## Robert Babuska

List of Publications by Year in descending order

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312 papers 12,021 citations

50276 46 h-index 95 g-index

320 all docs

 $\begin{array}{c} 320 \\ \text{docs citations} \end{array}$ 

times ranked

320

8265 citing authors

#	Article	IF	CITATIONS
1	A Comprehensive Survey of Multiagent Reinforcement Learning. IEEE Transactions on Systems, Man and Cybernetics, Part C: Applications and Reviews, 2008, 38, 156-172.	2.9	1,328
2	Fuzzy Modeling for Control. International Series in Intelligent Technologies, 1998, , .	0.1	661
3	A Survey of Actor-Critic Reinforcement Learning: Standard and Natural Policy Gradients. IEEE Transactions on Systems, Man and Cybernetics, Part C: Applications and Reviews, 2012, 42, 1291-1307.	2.9	606
4	Similarity measures in fuzzy rule base simplification. IEEE Transactions on Systems, Man, and Cybernetics, 1998, 28, 376-386.	5.0	398
5	Perspectives of fuzzy systems and control. Fuzzy Sets and Systems, 2005, 156, 432-444.	2.7	358
6	Fuzzy model for the prediction of unconfined compressive strength of rock samples. International Journal of Rock Mechanics and Minings Sciences, 1999, 36, 339-349.	5.8	299
7	Multi-agent Reinforcement Learning: An Overview. Studies in Computational Intelligence, 2010, , 183-221.	0.9	278
8	Neuro-fuzzy methods for nonlinear system identification. Annual Reviews in Control, 2003, 27, 73-85.	7.9	250
9	An overview of fuzzy modeling for control. Control Engineering Practice, 1996, 4, 1593-1606.	5.5	247
10	Modified Gath-Geva fuzzy clustering for identification of Takagi-Sugeno fuzzy models. IEEE Transactions on Systems, Man, and Cybernetics, 2002, 32, 612-621.	5.0	246
11	Rule-based modeling: precision and transparency. IEEE Transactions on Systems, Man and Cybernetics, Part C: Applications and Reviews, 1998, 28, 165-169.	2.9	238
12	Residential Demand Response of Thermostatically Controlled Loads Using Batch Reinforcement Learning. IEEE Transactions on Smart Grid, 2017, 8, 2149-2159.	9.0	232
13	Railway Track Circuit Fault Diagnosis Using Recurrent Neural Networks. IEEE Transactions on Neural Networks and Learning Systems, 2017, 28, 523-533.	11.3	220
14	Multi-agent discrete-time graphical games and reinforcement learning solutions. Automatica, 2014, 50, 3038-3053.	5.0	206
15	Deep convolutional neural networks for detection of rail surface defects. , 2016, , .		205
16	Experience Replay for Real-Time Reinforcement Learning Control. IEEE Transactions on Systems, Man and Cybernetics, Part C: Applications and Reviews, 2012, 42, 201-212.	2.9	165
17	Stability Analysis and Nonlinear Observer Design Using Takagi-Sugeno Fuzzy Models. Studies in Fuzziness and Soft Computing, 2011, , .	0.8	137
18	Optimal model-free output synchronization of heterogeneous systems using off-policy reinforcement learning. Automatica, 2016, 71, 334-341.	5.0	130

#	Article	IF	Citations
19	Fuzzy predictive control applied to an air-conditioning system. Control Engineering Practice, 1997, 5, 1395-1406.	5.5	128
20	Effective Optimization for Fuzzy Model Predictive Control. IEEE Transactions on Fuzzy Systems, 2004, 12, 661-675.	9.8	119
21	Fuzzy model-based predictive control using Takagi–Sugeno models. International Journal of Approximate Reasoning, 1999, 22, 3-30.	3.3	116
22	Multiobjective identification of Takagi-Sugeno fuzzy models. IEEE Transactions on Fuzzy Systems, 2003, 11, 847-860.	9.8	113
23	Reinforcement Learning Applied to an Electric Water Heater: From Theory to Practice. IEEE Transactions on Smart Grid, 2018, 9, 3792-3800.	9.0	112
24	Genetic algorithms for optimization in predictive control. Control Engineering Practice, 1997, 5, 1363-1372.	5.5	101
25	Efficient Model Learning Methods for Actor–Critic Control. IEEE Transactions on Systems, Man, and Cybernetics, 2012, 42, 591-602.	5.0	97
26	A Big Data Analysis Approach for Rail Failure Risk Assessment. Risk Analysis, 2017, 37, 1495-1507.	2.7	86
27	Fuzzy relational classifier trained by fuzzy clustering. IEEE Transactions on Systems, Man, and Cybernetics, 1999, 29, 619-625.	5.0	84
28	Adaptive observers for TS fuzzy systems with unknown polynomial inputs. Fuzzy Sets and Systems, 2010, 161, 2043-2065.	2.7	84
29	Input Selection for Nonlinear Regression Models. IEEE Transactions on Fuzzy Systems, 2004, 12, 688-696.	9.8	81
30	Reinforcement learning based compensation methods for robot manipulators. Engineering Applications of Artificial Intelligence, 2019, 78, 236-247.	8.1	77
31	Integrating State Representation Learning Into Deep Reinforcement Learning. IEEE Robotics and Automation Letters, 2018, 3, 1394-1401.	5.1	72
32	Fuzzy gain scheduling: controller and observer design based on lyapunov method and convex optimization. IEEE Transactions on Fuzzy Systems, 2003, 11, 285-298.	9.8	69
33	Identification and Control of Nonlinear Systems Using Fuzzy Hammerstein Models. Industrial & Samp; Engineering Chemistry Research, 2000, 39, 4302-4314.	3.7	68
34	Machine Learning Algorithms in Bipedal Robot Control. IEEE Transactions on Systems, Man and Cybernetics, Part C: Applications and Reviews, 2012, 42, 728-743.	2.9	66
35	Constructing Fuzzy Models by Product Space Clustering. , 1997, , 53-90.		64
36	Multi-Agent Reinforcement Learning: A Survey. , 2006, , .		64

