

# Jozsef K Tar

## List of Publications by Year in descending order

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149  
papers

1,035  
citations

1039880

9  
h-index

642610

23  
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152  
all docs

152  
docs citations

152  
times ranked

499  
citing authors

#	ARTICLE	IF	CITATIONS
1	Preliminary Design of a Receding Horizon Controller Supported by Adaptive Feedback. Electronics (Switzerland), 2022, 11, 1243.	1.8	3
2	Fractional Order Calculus-Inspired Kinematic Design in Adaptive Control. Mechanisms and Machine Science, 2022, , 218-225.	0.3	2
3	Adaptive Control of a Nonlinear System Avoiding State Estimation. , 2022, , .		3
4	Preliminary Ideas on the Estimation of Parameter and Model Component Significance in Adaptive Control of Nonlinear Systems. , 2022, , .		0
5	Approximate Model-based State Estimation in Simplified Receding Horizon Control. International Journal of Circuits, Systems and Signal Processing, 2021, 15, 114-124.	0.2	3
6	A Receding Horizon-type Solution of the Inverse Kinematic Task of Redundant Robots. , 2021, , .		2
7	Accelerated Reduced Gradient Algorithm for Solving the Inverse Kinematic Task of Redundant Open Kinematic Chains. , 2021, , .		1
8	Suboptimal Adaptive Receding Horizon Control Using Simplified Nonlinear Programming. , 2021, , .		1
9	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.	1.8	5
10	A Simple Soft Computing Structure for Modeling and Control. Machines, 2021, 9, 168.	1.2	5
11	Abstract Rotations for Uniform Adaptive Control and Soft Modeling of Mechanical Devices. Applied Sciences (Switzerland), 2021, 11, 7939.	1.3	3
12	Speeding up the Reduced Gradient Method for Constrained Optimization. , 2021, , .		3
13	Noise Sensitivity Reduction of the Fixed Point Iteration-based Adaptive Control. , 2021, , .		5
14	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.	0.3	1
15	Accelerated Reduced Gradient Algorithm with Constraint Relaxation in Differential Inverse Kinematics. System Theory, Control and Computing Journal, 2021, 1, 21-32.	0.3	0
16	Application of the Robust Fixed Point Iteration Method in Control of the Level of Twin Tanks Liquid. Computation, 2020, 8, 96.	1.0	3
17	Flexible Solution of the Inverse Kinematic Task for Cooperating Robots of Different Structures. , 2020, , .		1
18	Model Based Computed Torque Control for an Experimental Test Bed. , 2020, , .		0

#	ARTICLE	IF	CITATIONS
19	Tackling Actuator Saturation in Fixed Point Iteration-based Adaptive Control. , 2020, , .		1
20	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
21	On the Simulation of Cooling Curves Using Simple Functional Formats. Acta Polytechnica Hungarica, 2020, 17, 109-124.	2.5	0
22	Improved Simple Noise Filtering for Fixed Point Iteration-based Adaptive Controllers. , 2020, , .		0
23	Comparison of the Operation of Fixed Point Iteration-based Adaptive and Robust VS/SM-type Solutions for Controlling Two Coupled Fluid Tanks. , 2020, , .		1
24	Fixed Point Iteration-based Problem Solution without the Calculation of the Jacobian. , 2019, , .		2
25	A Simple Fixed Point Iteration-Based Digital Noise Filter for Control Applications. , 2019, , .		0
26	Fuzzified Fixed Point Transformation-Based Adaptive Controller for a Strongly Dynamic Non-Linear System. , 2019, , .		1
27	Investigation of Noise-sensitivity of a Fixed Point Iteration-based Adaptive Controller for a Pendulum-like Electric Cart. , 2019, , .		0
28	The Effects of Simultaneous Noise and Missing Information in Fixed Point Iteration-based Adaptive Control. , 2019, , .		1
29	Fixed Point Iteration-based Adaptive Control for a Delayed Differential Equation Model of Diabetes Mellitus. , 2019, , .		1
30	Numerical Simulations for an Experimental Test Bed for Adaptive Control Methods. , 2019, , .		1
31	The Use of Multiple Components Fixed Point Iteration in the Adaptive Control of Single Variable Systems. , 2019, , .		1
32	An opportunity of using Robust Fixed Point Transformation-based controller design in case of Type 1 Diabetes Mellitus. , 2019, , .		3
33	On Function Extrapolation by Fixed Point Iteration for Time-Delayed Systems. , 2019, , .		4
34	Studying Various Cost Functions by Nonlinear Programming for the Control of an Underactuated Mechanical System. Mechanisms and Machine Science, 2019, , 389-397.	0.3	0
35	Extrapolated state estimation in fixed point transformation-based adaptive control using fractional order feedback. , 2018, , .		5
36	Point Cloud Processing with the Combination of Fuzzy Information Measure and Wavelets. Advances in Intelligent Systems and Computing, 2018, , 455-461.	0.5	0

