

Dominik Matt

List of Publications by Year in descending order

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Version: 2024-02-01

143
papers

2,716
citations

185998

28
h-index

243296

44
g-index

148
all docs

148
docs citations

148
times ranked

1903
citing authors

#	ARTICLE	IF	CITATIONS
1	Digital transformation challenges: strategies emerging from a multi-stakeholder approach. TQM Journal, 2020, 32, 697-724.	2.1	142
2	The Advantages of Industry 4.0 Applications for Sustainability: Results from a Sample of Manufacturing Companies. Sustainability, 2020, 12, 3647.	1.6	104
3	Sustainable production in emerging markets through Distributed Manufacturing Systems (DMS). Journal of Cleaner Production, 2016, 135, 127-138.	4.6	102
4	Trends towards Distributed Manufacturing Systems and Modern Forms for their Design. Procedia CIRP, 2015, 33, 185-190.	1.0	101
5	Implementation of Lean Production in Small Sized Enterprises. Procedia CIRP, 2013, 12, 420-425.	1.0	83
6	BIM-based and AR Application Combined with Location-Based Management System for the Improvement of the Construction Performance. Buildings, 2019, 9, 118.	1.4	73
7	Worker assistance systems in manufacturing: A review of the state of the art and future directions. Journal of Manufacturing Systems, 2021, 59, 228-250.	7.6	69
8	The Way from Lean Product Development (LPD) to Smart Product Development (SPD). Procedia CIRP, 2016, 50, 26-31.	1.0	65
9	Urban production – A socially sustainable factory concept to overcome shortcomings of qualified workers in smart SMEs. Computers and Industrial Engineering, 2020, 139, 105384.	3.4	64
10	Parametric and Generative Design techniques in mass-production environments as effective enablers of Industry 4.0 approaches in the Building Industry. Automation in Construction, 2018, 92, 270-285.	4.8	62
11	Mini-factory – A Learning Factory Concept for Students and Small and Medium Sized Enterprises. Procedia CIRP, 2014, 17, 178-183.	1.0	61
12	A Maturity Level-Based Assessment Tool to Enhance the Implementation of Industry 4.0 in Small and Medium-Sized Enterprises. Sustainability, 2020, 12, 3559.	1.6	58
13	Adaptation of the value stream mapping approach to the design of lean engineer-to-order production systems. Journal of Manufacturing Technology Management, 2014, 25, 334-350.	3.3	57
14	Requirements for the Design of Flexible and Changeable Manufacturing and Assembly Systems: A SME-survey. Procedia CIRP, 2016, 41, 207-212.	1.0	57
15	Distributed manufacturing network models of smart and agile mini-factories. International Journal of Agile Systems and Management, 2017, 10, 185.	0.6	56
16	SME 4.0: The Role of Small- and Medium-Sized Enterprises in the Digital Transformation. , 2020, , 3-36.		55
17	Sustainability in Manufacturing through Distributed Manufacturing Systems (DMS). Procedia CIRP, 2015, 29, 544-549.	1.0	52
18	A human-in-the-loop cyber-physical system for collaborative assembly in smart manufacturing. Procedia CIRP, 2019, 81, 600-605.	1.0	52