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37	Towards automation of control software: A review of challenges in mechatronic design. Mechatronics, 2010, 20, 876-886.	3.3	64
38	Rule base reduction: some comments on the use of orthogonal transforms. IEEE Transactions on Systems, Man and Cybernetics, Part C: Applications and Reviews, 2001, 31, 199-206.	2.9	62
39	Timely condition-based maintenance planning for multi-component systems. Reliability Engineering and System Safety, 2017, 159, 310-321.	8.9	62
40	Parametric Bayesian Filters for Nonlinear Stochastic Dynamical Systems: A Survey. IEEE Transactions on Cybernetics, 2013, 43, 1607-1624.	9.5	59
41	Cross-Entropy Optimization of Control Policies With Adaptive Basis Functions. IEEE Transactions on Systems, Man, and Cybernetics, 2011, 41, 196-209.	5.0	58
42	Combining knowledge and historical data for system-level fault diagnosis of HVAC systems. Engineering Applications of Artificial Intelligence, 2017, 59, 260-273.	8.1	55
43	Fuzzy self-tuning PI control of pH in fermentation. Engineering Applications of Artificial Intelligence, 2002, 15, 3-15.	8.1	54
44	Comparison of intelligent control schemes for real-time pressure control. Control Engineering Practice, 1996, 4, 1585-1592.	5.5	53
45	Performance improvement of a drop-on-demand inkjet printhead using an optimization-based feedforward control method. Control Engineering Practice, 2011, 19, 771-781.	5.5	53
46	Bayesian and Dempster–Shafer reasoning for knowledge-based fault diagnosis–A comparative study. Engineering Applications of Artificial Intelligence, 2017, 60, 136-150.	8.1	53
47	Compatible cluster merging for fuzzy modelling., 0, , .		52
48	Approximate dynamic programming with a fuzzy parameterization. Automatica, 2010, 46, 804-814.	5.0	52
49	Adaptive fuzzy control of satellite attitude by reinforcement learning. IEEE Transactions on Fuzzy Systems, 1998, 6, 185-194.	9.8	50
50	Port-Hamiltonian Systems in Adaptive and Learning Control: A Survey. IEEE Transactions on Automatic Control, 2016, 61, 1223-1238.	5.7	50
51	Stability of Cascaded Fuzzy Systems and Observers. IEEE Transactions on Fuzzy Systems, 2009, 17, 641-653.	9.8	49
52	Knowledge-based fuzzy model for performance prediction of a rock-cutting trencher. International Journal of Approximate Reasoning, 1997, 16, 43-66.	3.3	47
53	Fuzzy modeling with multivariate membership functions: gray-box identification and control design. IEEE Transactions on Systems, Man, and Cybernetics, 2001, 31, 755-767.	5.0	46
54	Unified Modeling and Control of Walking and Running on the Spring-Loaded Inverted Pendulum. IEEE Transactions on Robotics, 2016, 32, 1178-1195.	10.3	46

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55	Computer-controlled mechanical simulation of the artificially ventilated human respiratory system. IEEE Transactions on Biomedical Engineering, 2003, 50, 731-743.	4.2	45
56	Identification of MIMO systems by input-output TS fuzzy models., 0,,.		43
57	A fast sampling method for estimating the domain of attraction. Nonlinear Dynamics, 2016, 86, 823-834.	<b>5.</b> 2	42
58	Decentralized Reinforcement Learning of Robot Behaviors. Artificial Intelligence, 2018, 256, 130-159.	5.8	41
59	Incorporating prior knowledge in fuzzy model identification. International Journal of Systems Science, 2000, 31, 657-667.	<b>5.</b> 5	40
60	A new identification method for linguistic fuzzy models., 0,,.		39
61	Adaptive fuzzy control of a non-linear servo-drive: Theory and experimental results. Engineering Applications of Artificial Intelligence, 2008, 21, 846-857.	8.1	39
62	Online least-squares policy iteration for reinforcement learning control. , 2010, , .		39
63	Clavulanic Acid Degradation in Streptomyces clavuligerus Fed-Batch Cultivations. Biotechnology Progress, 2002, 18, 451-457.	2.6	37
64	A Waveform Design Method for a Piezo Inkjet Printhead Based on Robust Feedforward Control. Journal of Microelectromechanical Systems, 2012, 21, 1365-1374.	2.5	37
65	Robust stability constraints for fuzzy model predictive control. IEEE Transactions on Fuzzy Systems, 2002, 10, 50-64.	9.8	36
66	Distributed Controller Design Approach to Dynamic Speed Limit Control against Shockwaves on Freeways. Transportation Research Record, 2008, 2086, 93-99.	1.9	36
67	Distributed nonlinear estimation for robot localization using weighted consensus. , 2010, , .		35
68	Soft computing applications in aircraft sensor management and flight control law reconfiguration. IEEE Transactions on Systems, Man and Cybernetics, Part C: Applications and Reviews, 2002, 32, 125-139.	2.9	34
69	A fuzzy decision support system for traffic control centers. , 0, , .		33
70	Reinforcement Learning for Port-Hamiltonian Systems. IEEE Transactions on Cybernetics, 2015, 45, 1017-1027.	9.5	33
71	Vision-based Navigation Using Deep Reinforcement Learning. , 2019, , .		32
72	Local and global identification and interpretation of parameters in Takagi-Sugeno fuzzy models. , 0, , .		31