#	ARTICLE	IF	CITATIONS
37	Robust Fixed Point Transformation based Proportional-Derivative Control of Angiogenic Tumor Growth. IFAC-PapersOnLine, 2018, 51, 894-899.	0.5	3
38	A Novel, Abstract Rotation-Based Fixed Point Transformation in Adaptive Control. , 2018, , .		25
39	Fractional Order PID-type Feedback in Fixed Point Transformation based Adaptive Control of the FitzHugh-Nagumo Neuron Model with Time-delay – This project has received funding from the European Research Council (ERC) under the European Unions Horizon 2020 research and innovation programme (grant agreement No 679681). Tamás Fajtli has been supported by the “New National Excellence Program of the Ministry of Human Capacities” application number UNKP-17-1-I. for the period 01. September 2017 – 30 June 2018.. IFAC-PapersOnLine, 2018, 51, 906-911.	0.5	6
40	Revisiting Lyapunov's Technique in the Fixed Point Transformation-Based Adaptive Control. , 2018, , .		7
41	Corrigendum to “Receding Horizon Control of Type 1 Diabetes Mellitus by Using Nonlinear Programming” Complexity, 2018, 2018, 1-1.	0.9	1
42	Preliminary Investigation on the Possible Adaptive Control of an Inverted Pendulum-type Electric Cart. , 2018, , .		3
43	Novel Contradiction Resolution in Fixed Point Transformation-based Adaptive Control. , 2018, , .		1
44	Receding Horizon Control of Type 1 Diabetes Mellitus by Using Nonlinear Programming. Complexity, 2018, 2018, 1-11.	0.9	3
45	Non-conventional Control Design by Sigmoid Generated Fixed Point Transformation Using Fuzzy Approximation. Studies in Systems, Decision and Control, 2018, , 1-15.	0.8	0
46	Comparative Analysis of Quasi-Differential Approaches in Inverse Kinematics. Mechanisms and Machine Science, 2018, , 3-10.	0.3	1
47	On the Alternatives of Lyapunov’s Direct Method in Adaptive Control Design. Robotics & Automation Engineering Journal, 2018, 3, .	0.1	0
48	Adaptive solution of the inverse kinematic task by fixed point transformation. , 2017, , .		3
49	Application of fixed point transformation to classical model identification using new tuning rule. , 2017, , .		0
50	Performance Enhancement of Fuzzy Logic Controller Using Robust Fixed Point Transformation. Advances in Intelligent Systems and Computing, 2017, , 411-418.	0.5	2
51	Fixed point transformation-based adaptive optimal control using nonlinear programming. , 2017, , .		5
52	On the effects of time-delay on precision degradation in fixed point transformation-based adaptive control. , 2017, , .		15
53	Towards surgical subtask automation “ Blunt dissection. , 2017, , .		5
54	Selection of kinematic requirements for RFPT-based adaptive anaesthesia control. , 2016, , .		7