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19	Template based production system design. Journal of Manufacturing Technology Management, 2008, 19, 783-797.	3.3	40
20	Enabling Connectivity of Cyber-physical Production Systems: A Conceptual Framework. Procedia Manufacturing, 2017, 11, 822-829.	1.9	39
21	Lean Hospitality - Application of Lean Management Methods in the Hotel Sector. Procedia CIRP, 2016, 41, 614-619.	1.0	36
22	Critical Factors for Introducing Lean Product Development to Small and Medium sized Enterprises in Italy. Procedia CIRP, 2017, 60, 362-367.	1.0	36
23	Inclusion of Workers with Disabilities in Production 4.0: Legal Foundations in Europe and Potentials Through Worker Assistance Systems. Sustainability, 2019, 11, 5978.	1.6	36
24	Axiomatic design guidelines for the design of flexible and agile manufacturing and assembly systems for SMEs. International Journal on Interactive Design and Manufacturing, 2019, 13, 1-22.	1.3	35
25	Complexity reduction in engineer-to-order industry through real-time capable production planning and control. Production Engineering, 2018, 12, 341-352.	1.1	33
26	An evaluation methodology for the conversion of manual assembly systems into human-robot collaborative workcells. Procedia Manufacturing, 2019, 38, 358-366.	1.9	32
27	Distributed manufacturing network models of smart and agile mini-factories. International Journal of Agile Systems and Management, 2017, 10, 185.	0.6	32
28	Industrial digitalization. A systematic literature review and research agenda. European Management Journal, 2023, 41, 47-78.	3.1	31
29	Design of a Network of Scalable Modular Manufacturing Systems to Support Geographically Distributed Production of Mass Customized Goods. Procedia CIRP, 2013, 12, 438-443.	1.0	30
30	Safety, Ergonomics and Efficiency in Human-Robot Collaborative Assembly: Design Guidelines and Requirements. Procedia CIRP, 2020, 91, 367-372.	1.0	30
31	Synchronization of the Manufacturing Process and On-site Installation in ETO Companies. Procedia CIRP, 2014, 17, 457-462.	1.0	29
32	Simulation Based Validation of Supply Chain Effects through ICT enabled Real-time-capability in ETO Production Planning. Procedia Manufacturing, 2017, 11, 846-853.	1.9	29
33	BIM-Integrated Collaborative Robotics for Application in Building Construction and Maintenance. Robotics, 2021, 10, 2.	2.1	29
34	Application of Axiomatic Design principles to control complexity dynamics in a mixed-model assembly system: a case analysis. International Journal of Production Research, 2012, 50, 1850-1861.	4.9	28
35	Integrating BIM with Lean Construction approach: Functional requirements and production management software. Automation in Construction, 2021, 132, 103969.	4.8	28
36	Pushing Digital Automation of Configure-to-Order Services in Small and Medium Enterprises of the Construction Equipment Industry: A Design Science Research Approach. Applied Sciences (Switzerland), 2019, 9, 3780.	1.3	27

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37	Parametric and Generative Design Techniques for Mass-Customization in Building Industry: A Case Study for Glued-Laminated Timber. <i>Procedia CIRP</i> , 2017, 60, 392-397.	1.0	23
38	Axiomatic Design of a Framework for the Comprehensive Optimization of Patient Flows in Hospitals. <i>Journal of Healthcare Engineering</i> , 2017, 2017, 1-9.	1.1	23
39	Implementing Lean in Engineer-to-Order Manufacturing. <i>Advances in Logistics, Operations, and Management Science Book Series</i> , 2014, , 148-172.	0.3	23
40	Axiomatic Design Based Guidelines for the Design of a Lean Product Development Process. <i>Procedia CIRP</i> , 2015, 34, 112-118.	1.0	22
41	Reducing the structural complexity of growing organizational systems by means of axiomatic designed networks of core competence cells. <i>Journal of Manufacturing Systems</i> , 2007, 26, 178-187.	7.6	21
42	Application of Axiomatic Design in Manufacturing System Design: A Literature Review. <i>Procedia CIRP</i> , 2016, 53, 1-7.	1.0	21
43	Applications of TRIZ and Axiomatic Design: A Comparison to Deduce Best Practices in Industry. <i>Procedia CIRP</i> , 2016, 39, 91-96.	1.0	21
44	Design of a scalable assembly system for product variety: a case study. <i>Assembly Automation</i> , 2013, 33, 117-126.	1.0	19
45	Development of a Digital Platform Based on the Integration of Augmented Reality and BIM for the Management of Information in Construction Processes. <i>IFIP Advances in Information and Communication Technology</i> , 2018, , 46-55.	0.5	19
46	Investigating benefits and criticisms of BIM for construction scheduling in SMES: An Italian case study. <i>International Journal of Sustainable Development and Planning</i> , 2018, 13, 139-150.	0.3	19
47	Design of Lean Manufacturing Support Systems in Make-to-Order Production. <i>Key Engineering Materials</i> , 0, 410-411, 151-158.	0.4	18
48	Axiomatic Design and TRIZ: Deficiencies of their Integrated Use and Future Opportunities. <i>Procedia CIRP</i> , 2015, 34, 1-6.	1.0	18
49	Sustainability in the Supply Chain through Synchronization of Demand and Supply in ETO-Companies. <i>Procedia CIRP</i> , 2015, 29, 215-220.	1.0	18
50	Decision Support in Building Construction: A Systematic Review of Methods and Application Areas. <i>Buildings</i> , 2020, 10, 170.	1.4	18
51	SME Requirements and Guidelines for the Design of Smart and Highly Adaptable Manufacturing Systems. , 2020, , 39-72.		17
52	Development of a BIM-based production planning and control system for Lean Construction through advancement and integration of existing management techniques. <i>Frontiers of Engineering Management</i> , 2021, 8, 429-441.	3.3	16
53	Design for Mass Customization: Rethinking Prefabricated Housing Using Axiomatic Design. <i>Journal of Architectural Engineering</i> , 2017, 23, .	0.8	15
54	From Design for Assembly to Design for Collaborative Assembly - Product Design Principles for Enhancing Safety, Ergonomics and Efficiency in Human-Robot Collaboration. <i>Procedia CIRP</i> , 2020, 91, 546-552.	1.0	14

