

Gabor Stepan

List of Publications by Year in descending order

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279
papers

9,010
citations

53794

45
h-index

53230

85
g-index

296
all docs

296
docs citations

296
times ranked

2728
citing authors

#	ARTICLE	IF	CITATIONS
1	Updated semi-discretization method for periodic delay-differential equations with discrete delay. <i>International Journal for Numerical Methods in Engineering</i> , 2004, 61, 117-141.	2.8	561
2	Semi-discretization method for delayed systems. <i>International Journal for Numerical Methods in Engineering</i> , 2002, 55, 503-518.	2.8	544
3	Chatter suppression techniques in metal cutting. <i>CIRP Annals - Manufacturing Technology</i> , 2016, 65, 785-808.	3.6	474
4	Traffic jams: dynamics and control. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2010, 368, 4455-4479.	3.4	302
5	Semi-Discretization for Time-Delay Systems. <i>Applied Mathematical Sciences (Switzerland)</i> , 2011, . .	0.8	271
6	Stability of up-milling and down-milling, part 1: alternative analytical methods. <i>International Journal of Machine Tools and Manufacture</i> , 2003, 43, 25-34.	13.4	253
7	Chatter stability of milling in frequency and discrete time domain. <i>CIRP Journal of Manufacturing Science and Technology</i> , 2008, 1, 35-44.	4.5	243
8	Multiple chatter frequencies in milling processes. <i>Journal of Sound and Vibration</i> , 2003, 262, 333-345.	3.9	207
9	Subcritical Hopf Bifurcation in the Delay Equation Model for Machine Tool Vibrations. <i>Nonlinear Dynamics</i> , 2001, 26, 121-142.	5.2	201
10	On the higher-order semi-discretizations for periodic delayed systems. <i>Journal of Sound and Vibration</i> , 2008, 313, 334-341.	3.9	180
11	Modelling nonlinear regenerative effects in metal cutting. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2001, 359, 739-757.	3.4	175
12	On stability prediction for milling. <i>International Journal of Machine Tools and Manufacture</i> , 2005, 45, 769-781.	13.4	174
13	Stability of up-milling and down-milling, part 2: experimental verification. <i>International Journal of Machine Tools and Manufacture</i> , 2003, 43, 35-40.	13.4	154
14	Delay effects in the human sensory system during balancing. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2009, 367, 1195-1212.	3.4	136
15	Stability Analysis of Turning With Periodic Spindle Speed Modulation Via Semidiscretization. <i>JVC/Journal of Vibration and Control</i> , 2004, 10, 1835-1855.	2.6	125
16	The effect of serration on mechanics and stability of milling cutters. <i>International Journal of Machine Tools and Manufacture</i> , 2010, 50, 511-520.	13.4	113
17	Exciting traffic jams: Nonlinear phenomena behind traffic jam formation on highways. <i>Physical Review E</i> , 2009, 80, 046205.	2.1	106
18	Subcritical Hopf bifurcations in a car-following model with reaction-time delay. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2006, 462, 2643-2670.	2.1	103

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19	DELAY, PARAMETRIC EXCITATION, AND THE NONLINEAR DYNAMICS OF CUTTING PROCESSES. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 2005, 15, 2783-2798.	1.7	101
20	Acceleration feedback improves balancing against reflex delay. Journal of the Royal Society Interface, 2013, 10, 20120763.	3.4	101
21	Machine Tool Chatter and Surface Location Error in Milling Processes. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2006, 128, 913-920.	2.2	88
22	State-dependent delay in regenerative turning processes. Nonlinear Dynamics, 2006, 47, 275-283.	5.2	87
23	On the chatter frequencies of milling processes with runout. International Journal of Machine Tools and Manufacture, 2008, 48, 1081-1089.	13.4	84
24	Criticality of Hopf bifurcation in state-dependent delay model of turning processes. International Journal of Non-Linear Mechanics, 2008, 43, 140-149.	2.6	84
25	Improved prediction of stability lobes with extended multi frequency solution. CIRP Annals - Manufacturing Technology, 2013, 62, 411-414.	3.6	84
26	Stability chart for the delayed Mathieu equation. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2002, 458, 1989-1998.	2.1	80
27	Stability of time-periodic and delayed systems – a route to act-and-wait control. Annual Reviews in Control, 2006, 30, 159-168.	7.9	79
28	Nonlinear Regenerative Machine Tool Vibrations. , 1997, , .		79
29	On the global dynamics of chatter in the orthogonal cutting model. International Journal of Non-Linear Mechanics, 2011, 46, 330-338.	2.6	78
30	Effects of Radial Immersion and Cutting Direction on Chatter Instability in End-Milling. , 2002, , 351.		71
31	Bisection method in higher dimensions and the efficiency number. Periodica Polytechnica, Mechanical Engineering, 2012, 56, 81.	1.4	71
32	Chatter Stability of Machining Operations. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2020, 142, .	2.2	65
33	Micro-chaos in digital control. Journal of Nonlinear Science, 1996, 6, 415-448.	2.1	63
34	Delay effects in shimmy dynamics of wheels with stretched string-like tyres. European Journal of Mechanics, A/Solids, 2009, 28, 516-525.	3.7	61
35	Nonlinear Dynamics of High-Speed Milling – Analyses, Numerics, and Experiments. Journal of Vibration and Acoustics, Transactions of the ASME, 2005, 127, 197-203.	1.6	60
36	The Effect of Helix Angle Variation on Milling Stability. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2012, 134, .	2.2	57