#	Article	IF	CITATIONS
73	Design of a gain-scheduling mechanism for flight control laws by fuzzy clustering. Control Engineering Practice, 2006, 14, 769-781.	5.5	30
74	Ant Colony Routing algorithm for freeway networks. Transportation Research Part C: Emerging Technologies, 2013, 37, 1-19.	7.6	30
75	Distributed Kalman filtering for cascaded systems. Engineering Applications of Artificial Intelligence, 2008, 21, 457-469.	8.1	29
76	Attitude and altitude estimation and control on board a Flapping Wing Micro Air Vehicle., 2015,,.		29
77	Transparent Fuzzy Modelling. International Journal of Human Computer Studies, 1998, 49, 159-179.	5.6	28
78	Fuzzy logic based full-envelope autonomous flight control for an atmospheric re-entry spacecraft. Control Engineering Practice, 2003, 11, 11-25.	5.5	28
79	Fuzzy logic based attitude control of the spacecraft X-38 along a nominal re-entry trajectory. Control Engineering Practice, 2001, 9, 699-707.	5.5	27
80	Control of the fluidised bed in the pellet softening process. Chemical Engineering Science, 2008, 63, 1390-1400.	3.8	27
81	Accurate, Transparent, and Compact Fuzzy Models for Function Approximation and Dynamic Modeling through Multi-objective Evolutionary Optimization. Lecture Notes in Computer Science, 2001, , 653-667.	1.3	27
82	Virtual sensor for fault detection and isolation in flight control systems - fuzzy modeling approach. , 0, , .		26
83	Decentralized Reinforcement Learning Control of a Robotic Manipulator. , 2006, , .		25
84	Ant Colony Optimization for traffic dispersion routing. , 2010, , .		25
85	Modeling and Control of Legged Locomotion via Switching Max-Plus Models. IEEE Transactions on Robotics, 2014, 30, 652-665.	10.3	25
86	Learning state representation for deep actor-critic control. , 2016, , .		25
87	Probabilistic Defect-Based Risk Assessment Approach for Rail Failures in Railway Infrastructure. IFAC-PapersOnLine, 2016, 49, 73-77.	0.9	25
88	Model-Plant Mismatch Compensation Using Reinforcement Learning. IEEE Robotics and Automation Letters, 2018, 3, 2471-2477.	5.1	25
89	Control delay in Reinforcement Learning for real-time dynamic systems: A memoryless approach. , 2010,		24
90	Passivity-based reinforcement learning control of a 2-DOF manipulator arm. Mechatronics, 2014, 24, 1001-1007.	3.3	24

#	Article	IF	Citations
91	Virtual Sensor for the Angle-of-Attack Signal in Small Commercial Aircraft. , 2006, , .		23
92	Visual Navigation in Real-World Indoor Environments Using End-to-End Deep Reinforcement Learning. IEEE Robotics and Automation Letters, 2021, 6, 4345-4352.	5.1	23
93	Decentralized Kalman filter comparison for distributed-parameter systems: A case study for a 1D heat conduction process. , $2011$ , , .		22
94	Directional Singularity-Robust Torque Control for Gyroscopic Actuators. IEEE/ASME Transactions on Mechatronics, 2016, 21, 2755-2763.	5.8	21
95	Intelligent adaptive control of bioreactors. Journal of Intelligent Manufacturing, 2003, 14, 255-265.	7.3	20
96	A semi-supervised method to detect seismic random noise with fuzzy GK clustering. Journal of Geophysics and Engineering, 2008, 5, 457-468.	1.4	20
97	Model learning actor-critic algorithms: Performance evaluation in a motion control task. , 2012, , .		20
98	Constrained distributed algebraic connectivity maximization in robotic networks. Automatica, 2013, 49, 1348-1357.	5.0	20
99	Comparison of model-free and model-based methods for time optimal hit control of a badminton robot. Mechatronics, 2014, 24, 1021-1030.	3.3	20
100	Rule base simplification with similarity measures. , 0, , .		19
101	Fuzzy modeling of enzymatic penicillin-G conversion. Engineering Applications of Artificial Intelligence, 1999, 12, 79-92.	8.1	19
102	Saturated Particle Filter: Almost sure convergence and improved resampling. Automatica, 2013, 49, 147-159.	5.0	19
103	A Multiple-Model Reliability Prediction Approach for Condition-Based Maintenance. IEEE Transactions on Reliability, 2018, 67, 1364-1376.	4.6	19
104	Efficient training algorithm for Takagi-Sugeno type neuro-fuzzy network., 0,,.		18
105	Estimation of respiratory parameters via fuzzy clustering. Artificial Intelligence in Medicine, 2001, 21, 91-105.	6.5	18
106	Online self-evolving fuzzy controller with global learning capabilities. Evolving Systems, 2010, 1, 225-239.	3.9	18
107	On distributed maximization of algebraic connectivity in robotic networks. , 2011, , .		18
108	Benchmarking model-free and model-based optimal control. Robotics and Autonomous Systems, 2017, 92, 81-90.	5.1	18

