Alexander Verl

List of Publications by Year
in descending order

283 **papers**	4,959 **citations**	218592 26 **h-index**	133188 59 **g-index**
291 **all docs**	291 **docs citations**	291 **times ranked**	3359 **citing authors**

#	Article	IF	Citations
1	Cooperation of human and machines in assembly lines. CIRP Annals - Manufacturing Technology, 2009, 58, 628-646.	1.7	631
2	Machine tool feed drives. CIRP Annals - Manufacturing Technology, 2011, 60, 779-796.	1.7	484
3	A generic energy consumption model for decision making and energy efficiency optimisation in manufacturing. International Journal of Sustainable Engineering, 2009, 2, 123-133.	1.9	231
4	Making existing production systems Industry 4.0-ready. Production Engineering, 2015, 9, 143-148.	1.1	231
5	Robots in machining. CIRP Annals - Manufacturing Technology, 2019, 68, 799-822.	1.7	216
6	Grasping devices and methods in automated production processes. CIRP Annals - Manufacturing Technology, 2014, 63, 679-701.	1.7	180
7	The Bionic Handling Assistant: a success story of additive manufacturing. Assembly Automation, 2011, 31, 329-333.	1.0	125
8	IPAnema: A family of Cable-Driven Parallel Robots for Industrial Applications. Mechanisms and Machine Science, 2013, , 119-134.	0.3	99
9	Innovative control of assembly systems and lines. CIRP Annals - Manufacturing Technology, 2017, 66, 707-730.	1.7	86
10	Improving robotic machining accuracy through experimental error investigation and modular compensation. International Journal of Advanced Manufacturing Technology, 2016, 85, 3-15.	1.5	85
11	Generative Fertigung mit Kunststoffen. , 2013, , .		81
12	Correlation between feed velocity and preloading in ball screw drives. CIRP Annals - Manufacturing Technology, 2010, 59, 429-432.	1.7	68
13	Expedient modeling of ball screw feed drives. Production Engineering, 2012, 6, 205-211.	1.1	66
14	Workpiece and Machine Design in Additive Manufacturing for Multi-Axis Fused Deposition Modeling. Procedia CIRP, 2017, 60, 229-234.	1.0	54
15	Sensorless automated condition monitoring for the control of the predictive maintenance of machine tools. CIRP Annals - Manufacturing Technology, 2009, 58, 375-378.	1.7	53
16	Modeling, simulation and validation of material flow on conveyor belts. Applied Mathematical Modelling, 2014, 38, 3295-3313.	2.2	51
17	Digital Twins of Manufacturing Systems as a Base for Machine Learning. , 2018, , .		43
18	Mobile robots for offshore inspection and manipulation. , 2009, , .		41

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19	On solving the inverse kinematics problem using neural networks. , 2017, , .		41
20	Estimation of stability lobe diagrams in milling with continuous learning algorithms. Robotics and Computer-Integrated Manufacturing, 2017, 43, 124-134.	6.1	40
21	Energy consumption modeling and optimization for production machines. , 2008, , .		37
22	Architecture for Multilevel Monitoring and Control of Energy Consumption. , 2011, , 347-352.		37
23	A Container-based Architecture for Real-Time Control Applications. , 2018, , .		36
24	Real-time co-simulation for the virtual commissioning of production systems. Procedia CIRP, 2019, 79, 397-402.	1.0	35
25	Torque maximization for permanent magnet synchronous motors. IEEE Transactions on Control Systems Technology, 1998, 6, 740-744.	3.2	34
26	Control of an pseudo-omnidirectional, non-holonomic, mobile robot based on an ICM representation in spherical coordinates. , 2008, , .		34
27	Periodic variation of preloading in ball screws. Production Engineering, 2010, 4, 261-267.	1.1	33
28	Stiffness modeling of industrial robots for deformation compensation in machining. , 2014, , .		33
29	Advanced gripper development and tests for automated photovoltaic wafer handling. Assembly Automation, 2013, 33, 334-344.	1.0	32
30	Vision-based robust road lane detection in urban environments. , 2014, , .		32
31	An Approach for a Cloud-based Machine Tool Control. Procedia CIRP, 2013, 7, 682-687.	1.0	31
32	Double nut ball screw with improved operating characteristics. CIRP Annals - Manufacturing Technology, 2014, 63, 361-364.	1.7	31
33	A Model- and Signal-based Power Consumption Monitoring Concept for Energetic Optimization of Machine Tools. Procedia CIRP, 2014, 15, 44-49.	1.0	31
34	Singularity avoidance for over-actuated, pseudo-omnidirectional, wheeled mobile robots. , 2009, , .		30
35	A Review of Research Aspects of Redundantly Actuated Parallel Robotsw for Enabling Further Applications. IEEE/ASME Transactions on Mechatronics, 2018, 23, 1259-1269.	3.7	29
36	Correlation analysis methods in multi-stage production systems for reaching zero-defect manufacturing. Procedia CIRP, 2018, 72, 635-640.	1.0	29