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37	Balancing with reflex delay. <i>Mathematical and Computer Modelling</i> , 2000, 31, 199-205.	2.0	56
38	Delay effects in brain dynamics. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2009, 367, 1059-1062.	3.4	54
39	Vibrations of machines subjected to digital force control. <i>International Journal of Solids and Structures</i> , 2001, 38, 2149-2159.	2.7	53
40	Continuation of Bifurcations in Periodic Delayâ€Differential Equations Using Characteristic Matrices. <i>SIAM Journal of Scientific Computing</i> , 2006, 28, 1301-1317.	2.8	53
41	SURFACE PROPERTIES OF THE MACHINED WORKPIECE FOR HELICAL MILLS. <i>Machining Science and Technology</i> , 2009, 13, 227-245.	2.5	53
42	Nonlinear Dynamics of Vehicle Traction. <i>Vehicle System Dynamics</i> , 2003, 40, 377-399.	3.7	52
43	Microchaotic Motion of Digitally Controlled Machines. <i>JVC/Journal of Vibration and Control</i> , 1998, 4, 427-443.	2.6	50
44	Quasiperiodic oscillations in robot dynamics. <i>Nonlinear Dynamics</i> , 1995, 8, 513-528.	5.2	50
45	Estimates of the bistable region in metal cutting. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2008, 464, 3255-3271.	2.1	49
46	Great delay in a predator-prey model. <i>Nonlinear Analysis: Theory, Methods & Applications</i> , 1986, 10, 913-929.	1.1	48
47	On the periodic response of a harmonically excited dry friction oscillator. <i>Journal of Sound and Vibration</i> , 2006, 295, 649-658.	3.9	48
48	Cylindrical milling tools: Comparative real case study for process stability. <i>CIRP Annals - Manufacturing Technology</i> , 2014, 63, 385-388.	3.6	48
49	Chatter avoidance in cutting highly flexible workpieces. <i>CIRP Annals - Manufacturing Technology</i> , 2017, 66, 377-380.	3.6	47
50	Global dynamics of low immersion high-speed milling. <i>Chaos</i> , 2004, 14, 1069-1077.	2.5	46
51	Control and Dynamics of Quarter-Car Models With Dual-Rate Damping. <i>JVC/Journal of Vibration and Control</i> , 2000, 6, 1045-1063.	2.6	44
52	Hopf Bifurcation Calculations in Delayed Systems with Translational Symmetry. <i>Journal of Nonlinear Science</i> , 2004, 14, 505-528.	2.1	44
53	Identification of cutting force characteristics based on chatter experiments. <i>CIRP Annals - Manufacturing Technology</i> , 2011, 60, 113-116.	3.6	42
54	Symmetry breaking in milling dynamics. <i>International Journal of Machine Tools and Manufacture</i> , 2019, 139, 37-59.	13.4	42

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55	Act-and-wait control concept for discrete-time systems with feedback delay. IET Control Theory and Applications, 2007, 1, 553-557.	2.1	41
56	Delay-dependent stability analysis by using delay-independent integral evaluation. Automatica, 2016, 70, 153-157.	5.0	41
57	Isolated large amplitude periodic motions of towed rigid wheels. Nonlinear Dynamics, 2008, 52, 27-34.	5.2	40
58	Operational stability prediction in milling based on impact tests. Mechanical Systems and Signal Processing, 2018, 103, 327-339.	8.0	40
59	Lobes and Lenses in the Stability Chart of Interrupted Turning. Journal of Computational and Nonlinear Dynamics, 2006, 1, 205-211.	1.2	38
60	Approximate stability charts for milling processes using semi-discretization. Applied Mathematics and Computation, 2006, 174, 51-73.	2.2	38
61	Chaotic Motion of Wheels. Vehicle System Dynamics, 1991, 20, 341-351.	3.7	37
62	Bifurcation analysis of wheel shimmy with non-smooth effects and time delay in the tyreâ€“ground contact. Nonlinear Dynamics, 2019, 98, 841-858.	5.2	36
63	Chatter mitigation using the nonlinear tuned vibration absorber. International Journal of Non-Linear Mechanics, 2017, 91, 103-112.	2.6	35
64	On Stability and Dynamics of Milling at Small Radial Immersion. CIRP Annals - Manufacturing Technology, 2005, 54, 357-362.	3.6	34
65	State Dependent Regenerative Effect in Milling Processes. Journal of Computational and Nonlinear Dynamics, 2011, 6, .	1.2	34
66	Analytical expressions for chatter analysis in milling operations with one dominant mode. Journal of Sound and Vibration, 2016, 375, 403-421.	3.9	34
67	Ultimate capability of variable pitch milling cutters. CIRP Annals - Manufacturing Technology, 2018, 67, 373-376.	3.6	34
68	Model based reconstruction of milled surface topography from measured cutting forces. International Journal of Machine Tools and Manufacture, 2012, 54-55, 25-33.	13.4	33
69	Balancing a wheeled inverted pendulum with a single accelerometer in the presence of time delay. JVC/Journal of Vibration and Control, 2017, 23, 604-614.	2.6	33
70	Design of self-tuneable mass damper for modular fixturing systems. CIRP Annals - Manufacturing Technology, 2016, 65, 389-392.	3.6	32
71	Experimental investigation of dynamic chip formation in orthogonal cutting. International Journal of Machine Tools and Manufacture, 2019, 145, 103429.	13.4	32
72	Controlling Unstable Rolling Phenomena. JVC/Journal of Vibration and Control, 2000, 6, 137-158.	2.6	29

