

Kaan Erkorkmaz

List of Publications by Year in descending order

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56
papers

2,537
citations

218662

26
h-index

189881

50
g-index

56
all docs

56
docs citations

56
times ranked

1014
citing authors

#	ARTICLE	IF	CITATIONS
1	High speed CNC system design. Part I: jerk limited trajectory generation and quintic spline interpolation. International Journal of Machine Tools and Manufacture, 2001, 41, 1323-1345.	13.4	469
2	High speed CNC system design. Part II: modeling and identification of feed drives. International Journal of Machine Tools and Manufacture, 2001, 41, 1487-1509.	13.4	197
3	Sliding Mode Controller Design for High Speed Feed Drives. CIRP Annals - Manufacturing Technology, 2000, 49, 265-270.	3.6	137
4	Design of a NURBS interpolator with minimal feed fluctuation and continuous feed modulation capability. International Journal of Machine Tools and Manufacture, 2010, 50, 281-293.	13.4	129
5	High speed CNC system design. Part III: high speed tracking and contouring control of feed drives. International Journal of Machine Tools and Manufacture, 2001, 41, 1637-1658.	13.4	119
6	Virtual CNC system. Part II. High speed contouring application. International Journal of Machine Tools and Manufacture, 2006, 46, 1124-1138.	13.4	117
7	Feedrate Optimization for Spline Interpolation In High Speed Machine Tools. CIRP Annals - Manufacturing Technology, 2003, 52, 297-302.	3.6	103
8	Virtual CNC system. Part I. System architecture. International Journal of Machine Tools and Manufacture, 2006, 46, 1107-1123.	13.4	98
9	Quintic Spline Interpolation With Minimal Feed Fluctuation. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2005, 127, 339-349.	2.2	96
10	High Bandwidth Control of Ball Screw Drives. CIRP Annals - Manufacturing Technology, 2006, 55, 393-398.	3.6	76
11	Compensation of Axial Vibrations in Ball Screw Drives. CIRP Annals - Manufacturing Technology, 2007, 56, 373-378.	3.6	64
12	Feedrate optimization for freeform milling considering constraints from the feed drive system and process mechanics. CIRP Annals - Manufacturing Technology, 2013, 62, 395-398.	3.6	64
13	Self-optimizing machining systems. CIRP Annals - Manufacturing Technology, 2020, 69, 740-763.	3.6	62
14	Accurate control of ball screw drives using pole-placement vibration damping and a novel trajectory prefilter. Precision Engineering, 2013, 37, 308-322.	3.4	59
15	Active suppression of structural chatter vibrations using machine drives and accelerometers. CIRP Annals - Manufacturing Technology, 2015, 64, 385-388.	3.6	58
16	Robust compensation of elastic deformations in ball screw drives. International Journal of Machine Tools and Manufacture, 2010, 50, 559-574.	13.4	54
17	Linear programming and windowing based feedrate optimization for spline toolpaths. CIRP Annals - Manufacturing Technology, 2017, 66, 393-396.	3.6	54
18	Accurate tracking controller design for high-speed drives. International Journal of Machine Tools and Manufacture, 2007, 47, 1393-1400.	13.4	46

