Gaetano Cascini

List of Publications by Year in descending order

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108 papers	1,371 citations	394421 19 h-index	434195 31 g-index
118 all docs	118 docs citations	118 times ranked	844 citing authors

#	Article	IF	Citations
1	A framework for user experience, needs and affordances. Design Studies, 2014, 35, 160-179.	3.1	130
2	Computer-aided analysis of patents and search for TRIZ contradictions. International Journal of Product Development, 2007, 4, 52.	0.2	107
3	Natural Language Processing of Patents and Technical Documentation. Lecture Notes in Computer Science, 2004, , 508-520.	1.3	53
4	Situating needs and requirements in the FBS framework. Design Studies, 2013, 34, 636-662.	3.1	53
5	Model and algorithm for computer-aided inventive problem analysis. CAD Computer Aided Design, 2012, 44, 961-986.	2.7	47
6	Plastics design: integrating TRIZ creativity and semantic knowledge portals. Journal of Engineering Design, 2004, 15, 405-424.	2.3	43
7	Measuring patent similarity by comparing inventions functional trees. International Federation for Information Processing, 2008, , 31-42.	0.4	38
8	Exploring the use of AR technology for co-creative product and packaging design. Computers in Industry, 2020, 123, 103308.	9.9	37
9	TRIZ-based Anticipatory Design of Future Products and Processes. Journal of Integrated Design and Process Science, 2012, 16, 29-63.	0.5	35
10	Network of contradictions analysis and structured identification of critical control parameters. Procedia Engineering, 2011, 9, 3-17.	1.2	31
11	Integrated Computer-Aided Innovation: The PROSIT approach. Computers in Industry, 2009, 60, 629-641.	9.9	30
12	Detection of corrugation and wheelflats of railway wheels using energy and cepstrum analysis of rail acceleration. Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit, 1997, 211, 109-116.	2.0	29
13	Business Process Reengineering driven by customer value: a support for undertaking decisions under uncertainty conditions. Computers in Industry, 2015, 68, 132-147.	9.9	28
14	Systematic design through the integration of TRIZ and optimization tools. Procedia Engineering, 2011, 9, 674-679.	1.2	27
15	Investigating the Patterns of Value-Oriented Innovations in Blue Ocean Strategy. International Journal of Innovation Science, 2012, 4, 123-142.	2.7	25
16	Supporting product design by anticipating the success chances of new value profiles. Computers in Industry, 2013, 64, 421-435.	9.9	24
17	Value analysis for customizable modular product platforms: theory and case study. Research in Engineering Design - Theory, Applications, and Concurrent Engineering, 2020, 31, 123-140.	2.1	23
18	Supporting sustainable innovation through TRIZ system thinking. Procedia Engineering, 2011, 9, 145-156.	1.2	22

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19	Correlations between the evolution of contradictions and the law of identity increase. Procedia Engineering, 2011, 9, 236-250.	1.2	19
20	Product Planning techniques: investigating the differences between research trajectories and industry expectations. Research in Engineering Design - Theory, Applications, and Concurrent Engineering, 2016, 27, 367-389.	2.1	18
21	Design for innovation â€“ A methodology to engineer the innovation diffusion into the development process. Computers in Industry, 2016, 75, 46-57.	9.9	18
22	Investigating usersâ€™ reactions to surprising products. Design Studies, 2020, 69, 100946.	3.1	18
23	Process value analysis for business process re-engineering. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2010, 224, 305-327.	2.4	17
24	Networks of trends: systematic definition of evolutionary scenarios. Procedia Engineering, 2011, 9, 355-367.	1.2	17
25	Computer-Aided Patent Analysis: finding invention peculiarities. , 2007, , 167-178.		17
26	Computer-aided embodiment design through the hybridization of mono objective optimizations for efficient innovation process. Computers in Industry, 2011, 62, 384-397.	9.9	16
27	About Integration Opportunities between TRIZ and Biomimetics for Inventive Design. Procedia Engineering, 2015, 131, 3-13.	1.2	16
28	Investigating the future of the fuzzy front end: towards a change of paradigm in the very early design phases?. Journal of Engineering Design, 2018, 29, 644-664.	2.3	16
29	Systematizing new value proposition through a TRIZ-based classification of functional features. Procedia Engineering, 2011, 9, 103-118.	1.2	15
30	Linking TRIZ to Conceptual Design Engineering Approaches. Procedia Engineering, 2015, 131, 1031-1040.	1.2	15
31	Sources of creativity stimulation for designing the next generation of technical systems: correlations with R&D designersâ€™ performance. Research in Engineering Design - Theory, Applications, and Concurrent Engineering, 2019, 30, 133-153.	2.1	15
32	UNO-BID: unified ontology for causal-function modeling in biologically inspired design. International Journal of Design Creativity and Innovation, 2015, 3, 177-210.	1.2	13
33	Multi-objective topology optimization through GA-based hybridization of partial solutions. Engineering With Computers, 2013, 29, 287-306.	6.1	12
34	Adding quality of life to design for Eco-Efficiency. Journal of Cleaner Production, 2016, 112, 3211-3221.	9.3	12
35	Testing ideation performance on a large set of designers: effects of analogical distance. International Journal of Design Creativity and Innovation, 2020, 8, 31-45.	1.2	12
36	ANALYSIS OF CO-DESIGN SCENARIOS AND ACTIVITIES FOR THE DEVELOPMENT OF A SPATIAL-AUGMENTED REALITY DESIGN PLATFORM. , 0, , .		12