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73	Sub-harmonic resonant solutions of a harmonically excited dry friction oscillator. <i>Nonlinear Dynamics</i> , 2007, 50, 93-109.	5.2	29
74	Semi-Discretization of Delayed Dynamical Systems. , 2001, , .		29
75	Micro-shimmy of towed structures in experimentally uncharted unstable parameter domain. <i>Vehicle System Dynamics</i> , 2012, 50, 1613-1630.	3.7	28
76	DYNAMICS OF PIECEWISE LINEAR DISCONTINUOUS MAPS. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2004, 14, 2341-2351.	1.7	27
77	Experiments on Quasiperiodic Wheel Shimmy. <i>Journal of Computational and Nonlinear Dynamics</i> , 2009, 4, .	1.2	27
78	Exact stability chart of an elastic beam subjected to delayed feedback. <i>Journal of Sound and Vibration</i> , 2016, 367, 219-232.	3.9	27
79	Stability of High-Speed Milling. , 2000, , .		26
80	Increasing the Accuracy of Digital Force Control Process Using the Act-and-Wait Concept. <i>IEEE/ASME Transactions on Mechatronics</i> , 2010, 15, 291-298.	5.8	25
81	Saturation limits the contribution of acceleration feedback to balancing against reaction delay. <i>Journal of the Royal Society Interface</i> , 2018, 15, 20170771.	3.4	25
82	Robust stability of milling operations based on pseudospectral approach. <i>International Journal of Machine Tools and Manufacture</i> , 2020, 149, 103516.	13.4	25
83	Analysis of effects of differential gain on dynamic stability of digital force control. <i>International Journal of Non-Linear Mechanics</i> , 2008, 43, 514-520.	2.6	24
84	Increased Stability of Low-Speed Turning Through a Distributed Force and Continuous Delay Model. <i>Journal of Computational and Nonlinear Dynamics</i> , 2009, 4, .	1.2	24
85	Full Characterization of Act-and-wait Control for First-order Unstable Lag Processes. <i>JVC/Journal of Vibration and Control</i> , 2010, 16, 1209-1233.	2.6	24
86	Regenerative delay, parametric forcing and machine tool chatter: A review. <i>IFAC-PapersOnLine</i> , 2015, 48, 322-327.	0.9	24
87	On the bistable zone of milling processes. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2015, 373, 20140409.	3.4	24
88	Extension of the spectral element method for stability analysis of time-periodic delay-differential equations with multiple and distributed delays. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2016, 35, 177-189.	3.3	24
89	Two-Dimensional Finite Element Analysis of Turning Processes. <i>Periodica Polytechnica, Mechanical Engineering</i> , 2017, 61, 44-54.	1.4	24
90	Stability and Bifurcation of Longitudinal Vehicle Braking. <i>Nonlinear Dynamics</i> , 2005, 40, 339-365.	5.2	23

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91	Computed torque control of an under-actuated service robot platform modeled by natural coordinates. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2011, 16, 2205-2217.	3.3	23
92	Contact patch memory of tyres leading to lateral vibrations of four-wheeled vehicles. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2013, 371, 20120427.	3.4	23
93	Extension of process damping to milling with low radial immersion. <i>International Journal of Advanced Manufacturing Technology</i> , 2017, 89, 2545-2556.	3.0	23
94	General Milling Stability Model for Cylindrical Tools. <i>Procedia CIRP</i> , 2012, 4, 90-97.	1.9	22
95	Robust stability analysis of machining operations. <i>International Journal of Advanced Manufacturing Technology</i> , 2017, 88, 45-54.	3.0	22
96	Sliding and Crossing Dynamics in Extended Filippov Systems. <i>SIAM Journal on Applied Dynamical Systems</i> , 2018, 17, 823-858.	1.6	22
97	ON STABILITY PREDICTION FOR LOW RADIAL IMMERSION MILLING. <i>Machining Science and Technology</i> , 2005, 9, 117-130.	2.5	21
98	Prediction of robust stability boundaries for milling operations with extended multi-frequency solution and structured singular values. <i>Journal of Manufacturing Processes</i> , 2017, 30, 281-289.	5.9	21
99	Nonsmooth analysis of three-dimensional slipping and rolling in the presence of dry friction. <i>Nonlinear Dynamics</i> , 2019, 97, 1799-1817.	5.2	21
100	Delayed feedback of sampled higher derivatives. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2010, 368, 469-482.	3.4	20
101	On the analysis of the double Hopf bifurcation in machining processes via centre manifold reduction. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2017, 473, 20170502.	2.1	20
102	Optimum Selection of Variable Pitch for Chatter Suppression in Face Milling Operations. <i>Materials</i> , 2019, 12, 112.	2.9	20
103	Tuneable clamping table for chatter avoidance in thin-walled part milling. <i>CIRP Annals - Manufacturing Technology</i> , 2020, 69, 313-316.	3.6	20
104	DIGITAL CONTROL AS SOURCE OF CHAOTIC BEHAVIOR. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2010, 20, 1365-1378.	1.7	19
105	Semidiscretization for Time-Delayed Neural Balance Control. <i>SIAM Journal on Applied Dynamical Systems</i> , 2015, 14, 1258-1277.	1.6	19
106	Spectral element method for stability analysis of milling processes with discontinuous time-periodicity. <i>International Journal of Advanced Manufacturing Technology</i> , 2017, 89, 2503-2514.	3.0	19
107	Effect of delay combinations on stability and Hopf bifurcation of an oscillator with acceleration-derivative feedback. <i>International Journal of Non-Linear Mechanics</i> , 2017, 94, 392-399.	2.6	19
108	Microchaos in human postural balance: Sensory dead zones and sampled time-delayed feedback. <i>Physical Review E</i> , 2018, 98, 022223.	2.1	18