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55	Achieving Operational Excellence Through Systematic Complexity Reduction in Manufacturing System Design. Key Engineering Materials, 2007, 344, 865-872.	0.4	13
56	Continuous Improvement of Manufacturing Systems with the Concept of Functional Periodicity. Key Engineering Materials, 2011, 473, 783-790.	0.4	13
57	Adaptation of the Value Stream Optimization Approach to Collaborative Company Networks in the Construction Industry. Procedia CIRP, 2013, 12, 402-407.	1.0	13
58	Systematic Design of SME Manufacturing and Assembly Systems Based on Axiomatic Design. Procedia CIRP, 2015, 34, 81-86.	1.0	13
59	Increasing productivity in ETO construction projects through a lean methodology for demand predictability. , 2015, , .		13
60	Prefabricated Timber Façade for the Energy Refurbishment of the Italian Building Stock: The Ri.Fa.Re. Project. Energy Procedia, 2016, 96, 788-799.	1.8	13
61	Application of Axiomatic Design for the Design of a Safe Collaborative Human-Robot Assembly Workplace. MATEC Web of Conferences, 2018, 223, 01003.	0.1	13
62	Study of the impact of projection-based assistance systems for improving the learning curve in assembly processes. Procedia CIRP, 2020, 88, 98-103.	1.0	13
63	Combining the Robot Operating System with Building Information Modeling for Robotic Applications in Construction Logistics. Mechanisms and Machine Science, 2020, , 245-253.	0.3	13
64	Smart Factory für den Mittelstand. ZWF Zeitschrift fuer Wirtschaftlichen Fabrikbetrieb, 2016, 111, 52-55.	0.2	13
65	Mobile On-site Factories & Scalable and distributed manufacturing systems for the construction industry. , 2015, , .		12
66	Synchronization of Engineering, Manufacturing and on-site Installation in Lean ETO-Enterprises. Procedia CIRP, 2015, 37, 128-133.	1.0	12
67	Enabling Manufacturing Competitiveness and Economic Sustainability. , 2012, , .		12
68	The role of innovation ecosystems in Industry 4.0 adoption. Journal of Manufacturing Technology Management, 2021, 32, 369-395.	3.3	11
69	Functional periodicity as a concept for the (re-)design to agility of production systems. Production Engineering, 2010, 4, 363-369.	1.1	10
70	Design of a Scalable Modular Production System for a Two-Stage Food Service Franchise System. International Journal of Engineering Business Management, 2012, 4, 32.	2.1	10
71	AD Design Guidelines for Implementing I4.0 Learning Factories. Procedia Manufacturing, 2019, 31, 239-244.	1.9	10
72	Knowledge Transfer and Introduction of Industry 4.0 in SMEs. Advances in Business Information Systems and Analytics Book Series, 2018, , 256-282.	0.3	10