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37	Perspectives on design creativity and innovation research: 10 years later. International Journal of Design Creativity and Innovation, 2022, 10, 1-30.	1.2	12
38	An Algorithm for Supply Chain Integration based on OTSM-TRIZ. Procedia, Social and Behavioral Sciences, 2013, 75, 383-396.	0.5	11
39	Surprise and design creativity: investigating the drivers of unexpectedness. International Journal of Design Creativity and Innovation, 2017, 5, 29-47.	1.2	11
40	Mapping Causal Relationships and Conflicts among Design Parameters and System Requirements. Computer-Aided Design and Applications, 2013, 10, 643-662.	0.6	10
41	OTSM-TRIZ Network of Problems for Evaluating the Design Skills of Engineering Students. Procedia Engineering, 2015, 131, 689-700.	1.2	10
42	An OTSM-TRIZ Based Framework Towards the Computer-Aided Identification of Cognitive Processes in Design Protocols. , 2015, , 99-117.		10
43	Time Domain Model of the Vertical Dynamics of a Railway Track up to 5 kHz. Vehicle System Dynamics, 1998, 30, 1-15.	3.7	9
44	State-of-the-Art and Trends of Computer-Aided Innovation Tools. , 2004, , 461-470.		9
45	Business re-engineering through integration of methods and tools for process innovation. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2008, 222, 1715-1728.	2.4	9
46	Assessing creativity of design projects: criteria for the service engineering field. International Journal of Design Creativity and Innovation, 2013, 1, 131-159.	1.2	9
47	FORMAT â€“ Building an Original Methodology for Technology Forecasting through Researchers Exchanges between Industry and Academia. Procedia Engineering, 2015, 131, 1084-1093.	1.2	8
48	CORRELATING DESIGN PERFORMANCE TO EEG ACTIVATION: EARLY EVIDENCE FROM EXPERIMENTAL DATA. Proceedings of the Design Society, 2021, 1, 771-780.	0.8	8
49	Enhancing interoperability in the design process, the PROSIT approach. , 2007, , 189-199.		8
50	OTSM-TRIZ Games: Enhancing Creativity of Engineering Students. Procedia Engineering, 2015, 131, 711-720.	1.2	7
51	Improving Self-efficacy in Solving Inventive Problems with TRIZ. Creativity in the Twenty First Century, 2016, , 195-213.	0.6	7
52	Classification of Change-Related Ilities Based on a Literature Review of Engineering Changes. Journal of Integrated Design and Process Science, 2017, 20, 3-23.	0.5	7
53	On the Factors Affecting Design Education Within a Multi-Disciplinary Class. Journal of Integrated Design and Process Science, 2017, 21, 21-44.	0.5	7
54	Impact of Design Representations on Creativity of Design Outcomes. Journal of Integrated Design and Process Science, 2020, 23, 31-60.	0.5	7

