance resource effectiveness. Journal of Engineering Design, 2007, 18, 73-91.	1.1	11
98	Product development platform for real-time capture and reuse of evolving product information. International Journal of Product Lifecycle Management, 2007, 2, 207.	0.1	3
99	A functional representation for aiding biomimetic and artificial inspiration of new ideas. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 2005, 19, .	0.7	202
100	Identification and application of requirements and their impact on the design process: a protocol study. Research in Engineering Design - Theory, Applications, and Concurrent Engineering, 2004, 15, 22-39.	1.2	57
101	A New Approach to Structure Sharing. Journal of Computing and Information Science in Engineering, 2004, 4, 11-19.	1.7	18
102	Processes for Effective Satisfaction of Requirements by Individual Designers and Design Teams. , 2003, , 132-141.		1
103	An approach to compositional synthesis of mechanical design concepts using computers. , 2002, , 179-197.		5
104	Improving efficiency of procedures for compositional synthesis by using bidirectional search. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 2001, 15, 67-80.	0.7	13
105	A scheme for functional reasoning in conceptual design. Design Studies, 2001, 22, 493-517.	1.9	154
106	Increasing efficiency of compositional synthesis by improving the database of its building blocks. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 2000, 14, 403-414.	0.7	1
107	A Computational Framework for Concept Generation and Exploration in Mechanical Design. , 2000, , 499-519.		8
108	An approach to functional synthesis of solutions in mechanical conceptual design. Part II: Kind synthesis. Research in Engineering Design - Theory, Applications, and Concurrent Engineering, 1996, 8, 52-62.	1.2	32

#	Article	IF	Citations
109	An approach to functional synthesis of mechanical design Concepts: Theory, applications, and emerging research issues. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 1996, 10, 313-331.	0.7	83
110	Generating Conceptual Solutions on Funcsion: Evolution of a Functional Synthesiser. , 1996, , 603-622.		19
111	Engineering design methods: Strategies for product design. Materials & Design, 1995, 16, 122-123.	5.1	2
112	An approach to functional synthesis of solutions in mechanical conceptual design. Part I: Introduction and knowledge representation. Research in Engineering Design - Theory, Applications, and Concurrent Engineering, 1994, 6, 127-141.	1.2	67
113	Towards a decision-support framework for the embodiment phase of mechanical design. Advanced Engineering Informatics, 1992, 7, 21-36.	0.5	10