Thomas Vietor

List of Publications by Year
in descending order

104	936	586496 16	591227 27
papers	citations	h-index	g-index

115	115	115	795
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Utilization of additively manufactured lattice structures for increasing adhesive bonding using material extrusion. Journal of Adhesion, 2024, 100, 340-361.	1.8	4
2	Test and Validation of the Surrogate-Based, Multi-Objective GOMORS Algorithm against the NSGA-II Algorithm in Structural Shape Optimization. Algorithms, 2022, 15, 46.	1.2	0
3	Methodology for Neural Network-Based Material Card Calibration Using LS-DYNA MAT_187_SAMP-1 Considering Failure with GISSMO. Materials, 2022, 15, 643.	1.3	1
4	Circular Economy Driven Communities â€“ Sustainable Behavior Driven by Mobile Applications. Procedia CIRP, 2022, 105, 362-367.	1.0	2
5	Increasing Acceptance for Refurbished Products at the Example of E-Cargo Bikes. Procedia CIRP, 2022, 105, 571-576.	1.0	1
6	Development of an Integrated Simulation Platform for Modelling and Simulation of the Energy Consumption of a Multi-zone Building. Journal of Physics: Conference Series, 2022, 2213, 012015.	0.3	1
7	Methodology for Managing Disruptive Innovation by Value-Oriented Portfolio Planning. Journal of Open Innovation: Technology, Market, and Complexity, 2022, 8, 48.	2.6	2
8	Necessary advances in computer-aided design to leverage on additive manufacturing design freedom. International Journal on Interactive Design and Manufacturing, 2022, 16, 1633-1651.	1.3	7
9	Multidisciplinary design optimization of a generic b-pillar under package and design constraints. Engineering Optimization, 2021, 53, 1884-1901.	1.5	3
10	Impact of Digitization on the Mobility System. Proceedings, 2021, , 309-320.	0.2	0
11	Systematic Design of Body Concepts Regarding Mini-Mal Environmental Impacts in an Early Concept Phase. Zukunftstechnologien Fuì‚r Den Multifunktionalen Leichtbau, 2021, , 97-109.	0.1	0
12	Development of an Industry 4.0 method and knowledge platform for strategic technology implementation. Procedia CIRP, 2021, 100, 613-618.	1.0	2
13	From package and design surfaces to optimization - how to apply shape optimization under geometrical constraints. Procedia CIRP, 2021, 100, 548-553.	1.0	2
14	How to Upgrade Vehicles? Release Planning in the Automotive Industry. Proceedings, 2021, , 155-173.	0.2	1
15	Adopting a Conversion Design Approach to Maximize the Energy Density of Battery Packs in Electric Vehicles. Energies, 2021, 14, 1939.	1.6	14
16	Development and Processing of Continuous Flax and Carbon Fiber-Reinforced Thermoplastic Composites by a Modified Material Extrusion Process. Materials, 2021, 14, 2332.	1.3	29
17	Development of Decisionâ€“Model and Strategies for Allaying Biased Choices in Design and Development Processes. Journal of Open Innovation: Technology, Market, and Complexity, 2021, 7, 118.	2.6	0
18	Design and Additive Manufacturing of Porous Sound Absorbersâ€”A Machine-Learning Approach. Materials, 2021, 14, 1747.	1.3	18