#	Article	IF	CITATIONS
109	Closed-Loop Control Through Self-Sensing of a Joule-Heated Twisted and Coiled Polymer Muscle. Soft Robotics, 2019, 6, 621-630.	8.0	18
110	Complexity reduction in fuzzy modeling. Mathematics and Computers in Simulation, 1998, 46, 507-516.	4.4	17
111	COMPOSITE ADAPTIVE FUZZY CONTROL. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 97-102.	0.4	17
112	Genetic polynomial regression as input selection algorithm for non-linear identification. Soft Computing, 2006, 10, 785-795.	3.6	17
113	Model-based operational constraints for fluidised bed crystallisation. Water Research, 2008, 42, 327-337.	11.3	17
114	Estimation of the soil-dependent time-varying parameters of the hopper sedimentation model: The FPF versus the BPF. Control Engineering Practice, 2014, 24, 67-78.	5.5	17
115	Balancing a Legged Robot Using State-Dependent Riccati Equation Control. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 2177-2182.	0.4	17
116	Improved deep reinforcement learning for robotics through distribution-based experience retention. , 2016, , .		17
117	Sequential stability analysis and observer design for distributed TS fuzzy systems. Fuzzy Sets and Systems, 2011, 174, 1-30.	2.7	16
118	Active learning of affordances for robot use of household objects., 2014,,.		16
119	Constructing parsimonious analytic models for dynamic systems via symbolic regression. Applied Soft Computing Journal, 2020, 94, 106432.	7.2	16
120	Fuzzy modeling - a control engineering perspective. , 0, , .		15
121	Predictive control by local linearization of a Takagi-Sugeno fuzzy model. , 0, , .		15
122	Fault-tolerant model-based predictive control using multiple Takagi-Sugeno fuzzy models. , 0, , .		15
123	Fuzzy Ant Colony Optimization for optimal control. , 2009, , .		15
124	DETERMINATION OF HYDROCORTISONE IN PHARMACEUTICAL DRUG BY TLC WITH DENSITOMETRIC DETECTION IN UV. Journal of Liquid Chromatography and Related Technologies, 2011, 34, 753-769.	1.0	15
125	Actor-critic reinforcement learning for tracking control in robotics. , 2016, , .		15
126	Fault diagnosis using spatial and temporal information with application to railway track circuits. Engineering Applications of Artificial Intelligence, 2016, 56, 200-211.	8.1	15

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127	Learning Complex Behaviors via Sequential Composition and Passivity-Based Control. Studies in Systems, Decision and Control, 2015, , 53-74.	1.0	15
128	Integrated operation of drinking water treatment plant at Amsterdam water supply. Water Science and Technology: Water Supply, 2004, 4, 263-270.	2.1	14
129	FUZZSAM - visualization of fuzzy clustering results by modified Sammon mapping. , 0, , .		14
130	Dynamic modelling for optimisation of pellet softening. Journal of Water Supply: Research and Technology - AQUA, 2008, 57, 45-56.	1.4	14
131	A new ant colony routing approach with a trade-off between system and user optimum. , $2011, \ldots$		14
132	Nested compliant admittance control for robotic mechanical assembly of misaligned and tightly toleranced parts., 2016,,.		14
133	Learning Sequential Composition Control. IEEE Transactions on Cybernetics, 2016, 46, 2559-2569.	9.5	14
134	Interpolation issues in Sugeno-Takagi reasoning. , 0, , .		13
135	Predictive control of nonlinear systems based on fuzzy and neural models., 1999,,.		13
136	A multi-objective evolutionary algorithm for fuzzy modeling. , 0, , .		13
137	On non-PDC local observers for TS fuzzy systems. , 2010, , .		13
138	Optimistic planning for continuous-action deterministic systems. , 2013, , .		13
139	Multi-agent discrete-time graphical games: interactive Nash equilibrium and value iteration solution. , 2013, , .		13
140	Reinforcement learning for sequential composition control. , 2013, , .		13
141	Rapid learning in sequential composition control. , 2014, , .		13
142	An application of sequential composition control to cooperative systems., 2015,,.		13
143	Comparison of conventional and fuzzy predictive control., 0,,.		12
144	Adaptive Friction Compensation: A Globally Stable Approach. IEEE/ASME Transactions on Mechatronics, 2015, , 1-1.	5.8	12