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55	Fixed point transformation-based adaptive control of the Furuta Pendulum. , 2016, , .		1
56	Matrix inversion-free quasi-differential approach in solving the inverse kinematic task. , 2016, , .		14
57	Tackling complexity and missing information in adaptive control by fixed point transformation-based approach. , 2016, , .		2
58	Adaptive controller using fuzzy modeling and Sigmoid Generated Fixed Point Transformation. , 2016, , .		0
59	Adaptive controller using fixed point transformation for regulating propofol administration through wavelet-based anesthetic value. , 2016, , .		7
60	Preliminary investigations on the applicability of the fixed point transformations-based adaptive control for time-delayed systems. , 2016, , .		3
61	Sigmoid generated fixed point transformation control scheme for stabilization of Kapitza's pendulum system. , 2016, , .		3
62	Adaptive control of underactuated mechanical systems using improved "Sigmoid Generated Fixed Point Transformation" and scheduling strategy. , 2016, , .		14
63	Joint Platforms and Community Efforts in Surgical Robotics Research. MACRo 2015, 2015, 1, 91-101.	0.1	1
64	Replacement of parameter tuning with simple calculation in adaptive control using "Sigmoid generated fixed point transformation"; , 2015, , .		4
65	Application of Robust Fixed Point Control in Case of T1DM. , 2015, , .		14
66	Control of Uncertain Systems: A Combined Approach. Advanced Materials Research, 2015, 1117, 241-244.	0.3	0
67	Anytime Fuzzy Supervisory System for Signal Auto-Healing. Advanced Materials Research, 2015, 1117, 269-272.	0.3	0
68	Novel Generation of Fixed Point Transformation for the Adaptive Control of a Nonlinear Neuron Model. , 2015, , .		27
69	Novel error interpretation in case of linear parameter varying systems. , 2015, , .		0
70	Adaptive control solution for T1DM control. , 2015, , .		3
71	Surgical robotics "Born in space. , 2015, , .		6
72	Improved Denoising with Robust Fitting in the Wavelet Transform Domain. IFIP Advances in Information and Communication Technology, 2015, , 179-187.	0.5	2

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73	Applicability of the Maxwell-Kelvin model in soft tissue parameter estimation. , 2014, , .		4
74	Modeling and low order adaptive control of a DC motor driven electric cart. , 2014, , .		0
75	Observation-based data driven adaptive control of an electromechanical device. , 2014, , .		1
76	Robust Fixed Point Transformation based design for Model Reference Adaptive Control of a modified TORA system. , 2014, , .		3
77	Combination of RFPT-based adaptive control and classical model identification. , 2014, , .		8
78	Nonlinear order-reduced adaptive controller for a DC motor driven electric cart. , 2014, , .		2
79	Fuzzy expert system for automatic wavelet shrinkage procedure selection for noise suppression. , 2014, , .		13
80	Novel design of a Model Reference Adaptive Controller for soft tissue operations. , 2014, , .		0
81	Symbiosis of RFPT-Based Adaptivity and the Modified Adaptive Inverse Dynamics Controller. Topics in Intelligent Engineering and Informatics, 2014, , 95-106.	0.4	1
82	Towards Replacing Lyapunov's "Direct" Method in Adaptive Control of Nonlinear Systems. , 2014, , 35-45.		3
83	Fine tuning with sigmoid functions in robust fixed point transformation. , 2013, , .		0
84	Application of Luenberger's observer in RFPT-based adaptive control &#x2014; A case study. , 2013, , .		3
85	Agile online-trained neural network models by using Robust Fixed Point Transformations. , 2013, , .		2
86	On the simulation of RFPT-based adaptive control of systems of 4 <sup>th</sup> order response. , 2013, , .		4
87	RFPT-based adaptive control of a small aeroplane model. , 2013, , .		0
88	Improved neural network control of inverted pendulums. International Journal of Advanced Intelligence Paradigms, 2013, 5, 270.	0.2	5
89	Iterative Adaptive Control of a Three Degrees-of-Freedom Aeroelastic Wing Model. Applied Mechanics and Materials, 2013, 300-301, 1593-1599.	0.2	2
90	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

