Luigi Piroddi

List of Publications by Year
in descending order

133 papers	2,511 citations

236833
25
h-index

223716
46
g-index

133 all docs	133 docs citations

133
times ranked

1634
citing authors

#	Article	IF	Citations
1	Selective Siphon Control for Deadlock Prevention in Petri Nets. IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans, 2008, 38, 1337-1348.	3.4	220
2	An identification algorithm for polynomial NARX models based on simulation error minimization. International Journal of Control, 2003, 76, 1767-1781.	1.2	188
3	Combined Siphon and Marking Generation for Deadlock Prevention in Petri Nets. IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans, 2009, 39, 650-661.	3.4	162
4	Forecasting peak air pollution levels using NARX models. Engineering Applications of Artificial Intelligence, 2009, 22, 593-602.	4.3	120
5	Real-time identification of tire–road friction conditions. IET Control Theory and Applications, 2009, 3, 891-906.	1.2	99
6	Toward Air Traffic Complexity Assessment in New Generation Air Traffic Management Systems. IEEE Transactions on Intelligent Transportation Systems, 2011, 12, 809-818.	4.7	97
7	Prediction of Human Activity Patterns for Human–Robot Collaborative Assembly Tasks. IEEE Transactions on Industrial Informatics, 2019, 15, 3934-3942.	7.2	80
8	Nonlinear identification and control of a heat exchanger: A neural network approach. Journal of the Franklin Institute, 1997, 334, 135-153.	1.9	70
9	Integrated design of optimal supervisors for the enforcement of static and behavioral specifications in Petri net models. Automatica, 2013, 49, 3432-3439.	3.0	66
10	Jordan recurrent neural network versus IHACRES in modelling daily streamflows. Journal of Hydrology, 2008, 362, 291-307.	2.3	65
11	Enumeration Algorithms for Minimal Siphons in Petri Nets Based on Place Constraints. IEEE Transactions on Systems, Man and Cybernetics, Part A: Systems and Humans, 2005, 35, 844-854.	3.4	51
12	Optimal Scheduling of Human–Robot Collaborative Assembly Operations With Time Petri Nets. IEEE Transactions on Automation Science and Engineering, 2021, 18, 70-84.	3.4	50
13	NARX-based technique for the modelling of magneto-rheological damping devices. Smart Materials and Structures, 2002, 11, 79-88.	1.8	49
14	Active noise control with on-line estimation of non-Gaussian noise characteristics. Journal of Sound and Vibration, 2012, 331, 27-40.	2.1	45
15	A branch and bound approach for the design of decentralized supervisors in Petri net models. Automatica, 2015, 52, 322-333.	3.0	45
16	Nonlinear Active Noise Control With NARX Models. IEEE Transactions on Audio Speech and Language Processing, 2010, 18, 286-295.	3.8	39
17	Parsimonious Monitor Control of Petri Net Models of Flexible Manufacturing Systems. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2013, 43, 215-221.	5.9	39
18	Simulation error minimisation methods for NARX model identification. International Journal of Modelling, Identification and Control, 2008, 3, 392.	0.2	34