#	Article	IF	CITATIONS
145	Exploiting spatial and temporal dependencies to enhance fault diagnosis: Application to railway track circuits. , $2015,  ,  .$		12
146	Policy derivation methods for critic-only reinforcement learning in continuous spaces. Engineering Applications of Artificial Intelligence, 2018, 69, 178-187.	8.1	12
147	Multi-objective symbolic regression for physics-aware dynamic modeling. Expert Systems With Applications, 2021, 182, 115210.	7.6	12
148	Continuous-State Reinforcement Learning with Fuzzy Approximation. Lecture Notes in Computer Science, 2008, , 27-43.	1.3	12
149	Fuzzy Clustering Algorithms with Applications to Rule Extraction. Studies in Fuzziness and Soft Computing, 2000, , 139-173.	0.8	12
150	Symbolic regression driven by training data and prior knowledge. , 2020, , .		12
151	Online self-organizing adaptive fuzzy controller: Application to a nonlinear servo system. , 2010, , .		11
152	Optimistic planning for sparsely stochastic systems. , 2011, , .		11
153	Actor-Critic Control with Reference Model Learning. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 14723-14728.	0.4	11
154	Takagi-Sugeno fuzzy observer and extended-Kalman filter for adaptive payload estimation. , 2013, , .		11
155	Robot learning and use of affordances in goal-directed tasks. , 2013, , .		11
156	Automated Transitions Between Walking and Running in Legged Robots. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 2171-2176.	0.4	11
157	AN OVERVIEW OF FUZZY MODELING AND MODEL-BASED FUZZY CONTROL. World Scientific Series in Robotics and Intelligent Systems, 1999, , 3-35.	0.1	11
158	Improved inference for Takagi-Sugeno models., 0,,.		10
159	Internal model control with a fuzzy model: application to an air-conditioning system. , 0, , .		10
160	Modeling and identification of a strip guidance process with internal feedback. IEEE Transactions on Control Systems Technology, 1998, 6, 88-102.	5.2	10
161	Optimal flow distribution over multiple parallel pellet reactors: a model-based approach. Water Science and Technology, 2006, 53, 493-501.	2.5	10
162	Novel ant colony optimization approach to optimal control. International Journal of Intelligent Computing and Cybernetics, 2009, 2, 414-434.	2.7	10

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163	Adaptive fuzzy and sliding-mode control of a robot manipulator with varying payload., 2011,,.		10
164	Least-Squares Methods for Policy Iteration. Adaptation, Learning, and Optimization, 2012, , 75-109.	0.6	10
165	On-line Reinforcement Learning for Nonlinear Motion Control: Quadratic and Non-Quadratic Reward Functions. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 7043-7048.	0.4	10
166	Symbolic method for deriving policy in reinforcement learning. , 2016, , .		10
167	Automated tuning and configuration of path planning algorithms. , 2017, , .		10
168	Laboratory evaluation of fuzzy controllers. Annual Review in Automatic Programming, 1992, 17, 189-194.	0.2	9
169	Reinforcement Learning Control for Biped Robot Walking on Uneven Surfaces. , 2006, , .		9
170	Particle filtering for on-line estimation of overflow losses in a hopper dredger. , 2006, , .		9
171	Switching Max-Plus models for legged locomotion. , 2009, , .		9
172	Fuzzy observer for state estimation of the METANET traffic model. , 2010, , .		9
173	Synchronization of a class of cyclic discrete-event systems describing legged locomotion. Discrete Event Dynamic Systems: Theory and Applications, 2016, 26, 225-261.	1.5	9
174	Identification of distributed-parameter systems from sparse measurements. Applied Mathematical Modelling, 2017, 51, 605-625.	4.2	9
175	Approximate Dynamic Programming and Reinforcement Learning. Studies in Computational Intelligence, 2010, , 3-44.	0.9	9
176	Where to Look Next: Learning Viewpoint Recommendations for Informative Trajectory Planning. , 2022, , .		9
177	Fault detection and isolation using multiple Takagi-Sugeno fuzzy models. , 0, , .		8
178	Comments on the benchmarks in "A proposal for improving the accuracy of Linguistic Modeling" and related articles. IEEE Transactions on Fuzzy Systems, 2003, 11, 861-865.	9.8	8
179	Max-plus algebra for optimal scheduling of multiple sheets in a printer. , 2012, , .		8
180	Effective transfer learning of affordances for household robots. , 2014, , .		8