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109	Design principles of digitally controlled robots. <i>Mechanism and Machine Theory</i> , 1990, 25, 515-527.	4.5	17
110	Period Doubling Bifurcation and Center Manifold Reduction in a Time-periodic and Time-delayed Model of Machining. <i>JVC/Journal of Vibration and Control</i> , 2010, 16, 1169-1187.	2.6	17
111	Kinematic oscillations of railway wheelsets. <i>Multibody System Dynamics</i> , 2015, 34, 259-274.	2.7	17
112	Cumulative Surface Location Error for Milling Processes Based on Tool-tip Frequency Response Function. <i>Procedia CIRP</i> , 2016, 46, 323-326.	1.9	17
113	Nonlinear model-based parameter estimation and stability analysis of an aero-pendulum subject to digital delayed control. <i>International Journal of Dynamics and Control</i> , 2017, 5, 629-643.	2.5	17
114	Stochastic semi-discretization for linear stochastic delay differential equations. <i>International Journal for Numerical Methods in Engineering</i> , 2019, 119, 879-898.	2.8	17
115	Remote Control of Periodic Robot Motion. <i>CISM International Centre for Mechanical Sciences, Courses and Lectures</i> , 2000, , 197-203.	0.6	17
116	Delay, Nonlinear Oscillations and Shimming Wheels. <i>Solid Mechanics and Its Applications</i> , 1999, , 373-386.	0.2	17
117	On the dimension reduction of systems with feedback delay by act-and-wait control. <i>IMA Journal of Mathematical Control and Information</i> , 2010, 27, 457-473.	1.7	16
118	Improving the stability of multi-cutter turning with detuned dynamics. <i>Machining Science and Technology</i> , 2016, 20, 440-459.	2.5	16
119	Quantization improves stabilization of dynamical systems with delayed feedback. <i>Chaos</i> , 2017, 27, 114306.	2.5	16
120	Experimental observations on unsafe zones in milling processes. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2019, 377, 20180125.	3.4	16
121	Nonlinear Dynamics of High-Speed Milling Subjected to Regenerative Effect. , 2005, , 111-128.		15
122	Nonlinear Bifurcation Analysis of a Single-DoF Model of a Robotic Arm Subject to Digital Position Control. <i>Journal of Computational and Nonlinear Dynamics</i> , 2013, 8, .	1.2	15
123	Tyre induced vibrations of the car-trailer system. <i>Journal of Sound and Vibration</i> , 2016, 362, 214-227.	3.9	15
124	Shimmy model for electric vehicle with independent suspensions. <i>Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering</i> , 2018, 232, 330-340.	1.9	15
125	On stability of emulated turning processes in HIL environment. <i>CIRP Annals - Manufacturing Technology</i> , 2019, 68, 405-408.	3.6	15
126	Estimation of the Bistable Zone for Machining Operations for the Case of a Distributed Cutting-Force Model. <i>Journal of Computational and Nonlinear Dynamics</i> , 2016, 11, .	1.2	14

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127	Experimental investigation of the shear angle variation during orthogonal cutting. <i>Materials Today: Proceedings</i> , 2018, 5, 26495-26500.	1.8	14
128	Influence of Control Valve Delay and Dead Zone on the Stability of a Simple Hydraulic Positioning System. <i>Mathematical Problems in Engineering</i> , 2010, 2010, 1-15.	1.1	13
129	Stability analysis of a two-degree-of-freedom mechanical system subject to proportionalâ€“derivative digital position control. <i>JVC/Journal of Vibration and Control</i> , 2015, 21, 1539-1555.	2.6	13
130	Life Expectancy of Transient Microchaotic Behaviour. <i>Journal of Nonlinear Science</i> , 2005, 15, 63-91.	2.1	12
131	Stabilizing skateboard speed-wobble with reflex delay. <i>Journal of the Royal Society Interface</i> , 2016, 13, 20160345.	3.4	12
132	State-dependent distributed-delay model of orthogonal cutting. <i>Nonlinear Dynamics</i> , 2016, 84, 1147-1156.	5.2	12
133	Bifurcation analysis of nonlinear timeâ€“periodic timeâ€“delay systems via semidiscretization. <i>International Journal for Numerical Methods in Engineering</i> , 2018, 115, 57-74.	2.8	12
134	Multi-Baker Map as a Model of Digital PD Control. <i>International Journal of Bifurcation and Chaos in Applied Sciences and Engineering</i> , 2016, 26, 1650023.	1.7	11
135	Optimal Detuning of a Parallel Turning Systemâ€“Theory and Experiments. <i>Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME</i> , 2017, 139, .	1.6	11
136	Milling stability for slowly varying parameters. <i>Procedia CIRP</i> , 2018, 77, 110-113.	1.9	11
137	Closed-form estimations of the bistable region in metal cutting via the method of averaging. <i>International Journal of Non-Linear Mechanics</i> , 2019, 112, 49-56.	2.6	11
138	Machining of slender workpieces subjected to time-periodic axial force: stability and chatter suppression. <i>Journal of Sound and Vibration</i> , 2021, 504, 116114.	3.9	11
139	Effects of Varying Dynamics of Flexible Workpieces in Milling Operations. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> , 2020, 142, .	2.2	11
140	Delayed digital position control of a single-DoF system and the nonlinear behavior of the act-and-wait controller. <i>JVC/Journal of Vibration and Control</i> , 2016, 22, 481-495.	2.6	10
141	Ball shooting tests for identification of modal parameter variation in rotating main spindles. <i>Procedia CIRP</i> , 2018, 77, 481-484.	1.9	10
142	Pseudospectral method for assessing stability robustness for linear timeâ€“periodic delayed dynamical systems. <i>International Journal for Numerical Methods in Engineering</i> , 2020, 121, 3505-3528.	2.8	10
143	Parametric continuation algorithm for time-delay systems and bifurcation caused by multiple characteristic roots. <i>Nonlinear Dynamics</i> , 2021, 103, 3241-3253.	5.2	10
144	On Perturbation of the Kernel in Infinite Delay Systems. <i>ZAMM Zeitschrift Fur Angewandte Mathematik Und Mechanik</i> , 1992, 72, 153-156.	1.6	9