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55	HIGH-FREQUENCY MOBILE INPUT RECONSTRUCTION ALGORITHM (HF-MIRA) APPLIED TO FORCES ACTING ON A DAMPED LINEAR MECHANICAL SYSTEM. Mechanical Systems and Signal Processing, 1998, 12, 255-268.	8.0	6
56	Integrated design of turbomachinery through a STEP-XML platform for data exchange. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2005, 219, 547-554.	2.4	6
57	A UX Model for the Communication of Experience Affordances. Design Issues, 2016, 32, 3-18.	0.4	6
58	ANALYSING THE EFFECT OF SELF-EFFICACY AND INFLUENCERS ON DESIGN TEAM PERFORMANCE. Proceedings of the Design Society DESIGN Conference, 2020, 1, 2571-2580.	0.8	6
59	Brain activity in constrained and open design: the effect of gender on frequency bands. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 2022, 36, .	1.1	6
60	MEASUREMENT OF THE LATERAL NOISE EMISSION OF AN UIC 60 RAIL WITH A CUSTOM DEVICE. Journal of Sound and Vibration, 2000, 231, 653-665.	3.9	5
61	From design optimization systems to geometrical contradictions. Procedia Engineering, 2011, 9, 473-483.	1.2	5
62	Product Architecture Definition: Evaluating the Potentiality of TRIZ Tools. Procedia Engineering, 2015, 131, 359-371.	1.2	5
63	A Computational Framework for Exploring the Socio-Cognitive Features of Teams and their Influence on Design Outcomes. Proceedings of the Design Society International Conference on Engineering Design, 2019, 1, 1-10.	0.6	5
64	AN EXPERIMENT-DRIVEN MASS-PERSONALISATION MODEL: APPLICATION TO SAXOPHONE MOUTHPIECE PRODUCTION. Proceedings of the Design Society DESIGN Conference, 2020, 1, 1037-1046.	0.8	5
65	CODING SCHEMES FOR THE ANALYSIS OF ICT SUPPORTED CO-CREATIVE DESIGN SESSIONS. , 0, , .		5
66	ROLLING CONTACT FORCE ENERGY RECONSTRUCTION. Journal of Sound and Vibration, 2000, 236, 185-192.	3.9	4
67	Preliminary Studies on Human Approaches to Inventive Design Tasks with a TRIZ Perspective. Procedia Engineering, 2015, 131, 39-49.	1.2	4
68	Extracting and Analysing Design Process Data from Log Files of ICT Supported Co-Creative Sessions. Proceedings of the Design Society International Conference on Engineering Design, 2019, 1, 129-138.	0.6	4
69	A decision support model to assess technological paradigms. International Journal of Technology Management, 2019, 80, 61.	0.5	4
70	Integrated Model for Technology Assessment and Expected Evolution: A Case Study in the Chilean Mining Industry. Journal of Integrated Design and Process Science, 2013, 17, 53-80.	0.5	3
71	What can we learn from COVID-19 pandemic for design creativity research?. International Journal of Design Creativity and Innovation, 2020, 8, 141-143.	1.2	3
72	Application of Systematic Design Methods to Cultural Heritage Preservation. IOP Conference Series: Materials Science and Engineering, 2020, 949, 012029.	0.6	3