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181	Learning rate free reinforcement learning for real-time motion control using a value-gradient based policy. Mechatronics, 2014, 24, 966-974.	3.3	8
182	Optimal Control via Reinforcement Learning with Symbolic Policy Approximation. IFAC-PapersOnLine, 2017, 50, 4162-4167.	0.9	8
183	Change detection using weighted features for image-based localization. Robotics and Autonomous Systems, 2021, 135, 103676.	5.1	8
184	Methods for Simplification of Fuzzy Models. , 1997, , 91-108.		8
185	Automated design environment for serial industrial manipulators. Industrial Robot, 2005, 32, 32-34.	2.1	7
186	Fuzzy Approximation for Convergent Model-Based Reinforcement Learning. , 2007, , .		7
187	Ant Colony Optimization for optimal control. , 2008, , .		7
188	Model-Based Dosing Control of a Pellet Softening Reactor. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 267-272.	0.4	7
189	Minimization of cross-talk in a piezo inkjet printhead based on system identification and feedforward control. Journal of Micromechanics and Microengineering, 2012, 22, 115035.	2.6	7
190	Reasoning under Uncertainty for Knowledge-Based Fault Diagnosis: A Comparative Study. IFAC-PapersOnLine, 2015, 48, 422-427.	0.9	7
191	Reinforcement Learning with Symbolic Input-Output Models. , 2018, , .		7
192	Data-driven Construction of Symbolic Process Models for Reinforcement Learning. , 2018, , .		7
193	Simultaneous task allocation and motion scheduling for complex tasks executed by multiple robots. , 2020, , .		7
194	Object-Based Pose Graph for Dynamic Indoor Environments. IEEE Robotics and Automation Letters, 2020, 5, 5401-5408.	5.1	7
195	Accurate, transparent and compact fuzzy models by multi-objective evolutionary algorithms. Studies in Fuzziness and Soft Computing, 2003, , 431-451.	0.8	7
196	Automated procedure for gain scheduled flight control law design. , 2000, , .		6
197	Engine load prediction in off-road vehicles using multi-objective nonlinear identification. Control Engineering Practice, 2004, 12, 615-624.	5.5	6
198	Decentralized estimation of overflow losses in a hopper dredger. Control Engineering Practice, 2008, 16, 392-406.	5.5	6

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199	Stability analysis and observer design for decentralized TS fuzzy systems. , 2008, , .		6
200	Toward a flexible control design framework to automatically generate control code for mechatronic systems. , 2009, , .		6
201	Policy search with cross-entropy optimization of basis functions. , 2009, , .		6
202	Optimization-based feedforward control for a Drop-on-Demand inkjet printhead., 2010,,.		6
203	Using prior knowledge to accelerate online least-squares policy iteration. , 2010, , .		6
204	Particle filters for estimating average grain diameter of material excavated by hopper dredger. , 2010, , .		6
205	On the eigenstructure of a class of max-plus linear systems. , 2011, , .		6
206	Learning Assembly Tasks in a Few Minutes by Combining Impedance Control and Residual Recurrent Reinforcement Learning. Advanced Intelligent Systems, 2022, 4, 2100095.	6.1	6
207	Enhanced Symbolic Regression Through Local Variable Transformations. , 2017, , .		6
208	Identification of Nonlinear Dynamic Systems as a Composition of Local Linear Parametric or State-Space Models. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1997, 30, 675-680.	0.4	5
209	Performance evaluation of a fuzzy rule base for control purpose. , 0, , .		5
210	ON MULTI-OBJECTIVE IDENTIFICATION OF TAKAGI-SUGENO FUZZY MODEL PARAMETERS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2002, 35, 115-120.	0.4	5
211	Information and communication technology embraces control. Annual Reviews in Control, 2006, 30, 31-40.	7.9	5
212	Stability of Cascaded Takagi-Sugeno Fuzzy Systems. IEEE International Conference on Fuzzy Systems, 2007, , .	0.0	5
213	A general modeling framework for swarms. , 2008, , .		5
214	Fuzzy Partition Optimization for Approximate Fuzzy Q-iteration. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 5629-5634.	0.4	5
215	Optimal gait switching for legged locomotion. , 2011, , .		5
216	Solutions to finite horizon cost problems using actor-critic reinforcement learning., 2013,,.		5

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217	Evolutionary co-optimization of control and system parameters for a resonating robot arm., 2013,,.		5
218	Nonlinear Disturbance Compensation and Reference Tracking via Reinforcement Learning with Fuzzy Approximators. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 5393-5398.	0.4	5
219	Interconnection and Damping Assignment Control via Reinforcement Learning. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 1760-1765.	0.4	5
220	Hybrid Single Node Genetic Programming for Symbolic Regression. Lecture Notes in Computer Science, 2016, , 61-82.	1.3	5
221	Interpretable Semi-Mechanistic Fuzzy Models by Clustering, OLS and FIS Model Reduction. Studies in Fuzziness and Soft Computing, 2003, , 221-248.	0.8	5
222	Fuzzy Control Versus Conventional Control. International Series in Intelligent Technologies, 1999, , 59-81.	0.1	5
223	Symbolic Regression Methods for Reinforcement Learning. IEEE Access, 2021, 9, 139697-139711.	4.2	5
224	Inverse Fuzzy Model Based Predictive Control. Studies in Fuzziness and Soft Computing, 1998, , 129-154.	0.8	5
225	Efficient Object Search Through Probability-Based Viewpoint Selection. , 2020, , .		5
226	Fuzzy clustering for selecting structure of nonlinear models with mixed discrete and continuous inputs. , 0, , .		4
227	Finding the bias-variance tradeoff during neural network training and its implication on structure selection. , $0$ , , .		4
228	INTEGRATED PREDICTIVE ADAPTIVE CONTROL OF HEATING, COOLING, VENTILATION, DAYLIGHTING AND ELECTRICAL LIGHTING IN BUILDINGS. International Journal of Solar Energy, 2001, 21, 203-217.	0.2	4
229	Data-driven Construction of Transparent Fuzzy Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2001, 34, 41-52.	0.4	4
230	Analysis of interactions in MIMO Takagi-Sugeno fuzzy models. , 0, , .		4
231	An Improved Multiagent Reinforcement Learning Algorithm. , 0, , .		4
232	A Fuzzy-logic System for Detecting Oscillations in Control Loops. , 2006, , .		4
233	Fuzzy models and observers for freeway traffic state tracking. , 2010, , .		4
234	Motion estimation based on predator/prey vision. , 2010, , .		4