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145	Delayed control of an elastic beam. <i>International Journal of Dynamics and Control</i> , 2014, 2, 68-76.	2.5	9
146	Numerical and experimental investigation of the applicability of pellet impacts for impulse excitation. <i>International Journal of Impact Engineering</i> , 2018, 115, 19-31.	5.0	9
147	Nonlinearities of hardware-in-the-loop environment affecting turning process emulation. <i>International Journal of Machine Tools and Manufacture</i> , 2020, 157, 103611.	13.4	9
148	Response to perturbation during quiet standing resembles delayed state feedback optimized for performance and robustness. <i>Scientific Reports</i> , 2021, 11, 11392.	3.3	9
149	Dynamics of Digital Force Control Applied in Rehabilitation Robotics. <i>Meccanica</i> , 2003, 38, 213-226.	2.0	8
150	Feasibility Study of Optical Detection of Chatter Vibration During Milling. <i>International Journal of Optomechatronics</i> , 2010, 4, 195-214.	6.6	8
151	The Effect of Non-Symmetric FRF on Machining: A Case Study. , 2015, , .		8
152	A collection on "Climate dynamics: multiple scales and memory effects"™. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2015, 471, 20150097.	2.1	8
153	Experimental validation of appropriate axial immersions for helical mills. <i>International Journal of Advanced Manufacturing Technology</i> , 2015, 84, 1295.	3.0	8
154	Semi-discretization and the time-delayed PDA feedback control of human balance. <i>IFAC-PapersOnLine</i> , 2015, 48, 93-98.	0.9	8
155	Discontinuity-induced bifurcations of a dual-point contact ball. <i>Nonlinear Dynamics</i> , 2016, 83, 685-702.	5.2	8
156	Nonlinear dynamics of hardware-in-the-loop experiments on stick-slip phenomena. <i>International Journal of Non-Linear Mechanics</i> , 2017, 94, 380-391.	2.6	8
157	A Theoretical Investigation of the Effect of the Stochasticity in the Material Properties on the Chatter Detection During Turning. , 2017, , .		8
158	Bifurcations in basic models of delayed force control. <i>Nonlinear Dynamics</i> , 2020, 99, 99-108.	5.2	8
159	Numerical Stability Test of Linear Time-Delay Systems of Neutral Type. <i>Advances in Delays and Dynamics</i> , 2017, , 77-91.	0.4	8
160	In-process impulse response of milling to identify stability properties by signal processing. <i>Journal of Sound and Vibration</i> , 2022, 527, 116849.	3.9	8
161	Spectral Properties of Milling and Machined Surface. <i>Materials Science Forum</i> , 0, 836-837, 570-577.	0.3	7
162	Stability of turning processes for periodic chip formation. <i>Advances in Manufacturing</i> , 2018, 6, 345-353.	6.1	7