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37	Evaluation of 3D feature descriptors for classification of surface geometries in point clouds. , 2012, , .		28
38	Glocalized cyber physical production systems. Production Engineering, 2012, 6, 643-649.	1.1	27
39	Challenges and obstacles in robot-machining. , 2013, , .		27
40	Detection of Workpiece Shape Deviations for Tool Path Adaptation in Robotic Deburring Systems. Procedia CIRP, 2016, 57, 545-550.	1.0	27
41	Modeling linear guide systems with CoFEM: equivalent models for rolling contact. Production Engineering, 2012, 6, 39-46.	1.1	25
42	A cyber-physical system for quality-oriented assembly of automotive electric motors. CIRP Journal of Manufacturing Science and Technology, 2018, 20, 12-22.	2.3	25
43	Experimental Investigation of Sources of Error in Robot Machining. Communications in Computer and Information Science, 2013, , 14-26.	0.4	25
44	Model-based energy consumption optimisation in manufacturing system and machine control. International Journal of Manufacturing Research, 2011, 6, 380.	0.1	24
45	Communication Mechanisms for Cloud based Machine Controls. Procedia CIRP, 2014, 17, 830-834.	1.0	24
46	Flexible and Modular Control and Manufacturing System. Procedia CIRP, 2015, 33, 115-120.	1.0	22
47	Methodology to Identify Applications for Collaborative Robots in Powertrain Assembly. Procedia CIRP, 2016, 55, 12-17.	1.0	22
48	Modular Modeling of Energy Consumption for Monitoring and Control. , 2011, , 341-346.		22
49	Manufacturing Task Description for Robotic Welding and Automatic Feature Recognition on Product CAD Models. Procedia CIRP, 2017, 60, 122-127.	1.0	22
50	Improvement of feed drive dynamics by means of semi-active damping. CIRP Annals - Manufacturing Technology, 2012, 61, 351-354.	1.7	21
51	Design and Evaluation of In-line Product Repair Strategies for Defect Reduction in the Production of Electric Drives. Procedia CIRP, 2014, 21, 159-164.	1.0	21
52	Open control systems: state of the art. Production Engineering, 2010, 4, 247-254.	1.1	20
53	Flexible, Self-configuring Control System for a Modular Production System. Procedia Technology, 2014, 15, 398-405.	1.1	20
54	High accurate robotic drilling with external sensor and compliance model-based compensation. , 2016, , .		20