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73	REAL-TIME CODING METHOD FOR CAPTURE OF ARTEFACT-CENTRIC INTERACTIONS IN CO-CREATIVE DESIGN SESSIONS. , 0, , .		3
74	Design methodology for mass personalisation enabled by digital manufacturing. Design Science, 2022, 8, .	2.1	3
75	Wood pellet manufacturing improvements through product-driven process value analysis. Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture, 2011, 225, 761-772.	2.4	2
76	Question/answer techniques within CAD environments: An Investigation about the most Effective Interfaces. Computer-Aided Design and Applications, 2013, 10, 905-917.	0.6	2
77	Modelling the Dynamics of Products and Processes Requirements. Procedia Engineering, 2015, 131, 661-671.	1.2	2
78	Production Processes Modeling for Identifying Technology Substitution Opportunities. Procedia Engineering, 2015, 131, 14-29.	1.2	2
79	Design computing and cognition. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 2020, 34, 128-131.	1.1	2
80	OVERCOMING AUGMENTED REALITY ADOPTION BARRIERS IN DESIGN: A MIXED PROTOTYPING CONTENT AUTHORING TOOL SUPPORTED BY COMPUTER VISION. Proceedings of the Design Society, 2021, 1, 2359-2368.	0.8	2
81	Exploring Tablet Interfaces for Product Appearance Authoring in Spatial Augmented Reality. International Journal of Human Computer Studies, 2021, 156, 102719.	5.6	2
82	Computer-Aided Problem Solving - Part 1: Objectives, Approaches, Opportunities. International Federation for Information Processing, 2011, , 117-131.	0.4	2
83	Maintenance optimisation for integrated planning. , 2013, , 651-658.		2
84	Towards 3D printed saxophone mouthpiece personalization: Acoustical analysis of design variations. Acta Acustica, 2021, 5, 46.	1.0	2
85	A Methodology for Evaluating the Adoption of Knowledge and Innovation Management Tools in a Product Development Process. , 2003, , .		2
86	Situating Needs and Requirements in a Multi-stakeholder Context. , 2015, , 345-360.		2
87	A bio-inspired approach for boosting innovation in the separation technology sector. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2022, 236, 4533-4550.	2.1	2
88	Design spaces and EEG frequency band power in constrained and open design. International Journal of Design Creativity and Innovation, 2022, 10, 193-221.	1.2	2
89	Digital Artefacts and The Role of Digital Affordance. Proceedings of the Design Society, 2022, 2, 11-20.	0.8	2
90	About the Introduction of a Dialogue-Based Interaction within CAD Systems. Computer-Aided Design and Applications, 2013, 10, 499-514.	0.6	1

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91	ARIZ85 and Patent-driven Knowledge Support. Procedia Engineering, 2015, 131, 291-302.	1.2	1
92	Techno-economic Classification of Contradictions and Related Strategies of Solution. Procedia Engineering, 2015, 131, 757-766.	1.2	1
93	Services Evaluation and Improvement with Systematic Innovation Tools. Procedia CIRP, 2016, 39, 225-230.	1.9	1
94	Exploring the Cognitive Dynamics of Product Appreciation. , 2017, , 555-573.		1
95	Influencers in design teams: a computational framework to study their impact on idea generation. Artificial Intelligence for Engineering Design, Analysis and Manufacturing: AIEDAM, 0, , 1-21.	1.1	1
96	From Computer-Aided (Detailed) Design to Automatic Topology and Shape Generation. , 2011, , 15-35.		1
97	Assessing the Performance of Computerized Tools for Inventive Design: Insights From Unsatisfactory Outcomes. , 2013, , 93-103.		1
98	Improving the Efficiency of Design Protocol Analysis: An Approach to Speed Up the Coding Stage. Lecture Notes in Mechanical Engineering, 2020, , 612-624.	0.4	1
99	Towards more visible scientific findings in TRIZ communities through ETRIA. Procedia Engineering, 2011, 9, 1-2.	1.2	0
100	Engineering Grand Challenges Demand for Trans-Disciplinary Design Science. Journal of Integrated Design and Process Science, 2016, 19, 1-2.	0.5	0
101	Impact of Inventive Design Education through the Correlation between Studentsâ€™ Grades and Individual Talent. Proceedings of the Design Society International Conference on Engineering Design, 2019, 1, 529-538.	0.6	0
102	DO ALL CREATIVE STIMULI WORK THE SAME? INSIGHTS FROM A WORKSHOP WITH PROFESSIONALS. Proceedings of the Design Society DESIGN Conference, 2020, 1, 1531-1540.	0.8	0
103	Effects of Function-Based Models in Biologically Inspired Design. Journal of Integrated Design and Process Science, 2021, 24, 85-108.	0.5	0
104	A Novel Paradigm for Computer-Aided Design: TRIZ-Based Hybridization of Topologically Optimized Density Distributions. IFIP Advances in Information and Communication Technology, 2009, , 38-50.	0.7	0
105	Product-Driven Process Value Analysis. , 2011, , 387-396.		0
106	IPPR Implementation. Springer Series in Advanced Manufacturing, 2012, , 47-85.	0.5	0
107	Selection and Evaluation of PLM Tools for Competitive Product Development. , 2006, , 351-362.		0
108	Spatial Augmented Reality as a Visualization Support for Engineering Analysis. Lecture Notes in Mechanical Engineering, 2022, , 103-115.	0.4	0