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91	Increased cycle time achieved by fractional derivatives in the adaptive control of the Brusselator model. , 2013, , .		3
92	Improvement of the stability of RFPT-based adaptive controllers by observing &#x201C;precursor oscillations&#x201D;. , 2013, , .		22
93	Improved Stabilization for Robust Fixed Point Transformations-Based Controllers. Journal of Advanced Computational Intelligence and Intelligent Informatics, 2013, 17, 418-424.	0.5	7
94	Chaos formation and reduction in robust fixed point transformations based adaptive control. , 2012, , .		17
95	Adaptive controllability of the brusselator model with input coupling. , 2012, , .		6
96	On the effects of strong asymmetries on the adaptive controllers based on Robust Fixed Point Transformations. , 2012, , .		4
97	Simple practical methodology of designing novel MRAC controllers for nonlinear plants. , 2012, , .		2
98	VS-type stabilization of MRAC controllers using robust fixed point transformations. , 2012, , .		15
99	Adaptive emission control of freeway traffic via compensation of modeling inconsistencies. , 2012, , .		0
100	Iterative adaptive control of a strongly underactuated mechanical system with limited possibilities for state observation. , 2012, , .		3
101	Cognitive Control initiative. , 2012, , .		12
102	Chaos patterns in a 3 Degree of Freedom control with Robust Fixed Point Transformation. , 2012, , .		6
103	Three Evolutionary Optimization Algorithms in PI Controller Tuning. Topics in Intelligent Engineering and Informatics, 2012, , 95-106.	0.4	2
104	Adaptive Emission Control of Freeway Traffic Using Quasi-Stationary Solutions of an Approximate Hydrodynamic Model. Journal of Applied Nonlinear Dynamics, 2012, 1, 29-50.	0.1	4
105	Efficient and Simple Noise Filtering for&Aacute;Stabilization Tuning of a Novel Version of&Aacute;Model Reference Adaptive Controller. Lecture Notes in Control and Information Sciences, 2012, , 205-214.	0.6	0
106	A novel approach to Robust Fixed Point Transformations. , 2011, , .		0
107	Chaos synchronization in Duffing systems with Robust Fixed Point Transformations. , 2011, , .		1
108	Preliminary investigations on a higher order model-free approach in antilock braking. , 2011, , .		1

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109	Robust Fixed Point Transformations-based model reference adaptive control of inverted pendulums. , 2011, , .		1
110	Simple noise reduction in the adaptive synchronization of coupled neurons by Robust Fixed Point Transformation. , 2011, , .		4
111	Fuzzy parameter tuning in the stabilization of an RFPT-based adaptive control for an underactuated system. , 2011, , .		9
112	Decentralized Adaptive Control with Fractional Order Elimination of Obsolete Information. , 2011, , .		3
113	Experiment-Based Teaching in Advanced Control Engineering. IEEE Transactions on Education, 2011, 54, 345-355.	2.0	59
114	RFPT-based decentralized adaptive control of partially, roughly modeled, coupled dynamic systems. , 2011, , .		0
115	Situation-dependent adaptive control polynomially eliminating the past information of fading relevance. , 2011, , .		0
116	Parametric sensitivity reduction of PI-based control systems by means of evolutionary optimization algorithms. , 2011, , .		5
117	Chaos Synchronization by Model Reference Adaptive Control using Fixed Point Transformations. , 2011, , .		2
118	Optimal Control Systems with Reduced Parametric Sensitivity Based on Particle Swarm Optimization and Simulated Annealing. Studies in Computational Intelligence, 2011, , 177-207.	0.7	2
119	New results in modelling derived from Bayesian filtering. Knowledge-Based Systems, 2010, 23, 182-194.	4.0	65
120	Optimal approximation of fractional derivatives through discrete-time fractions using genetic algorithms. Communications in Nonlinear Science and Numerical Simulation, 2010, 15, 482-490.	1.7	26
121	Implementation and signal processing aspects of Iterative Regression Tuning. , 2010, , .		6
122	Takagi-Sugeno fuzzy controller for a magnetic levitation system laboratory equipment. , 2010, , .		4
123	Replacement of Lyapunov's direct method in Model Reference Adaptive Control with Robust Fixed Point Transformations. , 2010, , .		49
124	Experiments in fuzzy control of a Magnetic Levitation System laboratory equipment. , 2010, , .		1
125	Robust Fixed Point Transformations in Chaos synchronization. , 2010, , .		7
126	A higher order adaptive approach of the swinging problem &#x2014; Implementation issues. , 2010, , .		0