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55	Robust design of independent joint control of industrial robots with secondary encoders. Robotics and Computer-Integrated Manufacturing, 2022, 73, 102232.	6.1	20
56	Parametric modeling of ball screw spindles. Production Engineering, 2010, 4, 625-631.	1.1	19
57	Friction Variances of Linear Machine Tool Axes. Procedia CIRP, 2012, 4, 115-119.	1.0	19
58	Online Learning of Stability Lobe Diagrams in Milling. Procedia CIRP, 2018, 67, 278-283.	1.0	19
59	Challenges and requirements for the safety compliant operation of reconfigurable manufacturing systems. Procedia CIRP, 2018, 72, 1100-1105.	1.0	19
60	Introducing Process Building Blocks for Designing Human Robot Interaction Work Systems and Calculating Accurate Cycle Times. Procedia CIRP, 2016, 44, 216-221.	1.0	18
61	Dynamic Real-time Orchestration of I4.0 Components based on Time-Sensitive Networking. Procedia CIRP, 2018, 72, 910-915.	1.0	18
62	On achieving accuracy and efficiency in Additive Manufacturing: Requirements on a hybrid CAM system. Procedia CIRP, 2018, 72, 1512-1517.	1.0	18
63	Compensation of Errors in Robot Machining with a Parallel 3D-Piezo Compensation Mechanism. Procedia CIRP, 2013, 7, 305-310.	1.0	17
64	Autonomous Systems for Maintenance Tasks – Requirements and Design of a Control Architecture. Procedia Technology, 2014, 15, 595-604.	1.1	16
65	Sliding bearing with adjustable friction properties. CIRP Annals - Manufacturing Technology, 2016, 65, 353-356.	1.7	16
66	A Radar-Based Terrain Mapping Approach for Stair Detection Towards Enhanced Prosthetic Foot Control. , 2018, , .		16
67	Combination of Time-of-Flight depth and stereo using semiglobal optimization. , 2011, , .		15
68	Automatic pose optimization for robotic processes. , 2015, , .		15
69	Cloud-Based Control Strategy: Downstream Defect Reduction in the Production of Electric Motors. IEEE Transactions on Industry Applications, 2017, 53, 5348-5353.	3.3	15
70	Automatic Motion Generation for Robotic Milling Optimizing Stiffness with Sample-Based Planning. Machines, 2017, 5, 3.	1.2	15
71	Assistive Robots in Eldercare and Daily Living: Automation of Individual Services for Senior Citizens. Lecture Notes in Computer Science, 2011, , 542-552.	1.0	15
72	Measurement pose selection and calibration forecast for manipulators with complex kinematic structures. CIRP Annals - Manufacturing Technology, 2008, 57, 425-428.	1.7	14

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73	A new adaptive penalization scheme for topology optimization. Production Engineering, 2009, 3, 427-434.	1.1	13
74	Model-based calculation of the system behavior of machine structures on the control device for vibration avoidance. International Journal of Advanced Manufacturing Technology, 2012, 58, 1087-1095.	1.5	13
75	Modularity in small machine tools. Production Engineering, 2013, 7, 483-490.	1.1	13
76	A feature descriptor for texture-less object representation using 2D and 3D cues from RGB-D data. , 2013, , .		13
77	Proactive quality control system for defect reduction in the production of electric drives. , 2013, , .		13
78	Analysis of the dynamic behavior of a six-axis industrial robot within the entire workspace in respect of machining tasks. , 2017, , .		13
79	A novel rapid additive manufacturing concept for architectural composite shell construction inspired by the shell formation in land snails. Bioinspiration and Biomimetics, 2018, 13, 026010.	1.5	13
80	A Novel Spatial Mandibular Motion-Capture System Based on Planar Fiducial Markers. IEEE Sensors Journal, 2018, 18, 10096-10104.	2.4	13
81	Reinforcement Learning of Material Flow Control Logic Using Hardware-in-the-Loop Simulation. , 2018, , .		11
82	Drive-Based Vibration Damping Control for Robot Machining. IEEE Robotics and Automation Letters, 2020, 5, 564-571.	3.3	11
83	Model-based automatic generation of digital twin models for the simulation of reconfigurable manufacturing systems for timber construction. Procedia CIRP, 2022, 107, 387-392.	1.0	11
84	Singularity-free state-space representation for non-holonomic, omnidirectional undercarriages by means of coordinate switching. , 2012, , .		10
85	Approach for a General Pose-dependent Model of the Dynamic Behavior of Large Lightweight Machine Tools for Vibration Reduction. Procedia CIRP, 2016, 41, 812-817.	1.0	10
86	CESA³R: Highly versatile plug-and-produce assembly system. , 2016, , .		10
87	Model-based method for condition monitoring and diagnosis of compressors. Procedia CIRP, 2018, 72, 1321-1326.	1.0	10
88	End-to-end Redundancy between Real-time I4.0 Components based on Time-Sensitive Networking. , 2018, , .		10
89	Post-Stuxnet: Sicherheitslücken bedrohen weiterhin Produktionsanlagen. ZWF Zeitschrift Fuer Wirtschaftlichen Fabrikbetrieb, 2011, 106, 237-240.	0.2	10
90	Multi-axis 3D printing of gelatin methacryloyl hydrogels on a non-planar surface obtained from magnetic resonance imaging. Additive Manufacturing, 2022, 50, 102566.	1.7	10

