Jozsef K Tar

List of Publications by Year
in descending order

149	1,035	1040056	642732
papers	citations	9	23
		h-index	g-index

152	152	152	499
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Design and Experiments for a Class of Fuzzy Controlled Servo Systems. IEEE/ASME Transactions on Mechatronics, 2008, 13, 22-35.	5.8	100
2	On the design of an obstacle avoiding trajectory: Method and simulation. Mathematics and Computers in Simulation, 2009, 79, 2211-2226.	4.4	76
3	Generic two-degree-of-freedom linear and fuzzy controllers for integral processes. Journal of the Franklin Institute, 2009, 346, 980-1003.	3.4	69
4	New results in modelling derived from Bayesian filtering. Knowledge-Based Systems, 2010, 23, 182-194.	7.1	65
5	Experiment-Based Teaching in Advanced Control Engineering. IEEE Transactions on Education, 2011, 54, 345-355.	2.4	59
6	Replacement of Lyapunov's direct method in Model Reference Adaptive Control with Robust Fixed Point Transformations. , 2010, , .		49
7	Approximating fractional derivatives through the generalized mean. Communications in Nonlinear Science and Numerical Simulation, 2009, 14, 3723-3730.	3.3	28
8	Novel Generation of Fixed Point Transformation for the Adaptive Control of a Nonlinear Neuron Model. , 2015, , .		27
9	Possible adaptive control by tangent hyperbolic fixed point transformations used for controlling the -6-type van der pol oscillator. , 2008, , .		26
10	Optimal approximation of fractional derivatives through discrete-time fractions using genetic algorithms. Communications in Nonlinear Science and Numerical Simulation, 2010, 15, 482-490.	3.3	26
11	A Novel, Abstract Rotation-Based Fixed Point Transformation in Adaptive Control. , 2018, , .		25
12	Improvement of the stability of RFPT-based adaptive controllers by observing “precursor oscillations”. , 2013, , .		22
13	Fixed Point Transformations-Based Approach in Adaptive Control of Smooth Systems. Lecture Notes in Control and Information Sciences, 2007, , 157-166.	1.0	22
14	Chaos formation and reduction in robust fixed point transformations based adaptive control. , 2012, , .		17
15	VS-type stabilization of MRAC controllers using robust fixed point transformations. , 2012, , .		15
16	On the effects of time-delay on precision degradation in fixed point transformation-based adaptive control. , 2017, , .		15
17	Application of Robust Fixed Point Control in Case of T1DM. , 2015, , .		14
18	Matrix inversion-free quasi-differential approach in solving the inverse kinematic task. , 2016, , .		14

#	Article	IF	Citations
19	Adaptive control of underactuated mechanical systems using improved "Sigmoid Generated Fixed Point Transformation" and scheduling strategy. , 2016, , .		14
20	Fuzzy expert system for automatic wavelet shrinkage procedure selection for noise suppression. , 2014, , .		13
21	Cognitive Control initiative. , 2012, , .		12
22	Fuzzy parameter tuning in the stabilization of an RFPT-based adaptive control for an underactuated system. , 2011, , .		9
23	Replacement of Lyapunov Function by Locally Convergent Robust Fixed Point Transformations in Model-Based Control a Brief Summary. Journal of Advanced Computational Intelligence and Intelligent Informatics, 2010, 14, 224-236.	0.9	9
24	Comparative analysis of a traditional and a novel approach to Model Reference Adaptive Control. , 2010, , .		8
25	Combination of RFPT-based adaptive control and classical model identification. , 2014, , .		8
26	Design of a Planar High Precision Motion Stage. Lecture Notes in Control and Information Sciences, 2009, , 371-379.	1.0	8
27	Robust Fixed Point Transformations in Chaos synchronization. , 2010, , .		7
28	Selection of kinematic requirements for RFPT-based adaptive anaesthesia control. , 2016, , .		7
29	Adaptive controller using fixed point transformation for regulating propofol administration through wavelet-based anesthetic value. , 2016, , .		7
30	Revisiting Lyapunov's Technique in the Fixed Point Transformation-Based Adaptive Control. , 2018, , .		7
31	Improved Stabilization for Robust Fixed Point Transformations-Based Controllers. Journal of Advanced Computational Intelligence and Intelligent Informatics, 2013, 17, 418-424.	0.9	7
32	Implementation and signal processing aspects of Iterative Regression Tuning. , 2010, , .		6
33	Adaptive controllability of the brusselator model with input coupling. , 2012, , .		6
34	Chaos patterns in a 3 Degree of Freedom control with Robust Fixed Point Transformation. , 2012, , .		6
35	Surgical robotics — Born in space. , 2015, , .		6
36	Fractional Order PID-type Feedback in Fixed Point Transformation-based Adaptive Control of the FitzHugh-Nagumo Neuron Model with Time-delay âŽ âŽThis project has received funding from the European Research Council (ERC) under the European Unions Horizon 2020 research and innovation programme (grant agreement No 679681). TamÃ¡s Faitli has been supported by the â€œNew National Excellence Program of the Ministry of Human Capacitiesâ€, application number UNKP-17-1-I, for the period 01 September 2017 â€" 30 June 2018.. IFAC-PapersOnLine, 2018, 51, 906-911.	0.9	6