#	Article	IF	Citations
19	Evaluation of Modelling and Simulation Strategies to Investigate the Mechanical Integrity of a Battery Cell Using Finite Element Methods. Energies, 2021, 14, 2976.	1.6	0
20	POTENTIAL MODEL - METHODICAL EVALUATION OF INDUSTRY 4.0 TECHNOLOGIES. Proceedings of the Design Society, 2021, 1, 2429-2438.	0.5	0
21	DEVELOPMENT METHOD FOR REQUIREMENT COLLECTIVES OF HYDROGEN REFUELLING STATIONS. Proceedings of the Design Society, 2021, 1, 1233-1242.	0.5	0
22	METHOD FOR IDENTIFYING SUITABLE COMPONENTS FOR FUNCTIONAL INTEGRATION â€“ FOCUSING ON GEOMETRIC CHARACTERISTICS. Proceedings of the Design Society, 2021, 1, 2047-2056.	0.5	3
23	An Approach to Complement Model-Based Vehicle Development by Implementing Future Scenarios. World Electric Vehicle Journal, 2021, 12, 97.	1.6	4
24	How to manage disruptive innovation - a conceptual methodology for value-oriented portfolio planning. Procedia CIRP, 2021, 100, 403-408.	1.0	1
25	Novel Resistive Sensor Design Utilizing the Geometric Freedom of Additive Manufacturing. Applied Sciences (Switzerland), 2021, 11, 113.	1.3	15
26	Material Parameter Identification for Acoustic Simulation of Additively Manufactured Structures. Materials, 2021, 14, 168.	1.3	4
27	Produktarchitektur. , 2021, , 335-393.		7
28	Team- und Projektarbeit in der digitalisierten Produktentwicklung. , 2021, , 155-178.		2
29	Potential impact of additive manufacturing and topology optimization inspired lightweight design on vehicle track performance. International Journal on Interactive Design and Manufacturing, 2021, 15, 499-508.	1.3	3
30	Novel Method for the Three-Dimensional Simulation of Mechanical Ageing of Battery Modules. , 2021, , .		0
31	Methodology for Defining the Interaction between Product Characteristics and Specific Product Complexityâ€"Evaluated on Electrodes for Lithium-Ion Batteries. Applied Sciences (Switzerland), 2021, 11, 11961.	1.3	0
32	A Model-Based Design Method for the Correlation between Customer Feedback and Technical Design Parameters in the Context of Systems Engineering. Modelling, 2021, 2, 795-820.	0.8	1
33	Finite element analysis considering packaging efficiency of innovative battery pack designs. International Journal of Crashworthiness, 2020, 25, 664-679.	1.1	19
34	Development of a design catalogue for the characteristics- and properties-based selection of generic car body components. Procedia CIRP, 2020, 91, 917-926.	1.0	2
35	Design for Flexibility â€“ Evaluation Interactions between Product Properties and Production Processes. Procedia CIRP, 2020, 91, 814-818.	1.0	6
36	Combined Design and Process Planning for Incremental Manufacturing. Procedia CIRP, 2020, 93, 927-932.	1.0	3

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37	Approach for assessment of suitable automotive component ranges for the application of multi material design. Procedia CIRP, 2020, 91, 188-193.	1.0	2
38	Design of Eco-Efficient Body Parts for Electric Vehicles Considering Life Cycle Environmental Information. Sustainability, 2020, 12, 5838.	1.6	10
39	Artificial Neural Networks-Based Material Parameter Identification for Numerical Simulations of Additively Manufactured Parts by Material Extrusion. Polymers, 2020, 12, 2949.	2.0	22
40	Verbesserung der Klebeignung von Polypropylen durch additiv gefertigte OberflÃchenstrukturen und Multi-Material-Druck. , 2020, , 263-281.		0
41	Schnelle kostengerechte Bauteilgestaltung fÃ¼r die additive Fertigung. , 2020, , 77-91.		0
42	Algorithm-Based Support for the Redesign of Product Variants. , 2020, , .		0
43	A Methodical Approach to Support Conceptual Design for Multi-Material Additive Manufacturing. Proceedings of the Design Society International Conference on Engineering Design, 2019, 1, 659-668.	0.6	14
44	Goal Oriented Provision of Design Principles for Additive Manufacturing to Support Conceptual Design. Proceedings of the Design Society International Conference on Engineering Design, 2019, 1, 749-758.	0.6	14
45	Distinction of Domain-Specific and Cross-Domain Linkage Types for Engineering Change Management. Proceedings of the Design Society International Conference on Engineering Design, 2019, 1, 1125-1134.	0.6	1
46	Identifying Cross-Domain Linkage Types to Support Engineering Change Management and Requirements Engineering. Procedia CIRP, 2019, 84, 719-724.	1.0	6
47	Approach to the systematic categorization and qualitative evaluation of multi-material designs for use in vehicle body structures. Procedia CIRP, 2019, 84, 908-915.	1.0	3
48	Model-Based Requirement Engineering to Support Development of Complex Systems. Procedia CIRP, 2019, 84, 239-244.	1.0	17
49	A methodical approach for improved control of safety-related product properties in early phases of the automotive product development process. Procedia CIRP, 2019, 84, 605-610.	1.0	1
50	Function in a box: An approach for multi-functional design by function integration and separation. Procedia CIRP, 2019, 84, 611-617.	1.0	7
51	Strategies for function integration in engineering design: from differential design to function adoption. Procedia CIRP, 2019, 84, 599-604.	1.0	9
52	Agile Process Engineering to support Collaborative Design. Procedia CIRP, 2019, 84, 1035-1040.	1.0	7
53	Incremental Manufacturing: Model-based part design and process planning for Hybrid Manufacturing of multi-material parts. Procedia CIRP, 2019, 79, 107-112.	1.0	12
54	Influence of Powder Deposition on Powder Bed and Specimen Properties. Materials, 2019, 12, 297.	1.3	42

