

Oliver Nelles

List of Publications by Year in descending order

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108
papers

2,048
citations

566801

15
h-index

500791

28
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114
all docs

114
docs citations

114
times ranked

1321
citing authors

#	ARTICLE	IF	CITATIONS
1	Space-filling Optimization of Excitation Signals for Nonlinear System Identification. , 2022, , .		0
2	Genetic Optimization of Excitation Signals for Nonlinear Dynamic System Identification. , 2021, , .		0
3	Optimization Approaches for Nonlinear State Space Models. , 2021, , .		0
4	Optimization Approaches for Nonlinear State Space Models. , 2021, 5, 1375-1380.		2
5	Incremental DoE and Modeling Methodology with Gaussian Process Regression: An Industrially Applicable Approach to Incorporate Expert Knowledge. Mathematics, 2021, 9, 2479.	1.1	4
6	Genetic Optimization of Excitation Signals for Nonlinear Dynamic System Identification. , 2021, , .		0
7	Compressing Interpretable Representations of Piecewise Linear Neural Networks using Neuro-Fuzzy Models. , 2021, , .		1
8	Incremental Latin Hypercube Additive Design for LOLIMOT. , 2020, , .		1
9	Development, Validation, and Application of an Optimization Scheme for Impellers of Centrifugal Fans Using Computational Fluid Dynamics-Trained Metamodels. Journal of Turbomachinery, 2020, 142, .	0.9	9
10	Fuzzy and Neuro-Fuzzy Models. , 2020, , 347-391.		1
11	Dynamic Local Linear Neuro-Fuzzy Models. , 2020, , 919-970.		0
12	Input Selection for Local Model Approaches. , 2020, , 583-637.		0
13	Applications of Advanced Methods. , 2020, , 1125-1150.		0
14	Design of Experiments. , 2020, , 1043-1094.		0
15	Local Linear Neuro-Fuzzy Models: Advanced Aspects. , 2020, , 447-581.		0
16	Linear, Polynomial, and Look-Up Table Models. , 2020, , 249-278.		0
17	Nonlinear Dynamic System Identification. , 2020, , 831-891.		9
18	Linear Dynamic System Identification. , 2020, , 715-830.		0

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19	Synthesis of Representative Driving Cycles with Respect to Time-Dependent Load Conditions. , 2020, , .		0
20	Pole Determination for Takagi-Sugeno Fuzzy Laguerre Models. , 2019, , .		1
21	Local Model Networks for the Identification of Nonlinear State Space Models. , 2019, , .		7
22	Two-Dimensional ECMS for System Analysis of Hybrid Concepts featuring Two Electric Traction Motors. , 2019, , .		1
23	Deep Recurrent Neural Networks for Nonlinear System Identification. , 2019, , .		6
24	Fast and simple dataset selection for machine learning. Automatisierungstechnik, 2019, 67, 833-842.	0.4	2
25	A Novel Approach for Development of Neural Network based Electrical Machine Models for HEV System-level Design Optimization. , 2019, , .		3
26	Nonlinear system identification with regularized local FIR model networks. Engineering Applications of Artificial Intelligence, 2018, 67, 345-354.	4.3	7
27	Sensitive Order Selection via Identification of Regularized FIR Models with Impulse Response Preservation. IFAC-PapersOnLine, 2018, 51, 197-202.	0.5	2
28	Gray-box identification with regularized FIR models. Automatisierungstechnik, 2018, 66, 704-713.	0.4	6
29	Excitation signal design for nonlinear dynamic systems with multiple inputs – A data distribution approach. Automatisierungstechnik, 2018, 66, 714-724.	0.4	16
30	Improved Incorporation of Prior Knowledge for Regularized FIR Model Identification. , 2018, , .		5
31	Model extension for model based MIMO control in HVAC systems. Journal of Building Engineering, 2017, 11, 224-229.	1.6	6
32	Order of experimentation and advisability of corner measurements. Automatisierungstechnik, 2017, 65, 156-166.	0.4	0
33	Order Determination and Input Selection with Local Model Networks. IFAC-PapersOnLine, 2017, 50, 7327-7332.	0.5	4
34	Iterative Excitation Signal Design for Nonlinear Dynamic Black-Box Models. Procedia Computer Science, 2017, 112, 1054-1061.	1.2	15
35	Hierarchical model predictive control for Local Model Networks. , 2017, , .		2
36	Automatic Modeling with Local Model Networks for Benchmark Processes. IFAC-PapersOnLine, 2017, 50, 470-475.	0.5	11