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37	Parametric sensitivity reduction of PI-based control systems by means of evolutionary optimization algorithms. , 2011, , .		5
38	Improved neural network control of inverted pendulums. International Journal of Advanced Intelligence Paradigms, 2013, 5, 270.	0.3	5
39	Fixed point transformation-based adaptive optimal control using nonlinear programming. , 2017, , .		5
40	Extrapolated state estimation in fixed point transformation-based adaptive control using fractional order feedback. , 2018, , .		5
41	Experimental and Simulation-Based Performance Analysis of a Computed Torque Control (CTC) Method Running on a Double Rotor Aeromechanical Testbed. Electronics (Switzerland), 2021, 10, 1745.	3.1	5
42	A Simple Soft Computing Structure for Modeling and Control. Machines, 2021, 9, 168.	2.2	5
43	Noise Sensitivity Reduction of the Fixed Point Iteration-based Adaptive Control. , 2021, , .		5
44	Towards surgical subtask automation â€" Blunt dissection. , 2017, , .		5
45	Compensation of Dynamic Friction by a Fractional Order Robust Controller. , 2006, , .		4
46	Iterative Learning-based fuzzy Control system. , 2008, , .		4
47	Takagi-Sugeno fuzzy controller for a magnetic levitation system laboratory equipment. , 2010, , .		4
48	Simple noise reduction in the adaptive synchronization of coupled neurons by Robust Fixed Point Transformation. , 2011, , .		4
49	On the effects of strong asymmetries on the adaptive controllers based on Robust Fixed Point Transformations. , 2012, , .		4
50	On the simulation of RFPT-based adaptive control of systems of 4th order response. , 2013, , .		4
51	Applicability of the Maxwell-Kelvin model in soft tissue parameter estimation. , 2014, , .		4
52	Replacement of parameter tuning with simple calculation in adaptive control using “Sigmoid generated fixed point transformation”. , 2015, , .		4
53	On Function Extrapolation by Fixed Point Iteration for Time-Delayed Systems. , 2019, , .		4
54	Adaptive Emission Control of Freeway Traffic Using Quasi-Stationary Solutions of an Approximate Hydrodynamic Model. Journal of Applied Nonlinear Dynamics, 2012, 1, 29-50.	0.3	4