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163	Theoretical and experimental study on the nonlinear dynamics of wheel-shimmy. <i>Nonlinear Dynamics</i> , 2019, 98, 2581-2593.	5.2	7
164	Analytical estimations of limit cycle amplitude for delay-differential equations. <i>Electronic Journal of Qualitative Theory of Differential Equations</i> , 2016, , 1-10.	0.5	7
165	Vehicle Shimmy Modeling With Pacejka's Magic Formula and the Delayed Tire Model. <i>Journal of Computational and Nonlinear Dynamics</i> , 2020, 15, .	1.2	7
166	Nonlinear oscillations in machines and mechanisms theory. <i>Mechanism and Machine Theory</i> , 1999, 34, 1237-1253.	4.5	6
167	Bifurcation analysis of a two-DoF mechanical system subject to digital position control. Part II. Effects of asymmetry and transition to chaos. <i>Nonlinear Dynamics</i> , 2013, 74, 1223-1241.	5.2	6
168	Effect of non-proportional damping on the dynamics and stability of multi-cutter turning systems. <i>International Journal of Machine Tools and Manufacture</i> , 2017, 117, 23-30.	13.4	6
169	Effect of dry friction on vibrations of sampled-data mechatronic systems. <i>Nonlinear Dynamics</i> , 2017, 88, 349-361.	5.2	6
170	Model Establishment and Parameter Analysis on Shimmy of Electric Vehicle with Independent Suspensions. <i>Procedia IUTAM</i> , 2017, 22, 259-266.	1.2	6
171	Quantification of uncertainty in machining operations based on probabilistic and robust approaches. <i>Procedia CIRP</i> , 2018, 77, 82-85.	1.9	6
172	Comparison of the Dynamics of Low Immersion Milling and Cutting With Varying Spindle Speed. , 2001, , .		6
173	Delayed oscillator model of pressure relief valves with outlet piping. <i>Journal of Sound and Vibration</i> , 2022, 534, 117016.	3.9	6
174	Dynamics of vehicle stability control subjected to feedback delay. <i>European Journal of Mechanics, A/Solids</i> , 2022, 96, 104678.	3.7	6
175	Stability of towed wheels with elastic steering mechanism and shimmy damper. <i>Periodica Polytechnica, Mechanical Engineering</i> , 2007, 51, 99.	1.4	5
176	Dynamics modeling and stability of robotic systems with discrete-time force control. <i>Archive of Applied Mechanics</i> , 2007, 77, 293-299.	2.2	5
177	Optimization of material removal rate for orthogonal cutting with vibration limits. <i>Periodica Polytechnica, Mechanical Engineering</i> , 2012, 56, 91.	1.4	5
178	Stability Properties and Optimization of Multi-Cutter Turning Operations. , 2013, , .		5
179	Numerical methods for the stability of time-periodic hybrid time-delay systems with applications. <i>Applied Mathematical Modelling</i> , 2018, 57, 142-162.	4.2	5
180	Gaussian noise process as cutting force model for turning. <i>Procedia CIRP</i> , 2018, 77, 94-97.	1.9	5

#	ARTICLE	IF	CITATIONS
181	High-speed camera measurements in the mechanical analysis of machining. <i>Procedia CIRP</i> , 2018, 77, 155-158.	1.9	5
182	Laser scanned patterns of machined surfaces. <i>Procedia CIRP</i> , 2018, 77, 355-358.	1.9	5
183	In-Process Monitoring of Changing Dynamics of a Thin-Walled Component During Milling Operation by Ball Shooter Excitation. <i>Journal of Manufacturing and Materials Processing</i> , 2020, 4, 78.	2.2	5
184	Stability charts of a delayed model of vehicle towing. <i>IFAC-PapersOnLine</i> , 2021, 54, 64-69.	0.9	5
185	Optimization of digital control with delay by periodic variation of the gain parameters. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2004, 37, 145-150.	0.4	4
186	Quick estimation of escape rate with the help of fractal dimension. <i>Communications in Nonlinear Science and Numerical Simulation</i> , 2006, 11, 595-605.	3.3	4
187	Brockett problem for systems with feedback delay. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2008, 41, 11491-11496.	0.4	4
188	Sampling and round-off, as sources of chaos in PD-controlled systems. , 2011, , .		4
189	Dynamics of Cutting Near Double Hopf Bifurcation. <i>Procedia IUTAM</i> , 2017, 22, 123-130.	1.2	4
190	Structural stability of a light rotating beam under combined loads. <i>Acta Mechanica</i> , 2017, 228, 3735-3740.	2.1	4
191	Hardware-in-the-loop experiment of turning. <i>Procedia CIRP</i> , 2018, 77, 675-678.	1.9	4
192	Numerical and experimental investigation of contact length during orthogonal cutting. <i>Materials Today: Proceedings</i> , 2019, 12, 329-334.	1.8	4
193	Slipping“rolling transitions of a body with two contact points. <i>Nonlinear Dynamics</i> , 2022, 107, 1511-1528.	5.2	4
194	Delay-induced bifurcations in collocated position control of an elastic arm. <i>Nonlinear Dynamics</i> , 2022, 107, 1611-1622.	5.2	4
195	Stability of hanging blocks. <i>Mechanism and Machine Theory</i> , 1994, 29, 813-817.	4.5	3
196	Electric field controlled flow behaviour of electrorheological fluid. <i>Periodica Polytechnica: Chemical Engineering</i> , 2008, 52, 3.	1.1	3
197	The Effect of Harmonic Helix Angle Variation on Milling Stability. , 2011, , .		3
198	Bifurcation analysis of a two-DoF mechanical system subject to digital position control. Part I: theoretical investigation. <i>Nonlinear Dynamics</i> , 2014, 76, 1781-1796.	5.2	3