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127	Comparative analysis of a traditional and a novel approach to Model Reference Adaptive Control. , 2010, , .		8
128	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.	0.5	9
129	Adaptive Tackling of the Swinging Problem for a 2 DOF Crane " Payload System. Studies in Computational Intelligence, 2010, , 103-114.	0.7	3
130	Stable design of fuzzy controllers for robotic telemanipulation applications. , 2009, , .		0
131	Generic two-degree-of-freedom linear and fuzzy controllers for integral processes. Journal of the Franklin Institute, 2009, 346, 980-1003.	1.9	69
132	On the design of an obstacle avoiding trajectory: Method and simulation. Mathematics and Computers in Simulation, 2009, 79, 2211-2226.	2.4	76
133	Approximating fractional derivatives through the generalized mean. Communications in Nonlinear Science and Numerical Simulation, 2009, 14, 3723-3730.	1.7	28
134	Adaptive Control Using Fixed Point Transformations for Nonlinear Integer and Fractional Order Dynamic Systems. Studies in Computational Intelligence, 2009, , 253-267.	0.7	3
135	Possible improvement of the operation of vehicles driven by omnidirectional wheels. , 2009, , .		3
136	Application of local deformations in adaptive control " A comparative survey. , 2009, , .		2
137	Design of a Planar High Precision Motion Stage. Lecture Notes in Control and Information Sciences, 2009, , 371-379.	0.6	8
138	Fixed Point Transformations in the Adaptive Control of Fractional-order MIMO Systems. Lecture Notes in Control and Information Sciences, 2009, , 103-112.	0.6	1
139	Application of Robust Fixed Point Transformations for Technological Operation of Robots. Lecture Notes in Control and Information Sciences, 2009, , 93-101.	0.6	1
140	Points of View on Building an Intelligent Robot. Studies in Computational Intelligence, 2009, , 263-277.	0.7	0
141	From Cybernetics to Plectics: A Practical Approach to Systems Enquiry in Engineering. , 2009, , 345-351.		0
142	Design and Experiments for a Class of Fuzzy Controlled Servo Systems. IEEE/ASME Transactions on Mechatronics, 2008, 13, 22-35.	3.7	100
143	Fractional Control of Two Cooperating Manipulators. , 2008, , .		3
144	Stable Iterative Feedback Tuning-based design of Takagi-Sugeno PI-fuzzy controllers. , 2008, , .		3

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145	Iterative Learning-based fuzzy Control system. , 2008, , .		4
146	Possible adaptive control by tangent hyperbolic fixed point transformations used for controlling the -6-type van der pol oscillator. , 2008, , .		26
147	Fixed Point Transformations-Based Approach in Adaptive Control of Smooth Systems. Lecture Notes in Control and Information Sciences, 2007, , 157-166.	0.6	22
148	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.	0.5	2
149	Compensation of Dynamic Friction by a Fractional Order Robust Controller. , 2006, , .		4