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37	Normalized L1 regularization for axis-oblique tree construction algorithms. , 2017, , .		1
38	Generalizing piecewise affine system identification to local model networks. , 2017, , .		1
39	Automated order determination strategies for nonlinear dynamic models. , 2016, , .		2
40	Efficient pole optimization of nonlinear laguerre filter models. , 2016, , .		3
41	Nonlinear System Identification with Regularized Local FIR Model Networks. IFAC-PapersOnLine, 2016, 49, 61-66.	0.5	7
42	Local model network with regularized MISO finite impulse response models. , 2016, , .		2
43	Order of experimentation for metamodeling tasks. , 2016, , .		3
44	Extended Deterministic Local Search Algorithm for Maximin Latin Hypercube Designs. , 2015, , .		18
45	Interpretation and Analysis of Input Selection Approaches in Distance Space. , 2015, , .		1
46	Proposal for a function generator and extrapolation analysis. , 2015, , .		5
47	Interpolation and extrapolation: Comparison of definitions and survey of algorithms for convex and concave hulls. , 2014, , .		13
48	Merging Strategy for Local Model Networks Based on the Lolimot Algorithm. Lecture Notes in Computer Science, 2014, , 153-160.	1.0	3
49	Identifikation mit achsenschrÄngen, lokal polynomialen Modellnetzen. Automatisierungstechnik, 2014, 62, 394-407.	0.4	2
50	One-class LS-SVM with zero leave-one-out error. , 2014, , .		3
51	Input Selection Using Local Model Network Trees. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2014, 47, 4128-4133.	0.4	3
52	Structure trade-off strategy for local model networks. , 2012, , .		3
53	Supervised Hierarchical Clustering in Fuzzy Model Identification. IEEE Transactions on Fuzzy Systems, 2011, 19, 1163-1176.	6.5	52
54	Nonlinear System Identification by Gustafsonâ€™s Fuzzy Clustering and Supervised Local Model Network Learning for the Drug Absorption Spectra Process. IEEE Transactions on Neural Networks, 2011, 22, 1941-1951.	4.8	44

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55	Hierarchical local model trees for design of experiments in the framework of ultrasonic structural health monitoring. , 2011, , .		7
56	Reliable nearest neighbors for lazy learning. , 2011, , .		0
57	Model-based design of experiments based on local model networks for nonlinear processes with low noise levels. , 2011, , .		11
58	Multi-step-ahead optimal learning strategy for local model networks with higher degree polynomials. , 2011, , .		0
59	Particle Swarm Optimization for Automotive Model-Based Calibration. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2010, 43, 733-738.	0.4	10
60	Adaptive local model networks with higher degree polynomials. , 2010, , .		1
61	Multilayer Perceptron Network with Modified Sigmoid Activation Functions. Lecture Notes in Computer Science, 2010, , 414-421.	1.0	8
62	Modeling of nonlinear wave velocity characteristics in a structural health monitoring system. , 2010, , .		2
63	Comparison of different subset selection algorithms for learning local model networks with higher degree polynomials. , 2010, , .		1
64	Automatic adjustment of the transition between local models in a hierarchical structure identification algorithm. , 2009, , .		5
65	SUPervised Hierarchical CLUSTERing (SUHICLUST) for nonlinear system identification. , 2009, , .		3
66	Local Model Networks for the Optimization of a Tablet Production Process. Lecture Notes in Computer Science, 2009, , 241-250.	1.0	2
67	On the smoothness in local model networks. , 2009, , .		9
68	Polynomial model tree (POLYMOT) – A new training algorithm for local model networks with higher degree polynomials. , 2009, , .		7
69	Identification of nonlinear hysteretic engine boost pressure characteristics using Preisach representations. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 1405-1410.	0.4	1
70	Global Supervised and Local Unsupervised Learning in Local Model Networks. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 1517-1522.	0.4	0
71	Learning Strategies for Local Model Networks with Higher Degree Polynomials. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 490-495.	0.4	2
72	Local Model Networks with Modified Parabolic Membership Functions. , 2009, , .		2