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19	Adaptive relay-based control of household freezers with on–off actuators. Control Engineering Practice, 2010, 18, 94-102.	3.2	33
20	Estimation of NOx Emissions in Thermal Power Plants Using Neural Networks. Journal of Engineering for Gas Turbines and Power, 2001, 123, 465-471.	0.5	32
21	Designing Optimal Deadlock Avoidance Policies for Sequential Resource Allocation Systems Through Classification Theory: Existence Results and Customized Algorithms. IEEE Transactions on Automatic Control, 2013, 58, 2772-2787.	3.6	32
22	GMV technique for nonlinear control with neural networks. IET Control Theory and Applications, 1994, 141, 57-69.	1.7	31
23	A resource decoupling approach for deadlock prevention in FMS. International Journal of Advanced Manufacturing Technology, 2009, 40, 157-170.	1.5	30
24	NARX model selection based on simulation error minimisation and LASSO. IET Control Theory and Applications, 2010, 4, 1157-1168.	1.2	30
25	A randomized algorithm for nonlinear model structure selection. Automatica, 2015, 60, 227-238.	3.0	29
26	On the role of prefiltering in nonlinear system identification. IEEE Transactions on Automatic Control, 2005, 50, 1597-1602.	3.6	24
27	Human-robot collaborative assembly: a use-case application. IFAC-PapersOnLine, 2018, 51, 194-199.	0.5	24
28	SEISMIC BEHAVIOUR OF BUTTRESS DAMS: NON-LINEAR MODELLING OF A DAMAGED BUTTRESS BASED ON ARX/NARX MODELS. Journal of Sound and Vibration, 2001, 239, 405-422.	2.1	22
29	Fault detection and isolation of bearings in a drive reducer of a hot steel rolling mill. Control Engineering Practice, 2015, 39, 35-44.	3.2	22
30	Black box model identification of nonlinear input–output models: A Wiener–Hammerstein benchmark. Control Engineering Practice, 2012, 20, 1109-1118.	3.2	21
31	A Feature Selection and Classification Algorithm Based on Randomized Extraction of Model Populations. IEEE Transactions on Cybernetics, 2018, 48, 1151-1162.	6.2	21
32	Simulation error minimization identification based on multi–stage prediction. International Journal of Adaptive Control and Signal Processing, 2011, 25, 389-406.	2.3	19
33	Energy Management of a Building Cooling System With Thermal Storage: An Approximate Dynamic Programming Solution. IEEE Transactions on Automation Science and Engineering, 2017, 14, 619-633.	3.4	19
34	HARMONIC ANALYSIS OF NON-LINEAR STRUCTURES BY MEANS OF GENERALISED FREQUENCY RESPONSE FUNCTIONS COUPLED WITH NARX MODELS. Mechanical Systems and Signal Processing, 2000, 14, 243-265.	4.4	18
35	Modeling and Control of Fluid Transportation Operations in Production Plants With Petri Nets. IEEE Transactions on Control Systems Technology, 2008, 16, 1090-1098.	3.2	18
36	A randomized two-stage iterative method for switched nonlinear systems identification. Nonlinear Analysis: Hybrid Systems, 2020, 35, 100818.	2.1	18

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37	A novel cost-effective parallel narrowband ANC system with local secondary-path estimation. Journal of Sound and Vibration, 2017, 401, 311-325.	2.1	17
38	Modular design and implementation of a logic control system for a batch process. Computers and Chemical Engineering, 2003, 27, 983-996.	2.0	16
39	Model-specific autotuning of classical regulators: A neural approach to structural identification. Control Engineering Practice, 1996, 4, 1381-1391.	3.2	15
40	Real-time identification of tire-road friction conditions. , 2008, , .		15
41	Adaptive model selection for polynomial NARX models. IET Control Theory and Applications, 2010, 4, 2693-2706.	1.2	15
42	Identification of polynomial input/output recursive models with simulation error minimisation methods. International Journal of Systems Science, 2012, 43, 319-333.	3.7	15
43	A distributed feature selection algorithm based on distance correlation with an application to microarrays. IEEE/ACM Transactions on Computational Biology and Bioinformatics, 2018, 16, 1-1.	1.9	15
44	A comparative performance analysis of deadlock avoidance control algorithms for FMS. Journal of Intelligent Manufacturing, 1999, 10, 569-585.	4.4	14
45	Monitor optimization in Petri net control. , 2011, , .		14
46	Approximate dynamic programming-based control of a building cooling system with thermal storage. , 2013, , .		14
47	Policy Search for the Optimal Control of Markov Decision Processes: A Novel Particle-Based Iterative Scheme. IEEE Transactions on Cybernetics, 2016, 46, 2643-2655.	6.2	13
48	Neural implementation of GMV control schemes based on affine input/output models. IET Control Theory and Applications, 1997, 144, 521-530.	1.7	12
49	An Incremental Petri Net-Based Approach to the Modeling of Production Sequences in Manufacturing Systems. IEEE Transactions on Automation Science and Engineering, 2007, 4, 424-434.	3.4	12
50	On the parameterisation of simple process models for the autotuning of industrial regulators. Proceedings of the American Control Conference, 2007, , .	0.0	12
51	An iterative algorithm for simulation error based identification of polynomial input–output models using multi-step prediction. International Journal of Control, 2010, 83, 1442-1456.	1.2	12
52	Model structure selection for switched NARX system identification: A randomized approach. Automatica, 2021, 125, 109415.	3.0	12
53	Some convergence properties of multi-step prediction error identification criteria. , 2008, , .		11
54	Data-driven indicators for the detection and prediction of stuck-pipe events in oil&gas drilling operations. Upstream Oil and Gas Technology, 2021, 7, 100043.	1.1	11