#	Article	IF	CITATIONS
235	Control-design methodology for drinking-water treatment processes. Water Science and Technology: Water Supply, 2010, 10, 121-127.	2.1	4
236	Saturated particle filter., 2011,,.		4
237	Drop-on-demand inkjet printhead performance improvement using robust feedforward control. , 2011, , .		4
238	Imitation learning with non-parametric regression. , 2012, , .		4
239	Identification of distributed-parameter systems with missing data. , 2012, , .		4
240	Adaptive fuzzy observer and robust controller for a 2-DOF robot arm., 2012,,.		4
241	Observer-based postural balance control for humanoid robots., 2013,,.		4
242	Model-free and model-based time-optimal control of a badminton robot. , 2013, , .		4
243	Learning robustly stable open-loop motions for robotic manipulation. Robotics and Autonomous Systems, 2015, 66, 27-34.	5.1	4
244	Co-design of traffic network topology and control measures. Transportation Research Part C: Emerging Technologies, 2015, 54, 56-73.	7.6	4
245	Integrated dynamic modelling and multivariable control of HVAC components. , 2016, , .		4
246	Policy Derivation Methods for Critic-Only Reinforcement Learning in Continuous Action Spaces. IFAC-PapersOnLine, 2016, 49, 285-290.	0.9	4
247	Approximate analytical solutions to the double-stance dynamics of the lossy spring-loaded inverted pendulum. Bioinspiration and Biomimetics, 2017, 12, 016003.	2.9	4
248	Evaluation of physical damage associated with action selection strategies in reinforcement learning * *I. Koryakovskiy, H. Vallery and R.BabuÅ <sub>I</sub> ka were supported by the European project KOROIBOT FP7-ICT-2013-10/611909 IFAC-PapersOnLine, 2017, 50, 6928-6933.	0.9	4
249	HYBRID CONTROL DESIGN FOR A ROBOT MANIPULATOR IN A SHIELD TUNNELING MACHINE. , 2006, , 143-150.		4
250	Data-Driven Construction of Transparent Fuzzy Models. International Series in Intelligent Technologies, 1999, , 83-106.	0.1	4
251	Fuzzy modeling and similarity analysis applied to ecological data. , 0, , .		3
252	Predictive Control of the pH in a Penicillin Conversion Process. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1997, 30, 421-426.	0.4	3

#	Article	IF	Citations
253	Fuzzy gain scheduling for flight control laws. , 0, , .		3
254	Estimation of expiratory time constants via fuzzy clustering. Journal of Clinical Monitoring and Computing, 2002, 17, 15-22.	1.6	3
255	Structure selection for nonlinear models with mixed discrete and continuous inputs: a comparative study. , $0$ , , .		3
256	Consistency of fuzzy model-based reinforcement learning. , 2008, , .		3
257	Model-based pH monitor for sensor assessment. Water Science and Technology, 2009, 60, 709-715.	2.5	3
258	Analytical approximation for the double-stance phase of a walking robot. , 2015, , .		3
259	Model-based real-time control of a magnetic manipulator system. , 2017, , .		3
260	Takagi–Sugeno Fuzzy Payload Estimation and Adaptive Control. IFAC-PapersOnLine, 2017, 50, 844-849.	0.9	3
261	GEM: Glare or Gloom, I Can Still See You – End-to-End Multi-Modal Object Detection. IEEE Robotics and Automation Letters, 2021, 6, 6321-6328.	5.1	3
262	Selecting Informative Data Samples for Model Learning Through Symbolic Regression. IEEE Access, 2021, 9, 14148-14158.	4.2	3
263	MIMO Predictive Control by Multiple-Step Linearization of Takagi-Sugeno Fuzzy Models. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1998, 31, 197-202.	0.4	2
264	Linguistic analysis of interactions in MIMO fuzzy systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1999, 32, 5416-5421.	0.4	2
265	Design of optimal membership functions for fuzzy gain-scheduled control. , 0, , .		2
266	Evolutionary input selection for the non-linear identification of complex processes. Computers and Electronics in Agriculture, 2005, 49, 441-451.	7.7	2
267	Stability analysis and observer design for string-connected TS systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 12795-12800.	0.4	2
268	Piezo Printhead Control: Jetting Any Drop at Any Time. Embedded Systems, 2013, , 41-85.	0.6	2
269	Online learning for optimistic planning. Engineering Applications of Artificial Intelligence, 2016, 55, 70-82.	8.1	2
270	Near Optimal Control With Reachability and Safety Guarantees. IFAC-PapersOnLine, 2019, 52, 230-235.	0.9	2