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91	Enabling Fast Ramp-Up of Assembly Lines through Context-Mapping of Implicit Operator Knowledge and Machine-Derived Data. International Federation for Information Processing, 2012, , 163-174.	0.4	9
92	Multi-level Energy Demand Optimizer System for Machine Tool Controls. Procedia CIRP, 2016, 41, 783-788.	1.0	9
93	Efficient Task and Path Planning for Maintenance Automation Using a Robot System. IEEE Transactions on Automation Science and Engineering, 2018, 15, 1205-1215.	3.4	9
94	Method for load-capable path planning in multi-axis fused deposition modeling. Procedia CIRP, 2019, 84, 335-340.	1.0	9
95	A novel I4.0-enabled engineering method and its evaluation. International Journal of Advanced Manufacturing Technology, 2019, 102, 2245-2263.	1.5	9
96	Cascaded sliding mode position control (SMC-PI) for an improved dynamic behavior of elastic feed drives. International Journal of Machine Tools and Manufacture, 2021, 169, 103796.	6.2	9
97	Learning Feedforward Control for Laser Powder Bed Fusion. Procedia CIRP, 2021, 96, 127-132.	1.0	9
98	Optimizing the Torque Distribution of a Redundantly Actuated Parallel Robot to Study the Temporomandibular Reaction Forces During Food Chewing. Journal of Mechanisms and Robotics, 2020, 12, .	1.5	9
99	A Reference Model for Collaborative Capacity Planning Between Automotive and Semiconductor Industry. Procedia CIRP, 2012, 3, 155-160.	1.0	8
100	Methodology to Apply Semantic Wikis as Lean Knowledge Management Systems on the Shop Floor. Procedia CIRP, 2013, 12, 444-449.	1.0	8
101	On the inverse kinematics of an *a priori* unknown general 6R-Robot. Robotica, 2013, 31, 455-463.	1.3	8
102	Selective rotor Assembly Using Fuzzy Logic in the Production of Electric Drives. Procedia CIRP, 2015, 33, 550-555.	1.0	8
103	Cloud-based control for downstream defect reduction in the production of electric motors. , 2016, , .		8
104	Knowledge Capturing Platform in Multi-Stage Production Systems for Zero-Defect Manufacturing. , 2018, , .		8
105	Adaptive preloading for rack-and-pinion drive systems. CIRP Annals - Manufacturing Technology, 2018, 67, 369-372.	1.7	8
106	Reinforcement Learning of a Robot Cell Control Logic using a Software-in-the-Loop Simulation as Environment. , 2019, , .		8
107	Automated Provision and Exchange of Energy Information throughout the Production Process. , 2012, , 381-386.		8
108	Vehicle tracking using ultrasonic sensors & joined particle weighting. , 2013, , .		7

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109	A Novel Method for Agile Planning Production Systems based on 3D Digitalization. , 2018, , .		7
110	Part Variation Modeling in Multi-Stage Production Systems for Zero-Defect Manufacturing. , 2019, , .		7
111	TSN-based Converged Industrial Networks: Evolutionary Steps and Migration Paths. , 2020, , .		7
112	A model-based and software-assisted safety assessment concept for reconfigurable PnP-systems. Procedia CIRP, 2020, 93, 359-364.	1.0	7
113	Reaching Zero-Defect Manufacturing by Compensation of Dimensional Deviations in the Manufacturing of Rotating Hollow Parts. Procedia Manufacturing, 2020, 51, 388-393.	1.9	7
114	Implementation of an Intelligent System Architecture for Process Monitoring of Machine Tools. Procedia CIRP, 2021, 96, 342-346.	1.0	7
115	Analysis of CNC software modules regarding parallelization capability. , 2014, , .		7
116	Kinematic Multibody Model Generation of Deformable Linear Objects from Point Clouds. , 2020, , .		7
117	Manufacturer-independent mechatronic information model for control systems. Production Engineering, 2010, 4, 165-173.	1.1	6
118	The QuadHelix-Drive - An improved rope actuator for robotic applications. , 2010, , .		6
119	A planning system for generating manipulation sequences for the automation of maintenance tasks. , 2016, , .		6
120	An Interpolation Concept for Linear Blending Based on Cornu Spiral. Procedia CIRP, 2016, 46, 348-351.	1.0	6
121	Automated Control System Generation Out of the Virtual Machine. Procedia Technology, 2016, 26, 349-356.	1.1	6
122	Control-integrated consumption graph-based optimisation method for energy reduction of machine tools with automated parameter optimisation. International Journal of Computer Integrated Manufacturing, 2016, 29, 1307-1316.	2.9	6
123	Concept for a simulation-based approach towards automated handling of deformable objects â€" A bin picking scenario. , 2017, , .		6
124	Automatic Close-optimal Workpiece Positioning for Robotic Manufacturing.. Procedia CIRP, 2018, 72, 277-284.	1.0	6
125	Persistent data backend for OPC UA namespaces in IT infrastructures. Procedia CIRP, 2018, 72, 174-178.	1.0	6
126	Smart centering for rotation-symmetric parts in multi-stage production systems for zero-defect manufacturing. Procedia CIRP, 2019, 79, 27-32.	1.0	6