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55	Determination of Influencing Factors on Interface Strength of Additively Manufactured Multi-Material Parts by Material Extrusion. Applied Sciences (Switzerland), 2019, 9, 1782.	1.3	24
56	MULTI MATERIAL DESIGN. A CURRENT OVERVIEW OF THE USED POTENTIAL IN AUTOMOTIVE INDUSTRIES. Zukunftstechnologien Fuˆr Den Multifunktionalen Leichtbau, 2019, , 3-13.	0.1	21
57	Design and Characterization of Electrically Conductive Structures Additively Manufactured by Material Extrusion. Applied Sciences (Switzerland), 2019, 9, 779.	1.3	49
58	Algorithm-based Verification of Manufacturing Constraints for a Loadpath Reinforced Fabric. Procedia CIRP, 2019, 85, 347-352.	1.0	0
59	How to Foster Innovation? A Methodology to Identify Fields for Fostering Innovation Capability in Small and Medium-Sized Enterprises. Proceedings of the Design Society International Conference on Engineering Design, 2019, 1, 2269-2278.	0.6	1
60	Towards Consistent Value Orientation in Release Planning. , 2019, , .		4
61	Integrated Product Gestalt Design Method for the Analysis and Definition of Interface Elements Regarding Exterior and Interior. Advances in Intelligent Systems and Computing, 2019, , 888-897.	0.5	1
62	REFLECTION IN AGILE LEARNING-TEACHING PROCESSES. , 2019, , .		0
63	Methods and tools for identifying and leveraging additive manufacturing design potentials. International Journal on Interactive Design and Manufacturing, 2018, 12, 481-493.	1.3	68
64	Development of Novel Test Specimens for Characterization of Multi-Material Parts Manufactured by Material Extrusion. Applied Sciences (Switzerland), 2018, 8, 1220.	1.3	18
65	Multidisciplinary Structural Optimization Using of NSGA-II and É›-Constraint Method in Lightweight Application. , 2018, , 573-589.		0
66	Concurrent Design & Life Cycle Engineering in Automotive Lightweight Component Development. Procedia CIRP, 2017, 66, 16-21.	1.0	35
67	An Improved Fatigue Failure Model for Multidirectional Fiber-reinforced Composite Laminates under any Stress Ratios of Cyclic Loading. Procedia CIRP, 2017, 66, 27-32.	1.0	10
68	A Methodological Approach Towards Multi-material Design of Automotive Components. Procedia CIRP, 2017, 60, 68-73.	1.0	20
69	Understanding Design Methods - using Explanatory Videos for Knowledge Transfer in Engineering Disciplines. Procedia CIRP, 2017, 60, 518-523.	1.0	2
70	Optimization of Variable Stiffness Composites in Automated Fiber Placement Process using Evolutionary Algorithms. Procedia CIRP, 2017, 66, 79-84.	1.0	10
71	The Boundary Layer Machine. Proceedings in Applied Mathematics and Mechanics, 2017, 17, 159-160.	0.2	0
72	Representing the Effects of Product Architecture for Decision-Making in Conceptual Design. Smart Innovation, Systems and Technologies, 2017, , 543-553.	0.5	0