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73	Conceptual Foundations for a New Lean Bim-Based Production System in Construction. , 0, , .		9
74	Smart Shopfloor Management. ZWF Zeitschrift Fuer Wirtschaftlichen Fabrikbetrieb, 2018, 113, 17-21.	0.2	9
75	Systematic selection methodology for worker assistance systems in manufacturing. Computers and Industrial Engineering, 2022, 166, 107982.	3.4	9
76	On-site Oriented Capacity Regulation for Fabrication Shops in Engineer-to-Order Companies (ETO). Procedia CIRP, 2015, 33, 197-202.	1.0	8
77	Collaborative Robotics Safety Control Application Using Dynamic Safety Zones Based on the ISO/TS 15066:2016. Advances in Intelligent Systems and Computing, 2020, , 430-437.	0.5	8
78	Mobile Factory Network (MFN) – Network of Flexible and Agile Manufacturing Systems in the Construction Industry. Applied Mechanics and Materials, 0, 752-753, 1368-1373.	0.2	7
79	A preliminary study on the changes in the Italian automotive supply chain for the introduction of electric vehicles. Journal of Industrial Engineering and Management, 2016, 9, 450.	1.0	7
80	Intelligent workpiece carrier for distributed data collection and control in manufacturing environments. Procedia Manufacturing, 2018, 24, 190-195.	1.9	7
81	Managing Cooperation in Supply Network Structures and Small or Medium-sized Enterprises. , 2011, , .		7
82	A deployment-friendly decentralized scheduling approach for cooperative multi-agent systems in production systems. Procedia Manufacturing, 2020, 52, 127-132.	1.9	7
83	Investigation of Assessment and Maturity Stage Models for Assessing the Implementation of Industry 4.0. , 2018, , .		6
84	Axiomatic Design based Design of a Software Prototype for Smart Shopfloor Management. MATEC Web of Conferences, 2018, 223, 01012.	0.1	6
85	Function-Based Mapping of Industrial Assistance Systems to User Groups in Production. Procedia CIRP, 2021, 96, 278-283.	1.0	6
86	SMART Reconfigurability Approach in Manufacture of Steel and Façade Constructions. , 2014, , 29-34.		6
87	Factors Affecting Future Scenarios for Alternative Vehicles Market. Advanced Materials Research, 2012, 608-609, 1607-1612.	0.3	5
88	Modular architectures for future alternative vehicles. International Journal of Vehicle Design, 2015, 67, 368.	0.1	5
89	An axiomatic design-based approach for the patient-value-oriented design of a sustainable Lean healthcare system. International Journal of Procurement Management, 2015, 8, 66.	0.1	5
90	Ideality in Axiomatic Design and beyond. Procedia CIRP, 2016, 53, 95-100.	1.0	5