#	ARTICLE	IF	CITATIONS
199	Nonlinear kinematic oscillations of railway wheelsets of general surface geometry. Proceedings in Applied Mathematics and Mechanics, 2014, 14, 303-304.	0.2	3
200	State-Dependent, Non-Smooth Model of Chatter Vibrations in Turning. , 2015, , .		3
201	Robust Stability of Machining Operations in Case of Uncertain Frequency Response Functions. Procedia CIRP, 2016, 46, 151-154.	1.9	3
202	On the Nonlinear Kinematic Oscillations of Railway Wheelsets. Journal of Computational and Nonlinear Dynamics, 2016, 11, .	1.2	3
203	Stability of Damped Skateboards Under Human Control. Journal of Computational and Nonlinear Dynamics, 2017, 12, .	1.2	3
204	Robust controller design for turning operations based on measured frequency response functions. IFAC-PapersOnLine, 2017, 50, 7103-7108.	0.9	3
205	The Development of High Speed Virtual Milling Test. , 2017, , .		3
206	On the stability of two-wheeled vehicle balancing passive human subjects. IFAC-PapersOnLine, 2018, 51, 337-342.	0.9	3
207	Stability of turning process with tool subjected to compression. Procedia CIRP, 2018, 77, 179-182.	1.9	3
208	Stability analysis in milling by taking into account the influence of forced vibrations on the actual tool-workpiece engagement conditions. Procedia CIRP, 2018, 77, 453-456.	1.9	3
209	Energy Distribution of a Vehicle Shimmy System with the Delayed Tyre Model. IFAC-PapersOnLine, 2018, 51, 7-12.	0.9	3
210	On the nonsmooth dynamics of towed wheels. Meccanica, 2020, 55, 2523-2540.	2.0	3
211	The Chaotic Oscillations of High-Speed Milling. , 2005, , 147-158.		3
212	Micro-Chaos in Digital Control. Journal of Nonlinear Science, 1996, 6, 415.	2.1	3
213	Evaluation of contact force distribution along a curve, based on measured electric potentials. Acta Mechanica, 2021, 232, 853-879.	2.1	3
214	Time delay model of pressure relief valves. IFAC-PapersOnLine, 2021, 54, 47-51.	0.9	3
215	Routh reducibility and controllability of unstable mechanical systems. Acta Mechanica, 2022, 233, 905-920.	2.1	3
216	Digital controlling of piecewise linear systems. , 0, , .		2

#	ARTICLE	IF	CITATIONS
217	The influence of parametric excitation on floating bodies. Proceedings in Applied Mathematics and Mechanics, 2008, 8, 10929-10930.	0.2	2
218	On the robustness of stable turning processes. International Journal of Machining and Machinability of Materials, 2008, 4, 320.	0.1	2
219	Comparison of Time Delayed Tyre Models. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 114-119.	0.4	2
220	Analytical investigation of single and double Neimark-Sacker bifurcations. Periodica Polytechnica, Mechanical Engineering, 2012, 56, 13.	1.4	2
221	Skateboard: A Human Controlled Non-Holonomic System. , 2015, , .		2
222	Investigating Multiscale Phenomena in Machining: The Effect of Cutting-Force Distribution Along the Tool's Rake Face on Process Stability. , 2015, , .		2
223	Optimization of the Robust Stability Limit for Multi-Cutter Turning Processes. , 2015, , .		2
224	Sensitivity of stability charts with respect to modal parameter uncertainties for turning operations. IFAC-PapersOnLine, 2015, 48, 63-68.	0.9	2
225	Surface Error and Stability Chart of Beam-Type Workpiece in Milling Processes. , 2016, , .		2
226	Estimation of Safe Chatter-free Technological Parameter Regions for Machining Operations. Procedia CIRP, 2016, 46, 464-467.	1.9	2
227	Effect of wavy tool path on the stability properties of milling by the implicit subspace iteration method. International Journal of Advanced Manufacturing Technology, 2017, 91, 1781-1789.	3.0	2
228	Handling Actuator Saturation as Underactuation: Case Study With Acroboter Service Robot. Journal of Computational and Nonlinear Dynamics, 2017, 12, .	1.2	2
229	Experimental Determination of Dominant Multipliers in Milling Process by Means of Homogeneous Coordinate Transformation. , 2017, , .		2
230	On process damping induced by vibration-dependency of cutting direction in milling. Procedia CIRP, 2018, 77, 171-174.	1.9	2
231	Essential chaotic dynamics of chatter in turning processes. Chaos, 2020, 30, 053108.	2.5	2
232	Why is it hard to identify the onset of chatter? A stochastic resonance perspective. CIRP Annals - Manufacturing Technology, 2021, 70, 329-332.	3.6	2
233	Motion control of a two-wheeled inverted pendulum with uncertain rolling resistance and angle constraint based on slow-fast dynamics. Nonlinear Dynamics, 2021, 104, 2185-2199.	5.2	2
234	Redundancy Resolution of the Underactuated Manipulator. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2013, , 233-240.	0.6	2