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127	Configuration of Application Layer Protocols within Real-time I4.0 Components. , 2019, , .		6
128	Automated OPC UA address space generation from existing data structures. , 2019, , .		6
129	A control model for downstream compensation strategy in multi-stage manufacturing systems of complex parts. IFAC-PapersOnLine, 2019, 52, 1473-1478.	0.5	6
130	Generation of OPC UA Companion Specification with Eclipse Modeling Framework. , 2020, , .		6
131	Integrative data processing for cyber-physical off-site and on-site construction promoting co-design. Procedia CIRP, 2021, 100, 451-456.	1.0	6
132	Static Analysis of a Two-Platform Planar Cable-Driven Parallel Robot with Unlimited Rotation. Mechanisms and Machine Science, 2019, , 121-133.	0.3	6
133	Towards Geometric Mapping for Semi-autonomous Mobile Robots. Lecture Notes in Computer Science, 2012, , 114-127.	1.0	6
134	Force Free Add-on Position Measurement Device for the TCP of Parallel Kinematic Manipulators. CIRP Annals - Manufacturing Technology, 2006, 55, 407-410.	1.7	5
135	Semi-active damping of drive systems. JVC/Journal of Vibration and Control, 2013, 19, 742-754.	1.5	5
136	Production assistants: The rob@work family. , 2013, , .		5
137	Analysis and Design of Computerized Numerical Controls for Execution on Multi-core Systems. Procedia CIRP, 2016, 41, 864-869.	1.0	5
138	On-line learning artificial neural networks for stability classification of milling processes. , 2016, , .		5
139	A new control principle to increase the bandwidth of feed drives with large inertia ratio. International Journal of Advanced Manufacturing Technology, 2017, 91, 1747-1752.	1.5	5
140	Simulation of Industrial Bin Picking: An Application of Laser Range Finder Simulation. , 2018, , .		5
141	Time-optimal Path Planning of Multi-axis CNC Processes Using Variability of Orientation. Procedia CIRP, 2021, 96, 324-329.	1.0	5
142	Automated Planning of Robotic MAG Welding Based on Adaptive Gap Model. Procedia CIRP, 2017, 62, 612-617.	1.0	5
143	DRIVE BASED VIBRATION REDUCTION FOR PRODUCTION MACHINES. MM Science Journal, 2009, 2009, 130-134.	0.2	5
144	Echtzeit-Co-Simulation für die Virtuelle Inbetriebnahme. Atp Magazin, 2018, 60, 44-55.	0.3	5