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91	Communication Concept of DeConSim: a Decentralized Control Simulator for Production Systems. <i>Procedia Manufacturing</i> , 2018, 24, 100-106.	1.9	5
92	Lean management in hospitality: methods, applications and future directions. <i>International Journal of Services and Operations Management</i> , 2020, 36, 303.	0.1	5
93	Knowledge Transfer and Introduction of Industry 4.0 in SMEs. , 2021, , 275-302.		5
94	State of the Art of Non-vision-Based Localization Technologies for AR in Facility Management. <i>Lecture Notes in Computer Science</i> , 2020, , 255-272.	1.0	5
95	Integration of Life Cycle Data in a BIM Object Library to Support Green and Digital Public Procurements. <i>International Journal of Sustainable Development and Planning</i> , 2020, 15, 983-990.	0.3	5
96	Planung autonomer, wandlungsfähiger Produktionsmodule. <i>ZWF Zeitschrift Fuer Wirtschaftlichen Fabrikbetrieb</i> , 2002, 97, 173-177.	0.2	5
97	Automotive Design Quantification: Parameters Defining Exterior Proportions According to Car Segment. , 2014, , .		4
98	Customer-oriented Production System for Supplier Companies in CTO. <i>Procedia CIRP</i> , 2016, 57, 533-538.	1.0	4
99	Design and Implementation Approach for Distributed Manufacturing Networks Using Axiomatic Design. , 2016, , 225-250.		4
100	(Re-)Design of a Demonstration Model for a Flexible and Decentralized Cyber-Physical Production System (ĈPPS). <i>MATEC Web of Conferences</i> , 2017, 127, 01016.	0.1	4
101	Industrial Assistance Systems to Enhance Humanâ€“Machine Interaction and Operatorâ€™s Capabilities in Assembly. , 2021, , 129-161.		4
102	From Sensors to BIM: Monitoring Comfort Conditions of Social Housing with the KlimaKit Model. <i>Lecture Notes in Computer Science</i> , 2019, , 108-115.	1.0	4
103	Application of Decision Support Systems for Advanced Equipment Selection in Construction. <i>Lecture Notes in Computer Science</i> , 2019, , 229-235.	1.0	4
104	Morgenstadt â€“ Urban Production in the City of the Future. , 2014, , 13-16.		4
105	Chapter two Designing assembly lines for mass customization production systems. , 2016, , 15-36.		4
106	BIM-Based Construction Progress Measurement of Non-Repetitive HVAC Installation Works. , 0, , .		4
107	Concept Design of a Digital Shop Floor Information System for Assembly Operators in Machine Industry. <i>MATEC Web of Conferences</i> , 2019, 301, 00017.	0.1	4
108	Design of changeable assembly systems - a complexity theory based approach. , 2007, , .		3

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109	Factors and barriers affecting the purchase of electric vehicles in the Italian market. International Journal of Productivity and Quality Management, 2016, 18, 210.	0.1	3
110	Complexity Measures and Models in Supply Chain Networks. Complexity, 2018, 2018, 1-3.	0.9	3
111	Roadmap in eine Digitale Welt. ZWF Zeitschrift Fuer Wirtschaftlichen Fabrikbetrieb, 2019, 114, 576-579.	0.2	3
112	AI and ML for Human-Robot Cooperation in Intelligent and Flexible Manufacturing. , 2021, , 95-127.		3
113	Die Natur als Inspiration. ZWF Zeitschrift Fuer Wirtschaftlichen Fabrikbetrieb, 2020, 115, 158-161.	0.2	3
114	On the Design of a Decision Support System for Robotic Equipment Adoption in Construction Processes. Applied Sciences (Switzerland), 2021, 11, 11415.	1.3	3
115	VALUE STREAM ORIENTED PLANNING OF SUPPLY NETWORKS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 559-564.	0.4	2
116	Extension of the Value Stream Mapping Approach to the Comprehensive Design of a Lean Sheet Metal Manufacturing System: An Industrial Case Study. Key Engineering Materials, 0, 549, 537-544.	0.4	2
117	Impact of electromobility on automotive architectures. , 2013, , .		2
118	Parametric and Generative Design Techniques for Digitalization in Building Industry: the Case Study of Glued- Laminated-Timber Industry. IOP Conference Series: Materials Science and Engineering, 2016, 157, 012033.	0.3	2
119	Research Fields and Challenges to implement Cyber-Physical Production Systems in SMEs: A Literature Review. Chiang Mai University Journal of Natural Sciences, 2021, 20, .	0.1	2
120	A Three Level Model for the Design, Planning and Operation of Changeable Production Systems in Distributed Manufacturing. , 2014, , 23-28.		2
121	Promoting Collaborative Construction Process Management by Means of a Normalized Workload Approach. , 0, , .		2
122	Eye Tracking in der Produktion 4.0. ZWF Zeitschrift Fuer Wirtschaftlichen Fabrikbetrieb, 2019, 114, 72-75.	0.2	2
123	The Application of Digital Worker Assistance Systems to Support Workers with Disabilities in Assembly Processes. Procedia CIRP, 2021, 103, 243-249.	1.0	2
124	Biological Transformation in Manufacturing: Overview and Fields of Application. IEEE Engineering Management Review, 2021, 49, 115-122.	1.0	2
125	Towards Sustainable Manufacturing: A Case Study for Sustainable Packaging Redesign. Lecture Notes in Mechanical Engineering, 2022, , 84-93.	0.3	2
126	Processing of use cases for the development of an open platform to support the smart urban development. IOP Conference Series: Earth and Environmental Science, 2019, 297, 012009.	0.2	1