#	ARTICLE	IF	CITATIONS
235	Nonlinear Dynamics of Computer Controlled Machines. , 1997, , 81-88.		2
236	Life expectancy calculation of transient chaos in the 2D micro-chaos map. Periodica Polytechnica, Mechanical Engineering, 2007, 51, 59.	1.4	2
237	Case studies for computed torque control of constrained underactuated systems. Periodica Polytechnica, Mechanical Engineering, 2012, 56, 73.	1.4	2
238	Effect of axial force on the stability of milling: Local bifurcations around stable islands. JVC/Journal of Vibration and Control, 2023, 29, 440-452.	2.6	2
239	Life Expectancy Calculations of Transient Chaotic Behaviour Using Approximate 1D Maps. Meccanica, 2000, 35, 547-562.	2.0	1
240	Act-and-Wait Control Concept for a Force Control Process with Delayed Feedback. , 2009, , 133-142.		1
241	Experimental and Theoretical Study of Distributed Delay in Machining. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 109-113.	0.4	1
242	Time-optimal computed-torque control in contact transitions. Periodica Polytechnica, Mechanical Engineering, 2012, 56, 43.	1.4	1
243	Efficient Stability Chart Computation for General Delayed Linear Time Periodic Systems. , 2013, , .		1
244	Position Control of Rolling Skateboard. IFAC-PapersOnLine, 2015, 48, 286-291.	0.9	1
245	Algorithm for Robust Stability of Delayed Multi-Degree-of-Freedom Systems. Advances in Delays and Dynamics, 2017, , 141-154.	0.4	1
246	Stability Analysis of the Wave Equation with Delayed Boundary Conditions. Procedia IUTAM, 2017, 22, 139-145.	1.2	1
247	Experimental Fitting of Rotor Models by Using a Special Three-Node Beam Element. Journal of Computational and Nonlinear Dynamics, 2018, 13, .	1.2	1
248	Experimental Bifurcation Diagram of Furuta Pendulum. , 2018, , .		1
249	Combined effects of sampling and dry friction on position control. Nonlinear Dynamics, 2019, 98, 3001-3007.	5.2	1
250	Experimental analysis and numerical modelling of contact damping. Journal of Sound and Vibration, 2020, 484, 115544.	3.9	1
251	Digital Force Control in Rehabilitation Robotics. , 2002, , 181-188.		1
252	Sliding Dynamics on Codimension-2 Discontinuity Surfaces. Trends in Mathematics, 2017, , 7-12.	0.1	1

#	ARTICLE	IF	CITATIONS
253	Hopf bifurcation analysis of scalar implicit neutral delay differential equation. <i>Electronic Journal of Qualitative Theory of Differential Equations</i> , 2018, , 1-9.	0.5	1
254	Stability of the Furuta pendulum with delayed digital controller. <i>IFAC-PapersOnLine</i> , 2021, 54, 204-208.	0.9	1
255	Global Attractors of High-Speed Milling: Analyses, Numerics and Experiments. , 2003, , 2231.		0
256	Comparison of zeroth- and first-order semi-discretizations for the delayed Mathieu equation. , 2004, ,		0
257	Control of separation point in periodic flows including delay effects. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2004, 37, 451-455.	0.4	0
258	HOPF CALCULATIONS IN DELAYED CAR-FOLLOWING MODELS. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2006, 39, 193-198.	0.4	0
259	Stabilizing unstable systems by the act-and-wait concept “ Case studies. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2009, 42, 213-217.	0.4	0
260	Balancing using accelerometers and equations with advanced arguments. <i>IFAC Postprint Volumes IPPV / International Federation of Automatic Control</i> , 2010, 43, 103-108.	0.4	0
261	Nonlinear Bifurcation Analysis of a Robotic Arm Subject to Digital Position Control. , 2011, ,		0
262	Fold Bifurcation in the State-Dependent Delay Model of Milling: Analytical and Numerical Solutions. , 2011, ,		0
263	Subcritical Bifurcations in Shimmy Dynamics. , 2012, ,		0
264	Stability of an elastic supported flat plate subjected to potential flow. <i>Periodica Polytechnica, Mechanical Engineering</i> , 2012, 56, 99.	1.4	0
265	Dynamics of Drill Bits With Cutting Edges of Varying Parameters. , 2013, ,		0
266	Regenerative Effect of Tire Carcass in Simple Shimmy Models. , 2013, ,		0
267	Detailed Contact Surface Evaluation Based on Electric Field Potentials. <i>Procedia CIRP</i> , 2017, 62, 323-328.	1.9	0
268	Hardware-in-the-loop Experiments in Presence of Delay. <i>Procedia IUTAM</i> , 2017, 22, 24-30.	1.2	0
269	Nonlinear dynamics of a basketball rolling around the rim. <i>Nonlinear Dynamics</i> , 2021, 104, 3013.	5.2	0
270	The ACROBOTER Platform “ Part 1: Conceptual Design and Dynamics Modeling Aspects. <i>IUTAM Symposium on Cellular, Molecular and Tissue Mechanics</i> , 2011, , 3-10.	0.2	0

#	ARTICLE	IF	CITATIONS
271	The ACROBOTER Platform - Part 2: Servo-Constraints in Computed Torque Control. IUTAM Symposium on Cellular, Molecular and Tissue Mechanics, 2011, , 11-18.	0.2	0
272	Bifurcation Analysis of a Two-DoF System Subject to Digital Position Control. , 2012, , .		0
273	Self-Excited Lateral Vibrations of Rolling Tires. , 2015, , .		0
274	Optimization of Edge Geometry of Cylindrical Milling Tools to Enhance Dynamic Stability. , 2019, , .		0
275	Collocated Position Control of Oscillatory System in Presence of Delay. , 2020, , .		0
276	Experiments on the Stability of Digital Force Control of Robots. , 2009, , 191-199.		0
277	The State-space Model of Micro-chaos. International Journal of Mathematical Models and Methods in Applied Sciences, 2021, 15, 184-189.	0.1	0
278	Mechanical characterization of high-speed rubber ball impacts applied for impulse excitation. Materials Today: Proceedings, 2022, , .	1.8	0
279	Role of Delayed Feedback in Human Balancing. , 2022, , 3063-3068.		0