TomÃ¡Å¡ VyhlÃ-dal

List of Publications by Year
in descending order

81	1,443	394421	345221
papers	citations	19 h-index	36 g-index

83	83	83	487
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Controlling the variable length pendulum: Analysis and Lyapunov based design methods. Journal of the Franklin Institute, 2022, 359, 1382-1406.	3.4	3
2	Observer based antiâ€windup compensator with functional state feedback for time delay controllersâ€”design and case study application. IET Control Theory and Applications, 2022, 16, 861-871.	2.1	2
3	Analysis and optimized design of an actively controlled two-dimensional delayed resonator. Mechanical Systems and Signal Processing, 2022, 178, 109195.	8.0	15
4	CFD Model of Turboprop Engine Nacelle Airflow for Ground Idle Condition. International Journal of Aerospace Engineering, 2022, 2022, 1-9.	0.9	0
5	Algorithms for cable-suspended payload sway damping by vertical motion of the pivot base. Mechanical Systems and Signal Processing, 2021, 149, 107131.	8.0	10
6	Two-dimensional delayed resonator for entire vibration absorption. Journal of Sound and Vibration, 2021, 500, 116010.	3.9	21
7	Lyapunov Based Adaptive Control for Varying Length Pendulum with Unknown Viscous Friction. , 2021, , .		0
8	Hydroelectric Power-Plant Simulator Implemented in Python. , 2021, , .		1
9	Swing compensation of a payload suspended to a planar copter. , 2021, , .		0
10	Stabilization with Zero Location Constraints for Delay-Based Non-collocated Vibration Suppression. IFAC-PapersOnLine, 2021, 54, 121-126.	0.9	4
11	Internal Model Controller to Attenuate Periodic Disturbance of a First-Order Time-Delay System. , 2021, , .		1
12	Virtual nonholonomic constraints to damp the varying length pendulum swing. , 2021, , .		0
13	Internal Model Control with Distributed-Delay-Compensator to Attenuate Multi-Harmonic Periodic Disturbance of Time-Delay System. , 2021, , .		2
14	Frequency weighted <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e150" altimg="si114.svg"><mml:msub><mml:mrow><mml:mi>H</mml:mi></mml:mrow><mml:mrow><mml:mn>2</mml:mn></mml:mrow></ optimization of multi-mode input shaper. Automatica, 2020, 121, 109202.	5.0	5
15	Underactuated pendulum damping by its length adjustment and passive output selection. , 2020, , .		2
16	Humidity change rate control in intermittently heated historic buildings. E3S Web of Conferences, 2020, 172, 15004.	0.5	1
17	Mechatronic robot arm with active vibration absorbers. JVC/Journal of Vibration and Control, 2020, 26, 1145-1156.	2.6	10
18	Spectral dominance of complex roots for single-delay linear equations. IFAC-PapersOnLine, 2020, 53, 4357-4362.	0.9	12

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19	Recent Results in Reference Prefiltering for Precision Motion Control. IFAC-PapersOnLine, 2020, 53, 8656-8667.	0.9	2
20	Analysis and design aspects of delayed resonator absorber with position, velocity or acceleration feedback. Journal of Sound and Vibration, 2019, 459, 114831.	3.9	35
21	A model-based method to control temperature and humidity in intermittently heated massive historic buildings. Building and Environment, 2019, 159, 106026.	6.9	10
22	Damping a pendulum's swing by string length adjustment - design and comparison of various control methods. , 2019, , .		7
23	Double Deployment of Delayed Resonator in Active Vibration Suppression. IFAC-PapersOnLine, 2019, 52, 115-120.	0.9	0
24	Damping oscillation of suspended payload by up and down motion of the pivot base - time delay algorithms for UAV applications. IFAC-PapersOnLine, 2019, 52, 121-126.	0.9	6
25	Optimized design of robust resonator with distributed time-delay. Journal of Sound and Vibration, 2019, 443, 576-590.	3.9	26
26	Dynamic similarity approach to control system design: delayed PID control loop. International Journal of Control, 2019, 92, 329-338.	1.9	18
27	A Comparison of Shaper-Based and Shaper-Free Architectures for Feedforward Compensation of Flexible Modes. Advances in Delays and Dynamics, 2019, , 233-247.	0.4	1
28	Control design and experimental validation for flexible multi-body systems pre-compensated by inverse shapers. Systems and Control Letters, 2018, 113, 93-100.	2.3	4
29	Further remarks on the effect of multiple spectral values on the dynamics of time-delay systems. Application to the control of a mechanical system. Linear Algebra and Its Applications, 2018, 542, 589-604.	0.9	44
30	Control Design With Inverse Feedback Shaper for Quadcopter With Suspended Load. , 2018, , .		2
31	Spectral design of robust delayed resonator by double-root assignment. IFAC-PapersOnLine, 2018, 51, 72-77.	0.9	8
32	Inverse Feedback Shapers for Coupled Multibody Systems. IEEE Transactions on Automatic Control, 2017, 62, 4804-4810.	5.7	10
33	Dominant root locus in state estimator design for material flow processes: A case study of hot strip rolling. ISA Transactions, 2017, 68, 381-401.	5.7	3
34	Extended delayed resonators â€“ Design and experimental verification. Mechatronics, 2017, 41, 29-44.	3.3	29
35	On the Coalescence of Spectral Values and its Effect on the Stability of Time-delay Systems: Application to Active Vibration Control. Procedia IUTAM, 2017, 22, 75-82.	1.2	19
36	Dominant four-pole placement in filtered PID control loop with delay. IFAC-PapersOnLine, 2017, 50, 6501-6506.	0.9	13