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55	A pruning method for the identification of polynomial NARMAX models. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2003, 36, 1071-1076.	0.4	10
56	A two-stage algorithm for structure identification of polynomial NARX models. , 2006, , .		10
57	A reachability graph partitioning technique for the analysis of deadlock prevention methods in bounded Petri nets. , 2010, , .		10
58	FPGA-based implementation of high-speed active noise and vibration controllers. Control Engineering Practice, 2011, 19, 798-808.	3.2	10
59	Minimising production costs in generation and cogeneration plants. Control Engineering Practice, 2001, 9, 283-295.	3.2	9
60	Adaptive temperature control of a household refrigerator. , 2009, , .		9
61	Polynomial NARX Model Identification: a Wienerâ€"Hammerstein Benchmark. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 1074-1079.	0.4	9
62	Maximally permissive deadlock avoidance for sequential resource allocation systems using disjunctions of linear classifiers. , 2012, , .		9
63	Distributed randomized model structure selection for NARX models. International Journal of Adaptive Control and Signal Processing, 2017, 31, 1853-1870.	2.3	9
64	A randomized approach to switched nonlinear systems identification. IFAC-PapersOnLine, 2018, 51, 281-286.	0.5	9
65	Energy production estimation of a photovoltaic system with temperature-dependent coefficients. , 2012, , .		8
66	Supervisory Control of Timed Discrete-Event Systems With Logical and Temporal Specifications. IEEE Transactions on Automatic Control, 2022, 67, 2800-2815.	3.6	8
67	ESTIMATION OF NOX EMISSIONS IN THERMAL POWER PLANTS USING ENG-GENES NEURAL NETWORKS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 115-120.	0.4	7
68	A randomised approach for NARX model identification based on a multivariate Bernoulli distribution. International Journal of Systems Science, 2017, 48, 1203-1216.	3.7	7
69	Model Classification Applied to the Autotuning of Industrial Proportionalâˆ'Integralâˆ'Derivative Regulators. Industrial & Engineering Chemistry Research, 2004, 43, 6787-6796.	1.8	6
70	Step response classification for model-based autotuning via polygonal curve approximation. Journal of Process Control, 2007, 17, 641-652.	1.7	6
71	FPGA-based implementation of an active vibration controller. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 5077-5082.	0.4	6
72	LASSO-enhanced simulation error minimization method for NARX model selection. , 2010, , .		6

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73	A gradient-free adaptation method for nonlinear active noise control. Journal of Sound and Vibration, 2014, 333, 13-30.	2.1	6
74	Characterization of minimal and basis siphons with predicate logic and binary programming. , 0, , .		5
75	Front-tracking centralized motor control in a paper-making process. Control Engineering Practice, 2002, 10, 1111-1125.	3.2	5
76	Long-range nonlinear prediction: a case study. , 0, , .		5
77	Vibration control of a turbomolecular vacuum pump using piezoelectric actuators. , 2006, , .		5
78	A cluster selection approach to polynomial NARX identification. Proceedings of the American Control Conference, 2007, , .	0.0	5
79	Feedback and feedforward active vibration control schemes for a turbomolecular vacuum pump. , 2007, , .		5
80	NARX model identification with error filtering. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 2726-2731.	0.4	5
81	Adaptive temperature control in a freezer with on-off actuation. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2008, 41, 15439-15444.	0.4	5
82	Nonlinear Active Noise Control using NARX model structure selection. , 2009, , .		5
83	Active noise control of impulsive noise using online estimation of an alpha-stable model. , 2010, , .		5
84	A nonlinear active noise control scheme with on-line model structure selection. , 2011, , .		5
85	Active noise control of impulsive noise with selective outlier elimination. , 2013, , .		5
86	Process noise covariance estimation via stochastic approximation. International Journal of Adaptive Control and Signal Processing, 2020, 34, 63-76.	2.3	5
87	Finite-precision implementation issues in narrowband active control. , 2007, , .		4
88	Simulation Error Minimizationâ€"Based Identification of Polynomial Inputâ€"Output Recursive Models. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 1393-1398.	0.4	4
89	A self-recovery approach to the probabilistic invariance problem for stochastic hybrid systems. , 2012, , .		4
90	A distributed feature selection scheme with partial information sharing. Machine Learning, 2019, 108, 2009-2034.	3.4	4