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145	New solutions and applications of 3D computer tomography image processing. , 2008, , .		4
146	A new, uncertainty-aware cost-model for cost-benefit assessment of robot systems. , 2013, , .		4
147	On the Development of Transformable Sheet Metal Forming Tools. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2013, 46, 391-396.	0.4	4
148	Generation of rotation matrix for assembly models with arbitrary angle constraints. International Journal of Advanced Manufacturing Technology, 2014, 74, 563-568.	1.5	4
149	CNC Tool Path Generation on Multi-Core Processors. Applied Mechanics and Materials, 2015, 794, 339-346.	0.2	4
150	Simulation-assisted run-to-run control for battery manufacturing in a cloud environment. , 2017, , .		4
151	User Interface for the Acquisition and Characterization of Defects and Performed Rework in Multi-Stage Production Systems. Procedia CIRP, 2018, 78, 243-248.	1.0	4
152	Control-based compensation of friction and backlash within rack-and-pinion drives. Production Engineering, 2018, 12, 589-596.	1.1	4
153	Synchronization of a distributed interpolation application via cross-coupled control. , 2019, , .		4
154	Design, Implementation and Long-Term Running Experiences of the Cable-Driven Parallel Robot CaRo Printer. Mechanisms and Machine Science, 2019, , 379-390.	0.3	4
155	Prediction of the configuration of objects in a bin based on synthetic sensor data. Procedia CIRP, 2020, 88, 54-59.	1.0	4
156	A software architecture for a multi-axis additive manufacturing path-planning tool. Procedia CIRP, 2020, 88, 433-438.	1.0	4
157	Workspace Planning for In-Operation-Reconfiguration of Cable-Driven Parallel Robots. Mechanisms and Machine Science, 2021, , 182-193.	0.3	4
158	Velocity Based Hybrid Position-Force Control of Cable Robots and Experimental Workspace Analysis. Mechanisms and Machine Science, 2021, , 230-242.	0.3	4
159	Framework for Controlling Energy Consumption of Machine Tools. Ecoproduction, 2013, , 155-168.	0.8	4
160	Tracking Branched Deformable Linear Objects With Structure Preserved Registration by Branch-wise Probability Modification. , 2021, , .		4
161	A novel approach to object recognition and localization in automation and handling engineering. Proceedings of SPIE, 2008, , .	0.8	3
162	Fast and flexible 3D object recognition solutions for machine vision applications. , 2013, , .		3

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163	Connecting factories and related IT environments to manufacturing clouds. International Journal of Manufacturing Research, 2014, 9, 389.	0.1	3
164	Automatic Variant Configuration and Generation of Simulation Models for Comparison of Plant and Machinery Variants. Procedia CIRP, 2015, 29, 62-67.	1.0	3
165	Approach for Manufacturer Independent Automated Machine Tool Control Software Test. Applied Mechanics and Materials, 0, 794, 347-354.	0.2	3
166	Time constant measurement for control of induction heating processes for thixoforming. Measurement Science and Technology, 2015, 26, 025001.	1.4	3
167	The control architecture RoViDiAsS â€" A robotic visual disassembly and assembly system. , 2016, , .		3
168	Fabrication of Biomimetic and Biologically Inspired (Modular) Structures for Use in the Construction Industry. Biologically-inspired Systems, 2016, , 319-339.	0.4	3
169	Evaluation of Clothoids in Manufacturing Context. Procedia CIRP, 2017, 62, 541-546.	1.0	3
170	A cloud-based control architecture design for the interaction of industrial robots with soft objects. , 2017, , .		3
171	Roadmap for in-vitro investigation of interaction between food and teeth. , 2017, , .		3
172	Towards Real-Time Capable Simulations with a Containerized Simulation Environment. , 2018, , .		3
173	Responsive and Reactive Dual-Arm Robot Coordination. , 2018, , .		3
174	Realization of Data Analytics Projects in Manufacturing Using a Microservice-Based Approach. , 2019, , .		3
175	Cloud Manufacturing: An Automated Literature Review. Procedia CIRP, 2019, 86, 251-256.	1.0	3
176	Method for generating manufacturable, topology-optimized parts for Laminated Layer Manufacturing. Procedia CIRP, 2020, 93, 38-43.	1.0	3
177	Arithmetic Coding for Floating-Point Numbers. , 2021, , .		3
178	Challenges of Linearization-based Control of Industrial Robots with Cycloidal Drives. , 2021, , .		3
179	EinfÃ¼hrung in die industrielle Robotik mit Mensch-Roboter-Kooperation. , 2019, , 1-35.		3
180	Hardware-in-the-Loop Simulation for Machines based on a Multi-Rate Approach. , 2018, , .		3