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37	Time-Delay Algorithms for Damping Oscillations of Suspended Payload by Adjusting the Cable Length. IEEE/ASME Transactions on Mechatronics, 2017, 22, 2319-2329.	5.8	33
38	Distributed delay input shaper design by optimizing smooth kernel functions. Journal of the Franklin Institute, 2017, 354, 5463-5485.	3.4	12
39	Reduced modelling and fixedâ€order control of delay systems applied to a heat exchanger. IET Control Theory and Applications, 2017, 11, 3341-3352.	2.1	12
40	Mixed-sensitivity design of a dynamic controller for systems pre-compensated by input shapers. IFAC-PapersOnLine, 2017, 50, 1304-1309.	0.9	2
41	Input Shaper Optimization with a Constraint on the Spectrum Distribution * *Supported by the Czech Science Foundation under project No. 16-17398S. This work has been also supported by the Programme of Interuniversity Attraction Poles of the Belgian Federal Science Policy Office (IAP P6-DYSCO), by OPTEC, the Optimization in Engineering Center of the KU Leuven, and by the project UCoCoS, funded by the European Unions Horizon 2020 research and innovation programme under the Marie	0.9	2
42	Flexible Mode Compensation by Inverse Shaper in the Loop with Magnitude Saturated Actuators * *The presented research has been supported by the Czech Science Foundation under the project No. 16-17398S. The work of the first author, which was performed during his study stay at CTU in Prague, was supported under scholarship programme 2214-A of The Scientific and Technological Research Council of Turkey. IFAC-PapersOnLine, 2017, 50, 1251-1256.	0.9	2
43	Input shaping solutions for drones with suspended load: First results. , 2017, , .		9
44	IAE based tuning of controller anti-windup schemes for first order plus dead-time system. , 2017, , .		6
45	Closedâ€form smoothers and shapers with distributed delay for damped oscillatory modes. IET Control Theory and Applications, 2016, 10, 2534-2542.	2.1	8
46	IAE Optimization of PID Control Loop with Delay in Pole Assignment Space. IFAC-PapersOnLine, 2016, 49, 177-181.	0.9	12
47	Multi-criteria optimisation design of shapers with piece-wise equally distributed time-delay. IFAC-PapersOnLine, 2016, 49, 112-117.	0.9	3
48	Delayed Resonator With Distributed Delay in Acceleration Feedbackâ€”Design and Experimental Verification. IEEE/ASME Transactions on Mechatronics, 2016, 21, 2120-2131.	5.8	33
49	On Feedback Architectures With Zero-Vibration Signal Shapers. IEEE Transactions on Automatic Control, 2016, 61, 2049-2064.	5.7	29
50	Design, Analysis and Implementation of Smoothed Input Shapers with Distributed s. Advances in Delays and Dynamics, 2016, , 229-248.	0.4	2
51	Stability Analysis and Control Design of a Vibration Control System with Uncertain and Tunable Delaysâˆ—â€”The presented research has been supported by the Ministry of Education of the Czech Republic under the program KONTAKT II LH12066.. IFAC-PapersOnLine, 2015, 48, 123-128.	0.9	0
52	Spectral design of output feedback controllers for systems pre-compensated by input shapersâˆ—â€”The presented research has been supported by the Czech Science Foundation under the project No. 13â€“06962S, by the Programme of Interuniversity Attraction Poles of the Belgian Federal Science Policy Office(IAP P6â€“DYSCO), by OPTEC, the Optimization in Engineering Center of the KU Leuven, and the project G.0712.11N and G.0717.11N of the Research Foundation â€“Flanders (FWO).. IFAC-PapersOnLine, 2015, 48, 117-122.	0.9	4
53	Magnitude Optimum Design of PID Control Loop with Delay. IFAC-PapersOnLine, 2015, 48, 446-451.	0.9	7
54	On zero-vibration signal shapers and a wave-absorbing controller for a chain of multi-agent dynamical systems. , 2015, , .		1