#	ARTICLE	IF	CITATIONS
19	Precision machine tool X & Y stage utilizing a planar air bearing arrangement. CIRP Annals - Manufacturing Technology, 2010, 59, 425-428.	3.6	38
20	Rapid identification technique for virtual CNC drives. International Journal of Machine Tools and Manufacture, 2007, 47, 1381-1392.	13.4	34
21	Chip geometry and cutting forces in gear power skiving. CIRP Annals - Manufacturing Technology, 2019, 68, 109-112.	3.6	32
22	A heuristic feedrate optimization strategy for NURBS toolpaths. CIRP Annals - Manufacturing Technology, 2008, 57, 407-410.	3.6	31
23	Design and Optimization of a Voice Coil Actuator for Precision Motion Applications. IEEE Transactions on Magnetics, 2015, 51, 1-10.	2.1	31
24	Virtual Computer Numerical Control System. CIRP Annals - Manufacturing Technology, 2006, 55, 399-402.	3.6	30
25	In-process digital twin estimation for high-performance machine tools with coupled multibody dynamics. CIRP Annals - Manufacturing Technology, 2020, 69, 321-324.	3.6	29
26	Time-optimal trajectory generation for 5-axis on-the-fly laser drilling. CIRP Annals - Manufacturing Technology, 2011, 60, 411-414.	3.6	26
27	Portable damping system for chatter suppression on flexible workpieces. CIRP Annals - Manufacturing Technology, 2019, 68, 423-426.	3.6	26
28	Chip geometry and cutting forces in gear shaping. CIRP Annals - Manufacturing Technology, 2016, 65, 133-136.	3.6	24
29	Control of ball screw drives based on disturbance response optimization. CIRP Annals - Manufacturing Technology, 2013, 62, 387-390.	3.6	22
30	Virtual Model of Gear Shaping”Part I: Kinematics, Cutter”Workpiece Engagement, and Cutting Forces. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2018, 140, .	2.2	21
31	Precision control of a T-type gantry using sensor/actuator averaging and active vibration damping. Precision Engineering, 2012, 36, 299-314.	3.4	20
32	Efficient Fitting of the Feed Correction Polynomial for Real-Time Spline Interpolation. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2015, 137, 044501.	2.2	18
33	Mechatronic design, actuator optimization, and control of a long stroke linear nano-positioner. Precision Engineering, 2018, 52, 308-322.	3.4	18
34	Digital shadow identification from feed drive structures for virtual process planning. CIRP Journal of Manufacturing Science and Technology, 2019, 24, 55-65.	4.5	14
35	Feed drive control tuning considering machine dynamics and chatter stability. CIRP Annals - Manufacturing Technology, 2020, 69, 345-348.	3.6	13
36	Constrained identification of virtual CNC drives using a genetic algorithm. International Journal of Advanced Manufacturing Technology, 2010, 50, 275-288.	3.0	9

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37	Time-optimized hole sequence planning for 5-axis on-the-fly laser drilling. CIRP Annals - Manufacturing Technology, 2014, 63, 377-380.	3.6	9
38	Chip geometry and cutting force prediction in gear hobbing. CIRP Annals - Manufacturing Technology, 2021, 70, 95-98.	3.6	9
39	Suppression of harmonic positioning errors in ball-screw drives using Adaptive Feedforward Cancellation. Precision Engineering, 2021, 68, 235-255.	3.4	9
40	A Control Systems Concept Inventory Test Design and Assessment. IEEE Transactions on Education, 2012, 55, 203-212.	2.4	8
41	Virtual Model of Gear Shapingâ€™Part II: Elastic Deformations and Virtual Gear Metrology. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2018, 140, .	2.2	8
42	RoboDrop: A Multi-Input Multi-Output Control System for On-Demand Manipulation of Microfluidic Droplets Based on Computer Vision Feedback. IEEE/ASME Transactions on Mechatronics, 2020, 25, 1129-1137.	5.8	7
43	Precision Tracking Controller Design for High Speed Feed Drives. , 2005, , 657.		6
44	Machining Porous Calcium Polyphosphate Implants for Tissue Engineering Applications. International Journal of Automation Technology, 2010, 4, 291-302.	1.0	6
45	Dynamic compliance attenuation in ball screw drives through model-based active damping of multiple vibration modes. CIRP Annals - Manufacturing Technology, 2022, 71, 373-376.	3.6	6
46	High Frequency Harmonic Cancellation in Ball-screw Drives. Procedia CIRP, 2012, 1, 615-620.	1.9	5
47	Thermomechanical and geometry model for directed energy deposition with 2D/3D toolpaths. Additive Manufacturing, 2020, 35, 101294.	3.0	5
48	Optimal cutting condition selection for high quality receptance measurements by sweep milling force excitation. International Journal of Machine Tools and Manufacture, 2022, 176, 103873.	13.4	5
49	Influence of guideway friction on the cutting point receptance in machine tools. CIRP Annals - Manufacturing Technology, 2022, 71, 361-364.	3.6	5
50	Dynamic model identification for CNC machine tool feed drives from in-process signals for virtual process planning. Mechatronics, 2020, 72, 102445.	3.3	4
51	Effect of Rack and Pinion Feed Drive Control Parameters on Machine Tool Dynamics. Journal of Manufacturing and Materials Processing, 2020, 4, 33.	2.2	4
52	Quintic Spline Interpolation With Minimal Feed Fluctuation. , 2003, , 523.		1
53	Modal Analysis, Metrology, and Error Budgeting of a Precision Motion Stage. Journal of Manufacturing and Materials Processing, 2018, 2, 8.	2.2	1
54	Control of Machining Processes. , 2014, , 1-8.		1

#	ARTICLE	IF	CITATIONS
55	Control of Machining Processes. , 2021, , 345-351.		0
56	Modeling, Simulation, and Optimization of Machining Polymer Infiltrated Calcium Polyphosphate. International Journal of Automation Technology, 2013, 7, 52-70.	1.0	0