#	Article	IF	CITATIONS
271	Towards Life-Long Autonomy of Mobile Robots Through Feature-Based Change Detection. , 2019, , .		2
272	Fine-tuning Deep RL with Gradient-Free Optimization. IFAC-PapersOnLine, 2020, 53, 8049-8056.	0.9	2
273	Ant Colony Learning Algorithm for Optimal Control. Studies in Computational Intelligence, 2010, , 155-182.	0.9	2
274	Control of Magnetic Manipulator Using Reinforcement Learning Based on Incrementally Adapted Local Linear Models. Complexity, 2021, 2021, 1-12.	1.6	2
275	Some Computational Issues in Fuzzy Predictive Control. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1996, 29, 55-59.	0.4	1
276	Semi-Mechanistic and Black-Box Modeling of an Enzymatic Conversion Process. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1997, 30, 373-378.	0.4	1
277	Data-driven initialization and structure learning in fuzzy neural networks. , 0, , .		1
278	Fuzzy decision support for the control of detergent production. International Journal of Adaptive Control and Signal Processing, 2001, 15, 769-785.	4.1	1
279	Fault-tolerant output-feedback control via fuzzy state blending. , 0, , .		1
280	State-space reconstruction and prediction of chaotic time series based on fuzzy clustering. , 0, , .		1
281	Genetic polynomial regression as input selection algorithm for engine load prediction in combine harvesters. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2004, 37, 81-85.	0.4	1
282	Dynamic Exploration in Q(λ)-learning. , 2006, , .		1
283	Complexity Management in Fuzzy Systems: A Rule Base Compression Approach [Book Review]. IEEE Computational Intelligence Magazine, 2007, 2, 42-43.	3.2	1
284	Stability bounds for fuzzy estimation and control & amp; $\#x2014$ ; Part II: Output-feedback control., 2010, , .		1
285	Erratum to "Adaptive observers for TS fuzzy systems with unknown polynomial inputs―[Fuzzy Sets and Systems 161 (2010) 2043–2065]. Fuzzy Sets and Systems, 2011, 171, 106-107.	2.7	1
286	Monitoring of traffic networks using mobile sensors. , 2014, , .		1
287	Convex saturated particle filter. Automatica, 2014, 50, 2494-2503.	5.0	1
288	Constructive on-line learning for a neuro-fuzzy network with fuzzy sets obtained by Delaunay triangulation. , $0$ , , .		1

#	Article	IF	Citations
289	Accuracy and Transparency of Fuzzy Systems. International Series in Intelligent Technologies, 2002, , 3-16.	0.1	1
290	An Improved Single Node Genetic Programming for Symbolic Regression. , 2015, , .		1
291	Recent Advances in Fuzzy Modeling and Control. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1996, 29, 43-54.	0.4	O
292	Comparison of Fuzzy Control Schemes on Real-Time Pressure Control. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1996, 29, 61-66.	0.4	0
293	Rule Reduction Algorithm for SISO Takagi-Sugeno Models. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1997, 30, 385-389.	0.4	O
294	Predictive Control in Biotechnology using Fuzzy and Neural Models., 1998,, 437-464.		0
295	Black-Box Modeling of a Rapid Sand Filter. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1998, 31, 101-106.	0.4	O
296	Decoupling of Multivariable Rule-Based Fuzzy Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1998, 31, 11.	0.4	0
297	Decoupling of Multivariable Rule-Based Fuzzy Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1998, 31, 13-16.	0.4	O
298	Fuzzy Expert System for Supervision in Adaptive Control. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2000, 33, 241-246.	0.4	0
299	Decoupling MBPC using fuzzy models. , 0, , .		O
300	Fuzzy Gain-Scheduled H-infinity Flight Control Law Design. , 2002, , .		0
301	Evaluation of adaptive fuzzy controllers: a real-world experiment. , 0, , .		0
302	TS FUZZY CONTROLLERS FOR CASCADED SYSTEMS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2007, 40, 43-48.	0.4	0
303	Generalized pheromone update for Ant Colony Learning in continuous state spaces. , 2010, , .		0
304	Convergence Analysis of Ant Colony Learning. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 14693-14698.	0.4	0
305	On the convergence of Ant Colony Optimization with stench pheromone. , 2013, , .		O
306	Stiffness and damping scheduling for legged locomotion. , 2013, , .		0

#	Article	IF	CITATIONS
307	Optimal routing in freeway networks via sequential linear programming. , 2013, , .		O
308	Analysis and design for continuous-time string-connected Takagi–Sugeno systems. Journal of the Franklin Institute, 2014, 351, 3577-3592.	3.4	0
309	Control by interconnection of a manipulator arm using reinforcement learning. , 2015, , .		O
310	Proxy Functions for Approximate Reinforcement Learning. IFAC-PapersOnLine, 2019, 52, 224-229.	0.9	0
311	Guiding Robot Model Construction with Prior Features. , 2021, , .		O
312	DeepKoCo: Efficient latent planning with a task-relevant Koopman representation., 2021,,.		0