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91	Modelling and active vibration control of a turbomolecular vacuum pump. , 2006, , .		4
92	Nonlinear modeling of NO/sub x/ emission in a coal-fired power generation plant. , 2004, , .		3
93	A Modular Approach for Deadlock Avoidance in FMS. , 0, , .		3
94	Approximate SEM identification of polynomial input-output models. , 2010, , .		3
95	A geometric approach to air traffic complexity evaluation for strategic trajectory management. , 2010, , .		3
96	Micro-grid energy management: A computational approach based on simulation and approximate discrete abstraction. , 2013, , .		3
97	Robust harmonic control: an application to structural vibration reduction in helicopters. IFAC-PapersOnLine, 2015, 48, 263-268.	0.5	3
98	A multiâ€tone central divided difference frequency tracker with adaptive process noise covariance tuning. International Journal of Adaptive Control and Signal Processing, 2020, 34, 877-900.	2.3	3
99	Automatic synthesis of multiple place resource models with Petri nets. , 2004, , .		3
100	An alternating optimization method for switched linear systems identification. IFAC-PapersOnLine, 2020, 53, 1071-1076.	0.5	3
101	Modeling and control of transporting systems in batch processes with multiple aggregated resources. , 0, , .		2
102	Model-based PID autotuning enhanced by neural structural identification. , 2004, , .		2
103	ON THE ROLE OF PRE-FILTERING IN NONLINEAR SYSTEM IDENTIFICATION. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 791-796.	0.4	2
104	Modelling and active vibration control of a turbomolecular vacuum pump. , 2006, , .		2
105	Environmental Over-Threshold Event Forecasting using NARX Models. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 10559-10564.	0.4	2
106	Compact and decentralized supervisors for general constraint enforcement in Petri net models. , 2013, , .		2
107	A novel randomized approach to nonlinear system identification. , 2014, , .		2
108	A particle-based policy for the optimal control of Markov decision processes. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 10518-10523.	0.4	2

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109	A switched nonlinear system identification method with switching location refinement. , 2021, , .		2
110	Active preference-based optimization for human-in-the-loop feature selection. European Journal of Control, 2022, 66, 100647.	1.6	2
111	Steady-State off-set Error Rejection in Neural Network-Based Control Systems. Intelligent Automation and Soft Computing, 2000, 6, 147-157.	1.6	1
112	Structure selection for polynomial NARX models based on simulation error minimization. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2003, 36, 357-362.	0.4	1
113	CONTROL-ORIENTED NARX MODELING OF MAGNETO-RHEOLOGICAL DAMPERS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2005, 38, 536-541.	0.4	1
114	Non redundant siphon control in ordinary petri nets. , 2007, , .		1
115	Closed- versus open-loop active vibration control in the presence of finite precision arithmetic. , 2008, , .		1
116	Forecasting Daily Streamflows Using NARMAX Models: How Disturbances May Affect Model Performance. , 2008, , .		1
117	A multirate autotuning PI with improved static performance. , 2009, , .		1
118	Efficient deadlock prevention in Petri nets through the generation of selected siphons. , 2009, , .		1
119	A pseudo-multirate implementation of digital systems for improved performance. , 2010, , .		1
120	Active control of impulsive noise with on-line outlier detection. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2011, 44, 7909-7914.	0.4	1
121	Hybrid neural control systems: Some stability properties. Journal of the Franklin Institute, 2012, 349, 826-844.	1.9	1
122	Parsimonious deadlock-free Petri net models of flexible manufacturing systems. , 2013, , .		1
123	An empirical weight update approach for nonlinear active noise control. , 2013, , .		1
124	Fault detection of bearings in a drive reducer of a hot steel rolling mill. , 2014, , .		1
125	A dual filtering scheme for nonlinear active noise control. International Journal of Adaptive Control and Signal Processing, 2014, 28, 1422-1439.	2.3	1
126	Black-box MIMO model identification for structural vibration reduction in helicopters. IFAC-PapersOnLine, 2015, 48, 269-274.	0.5	1

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127	Smart city vizze project: Development and field test of an architecture for the local dispatching of distribution networks. , 2017, , .		1
128	Nonlinear system identification with model structure selection via distributed computation. , 2019, , .		1
129	An incremental petri net approach to production sequence modeling. , 0, , .		0
130	Model structure selection based on polygonal curve approximation techniques. , 2006, , .		0
131	ON SAMPLING AND PREFILTERING IN NONLINEAR SYSTEM IDENTIFICATION. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2006, 39, 1009-1014.	0.4	0
132	Convergence properties of an iterative prediction approach to nonlinear SEM parameter estimation. , 2010, , .		0
133	Decentralized monitors design for Petri net models. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 73-79.	0.4	0