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55	Parameterization of input shapers with delays of various distribution. Automatica, 2015, 59, 256-263.	5.0	46
56	Diffusion-model-based risk assessment of moisture originated wood deterioration in historic buildings. Building and Environment, 2015, 94, 218-230.	6.9	9
57	Zero vibration derivative shaper with distributed delay for both feed-forward and feedback interconnections. , 2014, , .		0
58	QPmR - Quasi-Polynomial Root-Finder: Algorithm Update and Examples. Advances in Delays and Dynamics, 2014, , 299-312.	0.4	55
59	Double oscillatory mode compensation by inverse signal shaper with distributed delays. , 2014, , .		4
60	Delayed resonator with acceleration feedback â€“ Complete stability analysis by spectral methods and vibration absorber design. Journal of Sound and Vibration, 2014, 333, 6781-6795.	3.9	61
61	Dominant Trio of Poles Assignment in Delayed PID Control Loop. Advances in Delays and Dynamics, 2014, , 57-70.	0.4	9
62	Signal shaper with a distributed delay: Spectral analysis and design. Automatica, 2013, 49, 3484-3489.	5.0	47
63	Dominant three pole placement in PID control loop with delay. , 2013, , .		6
64	Dimensional analysis approach to dominant three-pole placement in delayed PID control loops. Journal of Process Control, 2013, 23, 1063-1074.	3.3	69
65	Experimental comparison of signal shapers with lumped and distributed delays. , 2013, , .		0
66	Mathematical models of equilibrium moisture content and their parameter assessment. , 2013, , .		0
67	Zero vibration shapers with distributed delays of various types. , 2013, , .		14
68	Spectral features of ZVD shapers with lumped and distributed delays. , 2013, , .		11
69	Inverse signal shapers in effective feedback architecture. , 2013, , .		15
70	ULTIMATE-FREQUENCY BASED THREE-POLE DOMINANT PLACEMENT IN DELAYED PID CONTROL LOOP. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 150-155.	0.4	9
71	Input shapers with uniformly distributed delays. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2012, 45, 91-96.	0.4	14
72	Positive trigonometric polynomials for strong stability of difference equations. Automatica, 2012, 48, 2207-2212.	5.0	12

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73	Control design for time-delay systems based on quasi-direct pole placement. Journal of Process Control, 2010, 20, 337-343.	3.3	71
74	Stability impact of small delays in proportionalâ€“derivative state feedback. Control Engineering Practice, 2009, 17, 382-393.	5.5	32
75	Model-based moisture sorption stabilization in historical buildings. Building and Environment, 2009, 44, 1181-1187.	6.9	17
76	Modification of Mikhaylov Criterion for Neutral Time-Delay Systems. IEEE Transactions on Automatic Control, 2009, 54, 2430-2435.	5.7	18
77	Mapping Based Algorithm for Large-Scale Computation of Quasi-Polynomial Zeros. IEEE Transactions on Automatic Control, 2009, 54, 171-177.	5.7	234
78	Strong Stability of Neutral Equations with an Arbitrary Delay Dependency Structure. SIAM Journal on Control and Optimization, 2009, 48, 763-786.	2.1	38
79	Cascade control parameterization for time delay plants. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 123-128.	0.4	0
80	Static-Model-Based Residue Generation for Hereditary Process Fault Detection. , 2007, , 1169-1174.		0
81	An eigenvalue based approach for the stabilization of linear time-delay systems of neutral type. Automatica, 2005, 41, 991-998.	5.0	136