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127	Methodology and Operating Tool for Urban Renovation: The Case Study of the Italian City of Meran. Green Energy and Technology, 2021, , 171-181.	0.4	1
128	Organization in SME Networks. , 2011, , 1-18.		1
129	Enhancing Automation in the Construction Equipment Industry Through Implementation of BIM. Lecture Notes in Computer Science, 2019, , 64-73.	1.0	1
130	Kundennutzenorientierte Strategieentwicklung. ZWF Zeitschrift Fuer Wirtschaftlichen Fabrikbetrieb, 2010, 105, 700-705.	0.2	1
131	Die "Produktionslandkarte". ZWF Zeitschrift Fuer Wirtschaftlichen Fabrikbetrieb, 2001, 96, 328-331.	0.2	1
132	Den Kundennutzen im Visier. ZWF Zeitschrift Fuer Wirtschaftlichen Fabrikbetrieb, 2007, 102, 375-379.	0.2	1
133	Synchronisierung von ETO-Fertigung und Baustellenmontage. ZWF Zeitschrift Fuer Wirtschaftlichen Fabrikbetrieb, 2015, 110, 9-13.	0.2	1
134	Application of Axiomatic Design for the Development of Robotic Semi- and Fully Automated Assembly Processes: Two Case Studies. , 2021, , .		1
135	Design of a low-cost loading/unloading mechanism for processing stations in an automated production environment. MATEC Web of Conferences, 2018, 223, 01001.	0.1	0
136	Exploiting BIM and Sensor Data Through Web-Based CAFM. Advances in Civil and Industrial Engineering Book Series, 2021, , 341-364.	0.2	0
137	Decision support systems in building construction " an Axiomatic Design approach. IOP Conference Series: Materials Science and Engineering, 2021, 1174, 012004.	0.3	0
138	Application of Axiomatic Design for the Design of Flexible and Agile Manufacturing Systems. , 2021, , 483-519.		0
139	Nutzeneffekte von digitalen Planungstools in Bereichs- und Betriebsmittelplanung. ZWF Zeitschrift Fuer Wirtschaftlichen Fabrikbetrieb, 2006, 101, 719-722.	0.2	0
140	The Impact of E-mobility on Automotive Supply Chain. , 2014, , 467-472.		0
141	Experimental Evaluation and Comparison of Low-Cost Adaptive Mechatronic Grippers. Mechanisms and Machine Science, 2018, , 630-637.	0.3	0
142	Vernetzung in Cyber-Physischen Produktionssystemen. ZWF Zeitschrift Fuer Wirtschaftlichen Fabrikbetrieb, 2018, 113, 165-169.	0.2	0
143	A Quantitative Evaluation Framework for the Benefit of Building Information Modeling for Small and Medium Enterprises Leveraging Risk Management Concepts. IFIP Advances in Information and Communication Technology, 2020, , 711-723.	0.5	0