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55	Fractional Control of Two Cooperating Manipulators. , 2008, , .		3
56	Stable Iterative Feedback Tuning-based design of Takagi-Sugeno PI-fuzzy controllers. , 2008, , .		3
57	Adaptive Control Using Fixed Point Transformations for Nonlinear Integer and Fractional Order Dynamic Systems. Studies in Computational Intelligence, 2009, , 253-267.	0.9	3
58	Possible improvement of the operation of vehicles driven by omnidirectional wheels. , 2009, , .		3
59	Decentralized Adaptive Control with Fractional Order Elimination of Obsolete Information. , 2011, , .		3
60	Iterative adaptive control of a strongly underactuated mechanical system with limited possibilities for state observation. , 2012, , .		3
61	Application of Luenberger's observer in RFPT-based adaptive control — A case study. , 2013, , .		3
62	Robust Fixed Point Transformations in the Model Reference Adaptive Control of a Three DoF Aeroelastic Wing. Applied Mechanics and Materials, 2013, 300-301, 1505-1512.	0.2	3
63	Increased cycle time achieved by fractional derivatives in the adaptive control of the Brusselator model. , 2013, , .		3
64	Robust Fixed Point Transformation based design for Model Reference Adaptive Control of a modified TORA system. , 2014, , .		3
65	Adaptive control solution for T1DM control. , 2015, , .		3
66	Preliminary investigations on the applicability of the fixed point transformations-based adaptive control for time-delayed systems. , 2016, , .		3
67	Sigmoid generated fixed point transformation control scheme for stabilization of Kapitza's pendulum system. , 2016, , .		3
68	Adaptive solution of the inverse kinematic task by fixed point transformation. , 2017, , .		3
69	Robust Fixed Point Transformation based Proportional-Derivative Control of Angiogenic Tumor Growth. IFAC-PapersOnLine, 2018, 51, 894-899.	0.9	3
70	Preliminary Investigation on the Possible Adaptive Control of an Inverted Pendulum-type Electric Cart. , 2018, , .		3
71	Receding Horizon Control of Type 1 Diabetes Mellitus by Using Nonlinear Programming. Complexity, 2018, 2018, 1-11.	1.6	3
72	An opportunity of using Robust Fixed Point Transformation-based controller design in case of Type 1 Diabetes Mellitus. , 2019, , .		3

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73	Application of the Robust Fixed Point Iteration Method in Control of the Level of Twin Tanks Liquid. Computation, 2020, 8, 96.	2.0	3
74	Approximate Model-based State Estimation in Simplified Receding Horizon Control. International Journal of Circuits, Systems and Signal Processing, 2021, 15, 114-124.	0.3	3
75	Abstract Rotations for Uniform Adaptive Control and Soft Modeling of Mechanical Devices. Applied Sciences (Switzerland), 2021, 11, 7939.	2.5	3
76	Speeding up the Reduced Gradient Method for Constrained Optimization. , 2021, , .		3
77	Adaptive Tackling of the Swinging Problem for a 2 DOF Crane â€" Payload System. Studies in Computational Intelligence, 2010, , 103-114.	0.9	3
78	Towards Replacing Lyapunovâ€™s â€œDirectâ€•Method in Adaptive Control of Nonlinear Systems. , 2014, , 35-45.		3
79	Preliminary Design of a Receding Horizon Controller Supported by Adaptive Feedback. Electronics (Switzerland), 2022, 11, 1243.	3.1	3
80	Adaptive Control of a Nonlinear System Avoiding State Estimation. , 2022, , .		3
81	Application of local deformations in adaptive control â€" A comparative survey. , 2009, , .		2
82	Simple practical methodology of designing novel MRAC controllers for nonlinear plants. , 2012, , .		2
83	Agile online-trained neural network models by using Robust Fixed Point Transformations. , 2013, , .		2
84	Iterative Adaptive Control of a Three Degrees-of-Freedom Aeroelastic Wing Model. Applied Mechanics and Materials, 2013, 300-301, 1593-1599.	0.2	2
85	Nonlinear order-reduced adaptive controller for a DC motor driven electric cart. , 2014, , .		2
86	Tackling complexity and missing information in adaptive control by fixed point transformation-based approach. , 2016, , .		2
87	Performance Enhancement of Fuzzy Logic Controller Using Robust Fixed Point Transformation. Advances in Intelligent Systems and Computing, 2017, , 411-418.	0.6	2
88	Fixed Point Iteration-based Problem Solution without the Calculation of the Jacobian. , 2019, , .		2
89	A Receding Horizon-type Solution of the Inverse Kinematic Task of Redundant Robots. , 2021, , .		2
90	Improved Denoising with Robust Fitting in the Wavelet Transform Domain. IFIP Advances in Information and Communication Technology, 2015, , 179-187.	0.7	2