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73	Anforderungsmanagement und Werkzeuge fÃ¼r Leichtbauweisen auf dem Weg zum Multi-Material-Design. , 2017, , 183-204.		0
74	Analyzing Decision-making in Automotive Design towards Life Cycle Engineering for Hybrid Lightweight Components. Procedia CIRP, 2016, 50, 825-830.	1.0	20
75	An extended cost estimation model for a multiâ€material topology optimization approach. Proceedings in Applied Mathematics and Mechanics, 2016, 16, 685-686.	0.2	1
76	Optimal adaptation of acoustic black holes by evolutionary optimization algorithms. Proceedings in Applied Mathematics and Mechanics, 2016, 16, 625-626.	0.2	7
77	A new methodological framework for design for additive manufacturing. Virtual and Physical Prototyping, 2016, 11, 3-19.	5.3	136
78	Model-based Support of the Conceptual Design in Distributed Product Development. Procedia CIRP, 2015, 36, 261-266.	1.0	0
79	Cost Reduction through Cell Design Optimization for Vehicle Requirements-From Active Material to Vehicle Product Portfolios. World Electric Vehicle Journal, 2015, 7, 32-40.	1.6	1
80	A geometrical approach to remove stress singularities in continuum models of multi-material structures. Proceedings in Applied Mathematics and Mechanics, 2015, 15, 279-280.	0.2	0
81	New Approaches iIn Vehicle Conception. Auto Tech Review, 2015, 4, 28-33.	0.1	1
82	Design for Fiber-Reinforced Additive Manufacturing. Journal of Mechanical Design, Transactions of the ASME, 2015, 137, .	1.7	76
83	Synergetische Produktentwicklung in WertschÃ¶pfungsnetzwerken. Konstruktion, 2015, 67, 70-87.	0.1	2
84	Development of a Modeling Language to Connect Features, Functions and Components. Procedia Computer Science, 2014, 28, 195-203.	1.2	0
85	Design for Pedestrian Protection. , 2014, , .		1
86	Integration of eLCAr Guidelines into Vehicle Design. Lecture Notes in Mechanical Engineering, 2014, , 235-241.	0.3	1
87	Future Trends in the Development of Vehicle Bodies Regarding Lightweight and Cost. Lecture Notes in Mechanical Engineering, 2014, , 13-21.	0.3	5
88	A Framework for the Application of Adaptronic Solution Principles. , 2013, , .		1
89	Produktarten zur Rationalisierung des Entwicklungs- und Konstruktionsprozesses. , 2013, , 817-871.		5
90	The Effects of Regional Specific Requirements on the Development of Vehicle Concepts. , 2013, , 167-190.		3

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91	Synergien in der kooperativen Produktentstehung. ZWF Zeitschrift Fuer Wirtschaftlichen Fabrikbetrieb, 2013, 108, 917-921.	0.2	3
92	Adaptronic Solution Principles: Potential to Flexible Design. , 2013, , 321-331.		0
93	Redundancy resolution and control of manipulators driven by antagonistic pneumatic muscles. , 2012, , .		2
94	Methodology for the Objectification of Decisions in the Product Development. Advanced Materials Research, 2012, 488-489, 1199-1203.	0.3	0
95	Optimisation Algorithms for the Design of Electric Cars. ATZ Worldwide, 2011, 113, 16-19.	0.1	5
96	Joint actuation based on highly dynamic torque transmission elements - concept and control approaches. , 2011, , .		1
97	Adaptronic couplers — An alternative drive principle. , 2010, , .		4
98	Knowledge-Based Design Principles and Tools for Parallel Robots. Springer Tracts in Advanced Robotics, 2010, , 59-75.	0.3	2
99	Passive and Adaptive Joints for Parallel Robots. Springer Tracts in Advanced Robotics, 2010, , 429-444.	0.3	6
100	Special issue on stochastic optimization. Structural and Multidisciplinary Optimization, 2008, 35, 187-188.	1.7	0
101	Stochastic Optimization for mechanical structures. Mathematical Methods of Operations Research, 1997, 46, 377-408.	0.4	4
102	Robust Design of Elastic Mounting Systems. , 0, , .		8
103	COLLABORATIVE DESIGN: LINKING METHODS, COMMUNICATION TOOLS AND COMPETENCIES TO PROCESSES. , 0, , .		6
104	HOW TO FOSTER INNOVATION? FINDINGS AND HYPOTHESES FOR COLLABORATIONS BETWEEN RESEARCH AND INDUSTRY. , 0, , .		2