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73	Local model networks. ATZelegtronik Worldwide, 2008, 3, 36-39.	0.1	8
74	Rolf Isermann wird 70. Automatisierungstechnik, 2008, 56, 453-453.	0.4	0
75	Axes-oblique partitioning strategies for local model networks. , 2006, , .		31
76	Axes-Oblique Partitioning Strategies for Local Model Networks. , 2006, , .		15
77	Polynommodelle, Kennfelder und neuronale Netze. , 2003, , 103-119.		0
78	Lernfähige Fuzzy-basierte Fahrstrategie für automatische Getriebe. , 2003, , 233-250.		3
79	NONLINEAR INTERNAL MODEL CONTROL FOR MISO SYSTEMS BASED ON LOCAL LINEAR NEURO-FUZZY MODELS. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2002, 35, 303-308.	0.4	9
80	Non-linear adaptive control of a heat exchanger. International Journal of Adaptive Control and Signal Processing, 2001, 15, 883-906.	2.3	8
81	Genetic programming for model selection of TSK-fuzzy systems. Information Sciences, 2001, 136, 7-28.	4.0	52
82	Nonlinear System Identification. , 2001, , .		980
83	Grid-Based Look-Up Table Optimization Toolbox. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2000, 33, 839-844.	0.4	2
84	Local Linear Model Trees (LOLIMOT) Toolbox for Nonlinear System Identification. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2000, 33, 845-850.	0.4	62
85	On the Dynamics of Local Linear Model Networks with Orthonormal Basis Functions. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2000, 33, 55-60.	0.4	1
86	Comparison of a Hierarchically Constructed Neural Network and a Hierarchical Look-Up Table. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2000, 33, 67-72.	0.4	3
87	Local Linear Model Tree (LOLIMOT) for Nonlinear System Identification of a Turbocharger with Variable Turbine Geometry (VTG). IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2000, 33, 615-620.	0.4	2
88	Fast neural networks for diesel engine control design. Control Engineering Practice, 2000, 8, 1211-1221.	3.2	118
89	Supervision of nonlinear adaptive controllers based on fuzzy models. Control Engineering Practice, 2000, 8, 1093-1105.	3.2	35
90	Knowledge-based Adaptation of Neurofuzzy Models in Predictive Control of a Heat Exchanger. , 2000, , 469-489.		1

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91	Lokale Linearisierung von Fuzzy-Modellen. Automatisierungstechnik, 1999, 47, 217-223.	0.4	2
92	Adaptive predictive control of a heat exchanger based on a fuzzy model. Control Engineering Practice, 1998, 6, 259-269.	3.2	54
93	Predictive control based on local linear fuzzy models. International Journal of Systems Science, 1998, 29, 679-697.	3.7	48
94	Integrated control, diagnosis and reconfiguration of a heat exchanger. IEEE Control Systems, 1998, 18, 52-63.	1.0	48
95	Identifikation mit einem Hammersteinmodell und neuronalen Netzen am Beispiel eines Abgasturboladers. Automatisierungstechnik, 1998, 46, 411-420.	0.4	0
96	Structure Optimization of Takagi-Sugeno Fuzzy Models. International Journal of Uncertainty, Fuzziness and Knowledge-Based Systems, 1998, 06, 161-170.	0.9	5
97	Neuronale Netze zur Identifikation nichtlinearer, dynamischer Systeme: Ein Ãœberblick. Automatisierungstechnik, 1997, 45, 251-262.	0.4	15
98	LOLIMOT - Lokale, lineare Modelle zur Identifikation nichtlinearer, dynamischer Systeme. Automatisierungstechnik, 1997, 45, 163-174.	0.4	56
99	Exploiting Prior Knowledge in Fuzzy Model Identification of a Heat Exchanger. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1997, 30, 391-396.	0.4	18
100	Identification of Fuzzy Models for Predictive Control of Nonlinear Time-Variant Processes. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1997, 30, 403-408.	0.4	4
101	Orthonormal Basis Functions for Nonlinear System Identification with Local Linear Model Trees (LOLIMOT). IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1997, 30, 639-644.	0.4	42
102	Automatic Model Selection in Local Linear Model Trees (LOLIMOT) for Nonlinear System Identification of a Transport Delay Process. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1997, 30, 699-704.	0.4	14
103	Fuzzy Model-Based Predictive Control of a Heat Exchanger. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1997, 30, 409-414.	0.4	8
104	Adaptive Predictive Control Based on Local Linear Fuzzy Models. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1997, 30, 819-824.	0.4	4
105	GA-Based Generation of Fuzzy Rules. , 1997, , 269-295.		5
106	Nonlinear System Identification with Neurofuzzy Methods. , 1997, , 283-310.		3
107	A New Technique for Determination of Hidden Layer Parameters in RBF Networks. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1996, 29, 4380-4385.	0.4	3
108	A Comparison Between RBF Networks and Classical Methods for Identification of Nonlinear Dynamic Systems. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 1995, 28, 233-238.	0.4	3