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91	Three Evolutionary Optimization Algorithms in PI Controller Tuning. Topics in Intelligent Engineering and Informatics, 2012, , 95-106.	0.4	2
92	Comparison of Fractional Robust- and Fixed Point Transformations- Based Adaptive Compensation of Dynamic Friction. Journal of Advanced Computational Intelligence and Intelligent Informatics, 2007, 11, 1062-1071.	0.9	2
93	Chaos Synchronization by Model Reference Adaptive Control using Fixed Point Transformations. , 2011, , .		2
94	Optimal Control Systems with Reduced Parametric Sensitivity Based on Particle Swarm Optimization and Simulated Annealing. Studies in Computational Intelligence, 2011, , 177-207.	0.9	2
95	Novel Model Reference Adaptive Control Designed by a Lyapunov Function That is Kept at Low Value by Fixed Point Iteration. Topics in Intelligent Engineering and Informatics, 2020, , 129-137.	0.4	2
96	Fractional Order Calculus-Inspired Kinematic Design inÂAdaptive Control. Mechanisms and Machine Science, 2022, , 218-225.	0.5	2
97	Experiments in fuzzy control of a Magnetic Levitation System laboratory equipment. , 2010, , .		1
98	Chaos synchronization in Duffing systems with Robust Fixed Point Transformations. , 2011, , .		1
99	Preliminary investigations on a higher order model-free approach in antilock braking. , 2011, , .		1
100	Robust Fixed Point Transformations-based model reference adaptive control of inverted pendulums. , 2011, , .		1
101	Observation-based data driven adaptive control of an electromechanical device. , 2014, , .		1
102	Joint Platforms and Community Efforts in Surgical Robotics Research. MACRo 2015, 2015, 1, 91-101.	0.1	1
103	Fixed point transformation-based adaptive control of the Furuta Pendulum. , 2016, , .		1
104	Corrigendum to â€œReceding Horizon Control of Type 1 Diabetes Mellitus by Using Nonlinear Programmingâ€. Complexity, 2018, 2018, 1-1.	1.6	1
105	Novel Contradiction Resolution in Fixed Point Transformation-based Adaptive Control. , 2018, , .		1
106	Fuzzified Fixed Point Transformation-Based Adaptive Controller for a Strongly Dynamic Non-Linear System. , 2019, , .		1
107	The Effects of Simultaneous Noise and Missing Information in Fixed Point Iteration-based Adaptive Control. , 2019, , .		1
108	Fixed Point Iteration-based Adaptive Control for a Delayed Differential Equation Model of Diabetes Mellitus. , 2019, , .		1

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109	Numerical Simulations for an Experimental Test Bed for Adaptive Control Methods. , 2019, , .		1
110	The Use of Multiple Components Fixed Point Iteration in the Adaptive Control of Single Variable Systems. , 2019, , .		1
111	Flexible Solution of the Inverse Kinematic Task for Cooperating Robots of Different Structures. , 2020, , .		1
112	Tackling Actuator Saturation in Fixed Point Iteration-based Adaptive Control. , 2020, , .		1
113	Accelerated Reduced Gradient Algorithm for Solving the Inverse Kinematic Task of Redundant Open Kinematic Chains. , 2021, , .		1
114	Suboptimal Adaptive Receding Horizon Control Using Simplified Nonlinear Programming. , 2021, , .		1
115	Fixed Point Transformations in the Adaptive Control of Fractional-order MIMO Systems. Lecture Notes in Control and Information Sciences, 2009, , 103-112.	1.0	1
116	Application of Robust Fixed Point Transformations for Technological Operation of Robots. Lecture Notes in Control and Information Sciences, 2009, , 93-101.	1.0	1
117	Symbiosis of RFPT-Based Adaptivity and the Modified Adaptive Inverse Dynamics Controller. Topics in Intelligent Engineering and Informatics, 2014, , 95-106.	0.4	1
118	Comparative Analysis of Quasi-Differential Approaches in Inverse Kinematics. Mechanisms and Machine Science, 2018, , 3-10.	0.5	1
119	Comparison of the Operation of Fixed Point Iteration-based Adaptive and Robust VS/SM-type Solutions for Controlling Two Coupled Fluid Tanks. , 2020, , .		1
120	Sub-optimal Solution of the Inverse Kinematic Task of Redundant Robots without Using Lagrange Multipliers. System Theory, Control and Computing Journal, 2021, 1, 40-48.	0.5	1
121	Stable design of fuzzy controllers for robotic telemanipulation applications. , 2009, , .		0
122	A higher order adaptive approach of the swinging problem — Implementation issues. , 2010, , .		0
123	A novel approach to Robust Fixed Point Transformations. , 2011, , .		0
124	RFPT-based decentralized adaptive control of partially, roughly modeled, coupled dynamic systems. , 2011, , .		0
125	Situation-dependent adaptive control polynomially eliminating the past information of fading relevance. , 2011, , .		0
126	Adaptive emission control of freeway traffic via compensation of modeling inconsistences. , 2012, , .		0