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181	Virtual Commissioning Simulation as Reinforcement Learning Environment for Robot Cable Handling. , 2020, , .		3
182	Orientation smoothing in multi-axis additive manufacturing. Procedia CIRP, 2022, 107, 357-362.	1.0	3
183	Industrial powerline communication for machine tools and robotics. Production Engineering, 2010, 4, 295-305.	1.1	2
184	A HMM-based approach to learning probability models of programming strategies for industrial robots. , 2010, , .		2
185	Real-time 3D environment model for obstacle detection and collision avoidance with a mobile service robot. , 2010, , .		2
186	Efficient Object Categorization with the Surface-Approximation Polynomials Descriptor. Lecture Notes in Computer Science, 2012, , 34-53.	1.0	2
187	Adding rotational robustness to the Surface-Approximation Polynomials descriptor. , 2012, , .		2
188	Modeling linear guide systems with CoFEM: experimental validation. Production Engineering, 2012, 6, 259-265.	1.1	2
189	Modular Design Approach for Model-Based Drive Control Systems on Reconfigurable Logic. Applied Mechanics and Materials, 0, 704, 380-384.	0.2	2
190	Automatic optimal motion generation for robotic manufacturing processes: Optimal collision avoidance in robotic welding. , 2016, , .		2
191	Motion Control for Novel Emerging Robotic Devices and Systems. IEEE Transactions on Industrial Electronics, 2017, 64, 1623-1625.	5.2	2
192	Energy control system for energy-efficient control of machine tools. Production Engineering, 2017, 11, 85-91.	1.1	2
193	Fast robot task and path planning based on CAD and vision data. , 2017, , .		2
194	Environment modeling for maintenance automation-a next-best-view approach for combining space exploration and object recognition tasks. , 2017, , .		2
195	Measurement of the controlled variable during heating of Ti6Al4V for thixoforging. Materials Research Express, 2018, 5, 026508.	0.8	2
196	Reinforcement Learning Approach to Vibration Compensation for Dynamic Feed Drive Systems. , 2019, , .		2
197	Predicting coupling signals in a material flow real-time co-simulation with a Kalman filter. Procedia CIRP, 2020, 88, 9-14.	1.0	2
198	Impact-based feed drive actuator for discontinuous motion profiles. Production Engineering, 2020, 14, 157-163.	1.1	2

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199	Acceleration-based disturbance compensation for elastic rack-and-pinion drives. Production Engineering, 2021, 15, 791.	1.1	2
200	A First Step towards Cross-Platform Integration in Modular Micro-assembly Systems â€" Concept for a Process Module Construction Kit. , 2014, , 35-40.		2
201	Feeding of Small Components Using the Surface Tension of Fluids. Lecture Notes in Computer Science, 2014, , 47-51.	1.0	2
202	Simulation of the Stopping Behavior of Industrial Robots. , 2010, , 369-376.		2
203	POSE AND FEED-DIRECTION DEPENDENCY ANALYSIS FOR MILLING TASKS WITH INDUSTRIAL ROBOTS. DEStech Transactions on Engineering and Technology Research, 2018, , .	0.0	2
204	Experimental investigation into the implications of transmission errors for rack-and-pinion drives. Production Engineering, 0, , 1.	1.1	2
205	Distributed Interpolation: Synchronization of motion-controlled axes with coordination vector and decentralized segment controllers. , 2020, , .		2
206	Hybrid manufacturing of topology optimized machine tool parts through a layer laminated manufacturing method. Production Engineering, 2022, 16, 493-502.	1.1	2
207	Online Parameterization of a Milling Force Model using an Intelligent System Architecture and Bayesian Optimization. Procedia CIRP, 2022, 107, 1041-1046.	1.0	2
208	Camera-based Process Monitoring for Powder Bed Additive Manufacturing in Construction. Procedia CIRP, 2022, 107, 534-539.	1.0	2
209	New solutions for industrial inspection based on 3D computer tomography. , 2008, , .		1
210	Implementation of a new communication system for reconfigurable mechatronic modules. , 2010, , .		1
211	Research approaches enabling transformability for the metal forming industry. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 146-150.	0.4	1
212	Component oriented and automatic generation of FE models for parallel kinematics. Production Engineering, 2013, 7, 233-237.	1.1	1
213	Design, Development and Realisation of an Active Driven Knee-Prosthesis with Bevel Helical Gearbox. Advanced Materials Research, 0, 907, 225-239.	0.3	1
214	The Printed Machine Tool for Micro Machining. Advanced Materials Research, 2014, 1018, 433-440.	0.3	1
215	Knowledge-based cost engineering for industrial robot systems. , 2015, , .		1
216	Concept of a computerized numerical control kernel for execution on multi-core processors. , 2016, , .		1

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217	A Clothoid based real-time interpolation concept for path smoothing. , 2017, , .		1
218	Visual perception for robot based maintenance automation. , 2017, , .		1
219	Camera based path planning for low quantity - high variant manufacturing with industrial robots. , 2018, , .		1
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