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127	Fine tuning with sigmoid functions in robust fixed point transformation. , 2013, , .		0
128	RFPT-based adaptive control of a small aeroplane model. , 2013, , .		0
129	Modeling and low order adaptive control of a DC motor driven electric cart. , 2014, , .		0
130	Novel design of a Model Reference Adaptive Controller for soft tissue operations. , 2014, , .		0
131	Control of Uncertain Systems: A Combined Approach. Advanced Materials Research, 2015, 1117, 241-244.	0.3	0
132	Anytime Fuzzy Supervisory System for Signal Auto-Healing. Advanced Materials Research, 2015, 1117, 269-272.	0.3	0
133	Novel error interpretation in case of linear parameter varying systems. , 2015, , .		0
134	Adaptive controller using fuzzy modeling and Sigmoid Generated Fixed Point Transformation. , 2016, , .		0
135	Application of fixed point transformation to classical model identification using new tuning rule. , 2017, , .		0
136	Point Cloud Processing with the Combination of Fuzzy Information Measure and Wavelets. Advances in Intelligent Systems and Computing, 2018, , 455-461.	0.6	0
137	Non-conventional Control Design by Sigmoid Generated Fixed Point Transformation Using Fuzzy Approximation. Studies in Systems, Decision and Control, 2018, , 1-15.	1.0	0
138	A Simple Fixed Point Iteration-Based Digital Noise Filter for Control Applications. , 2019, , .		0
139	Investigation of Noise-sensitivity of a Fixed Point Iteration-based Adaptive Controller for a Pendulum-like Electric Cart. , 2019, , .		0
140	Model Based Computed Torque Control for an Experimental Test Bed. , 2020, , .		0
141	Points of View on Building an Intelligent Robot. Studies in Computational Intelligence, 2009, , 263-277.	0.9	0
142	Efficient and Simple Noise Filtering forÂStabilization Tuning of a Novel Version ofÂaÂModel Reference Adaptive Controller. Lecture Notes in Control and Information Sciences, 2012, , 205-214.	1.0	0
143	Studying Various Cost Functions by Nonlinear Programming for the Control of an Underactuated Mechanical System. Mechanisms and Machine Science, 2019, , 389-397.	0.5	0
144	On the Alternatives of Lyapunovâ€™s Direct Method in Adaptive Control Design. Robotics & Automation Engineering Journal, 2018, 3, .	0.1	0

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145	On the Simulation of Cooling Curves Using Simple Functional Formats. Acta Polytechnica Hungarica, 2020, 17, 109-124.	2.9	0
146	From Cybernetics to Plectics: A Practical Approach to Systems Enquiry in Engineering. , 2009, , 345-351.		0
147	Improved Simple Noise Filtering for Fixed Point Iteration-based Adaptive Controllers. , 2020, , .		0
148	Accelerated Reduced Gradient Algorithm with Constraint Relaxation in Differential Inverse Kinematics. System Theory, Control and Computing Journal, 2021, 1, 21-32.	0.5	0
149	Preliminary Ideas on the Estimation of Parameter and Model Component Significance in Adaptive Control of Nonlinear Systems. , 2022, , .		0