Keith Worden

List of Publications by Year
in descending order

464 papers	17,527 citations	23567 58 h-index	22832 112 g-index
531 all docs	531 docs citations	531 times ranked	8008 citing authors

#	Article	IF	Citations
1	An introduction to structural health monitoring. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2007, 365, 303-315.	3.4	1,629
2	Past, present and future of nonlinear system identification in structural dynamics. Mechanical Systems and Signal Processing, 2006, 20, 505-592.	8.0	912
3	DAMAGE DETECTION USING OUTLIER ANALYSIS. Journal of Sound and Vibration, 2000, 229, 647-667.	3.9	494
4	The fundamental axioms of structural health monitoring. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2007, 463, 1639-1664.	2.1	368
5	Structural Health Monitoring Using Statistical Pattern Recognition Techniques. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2001, 123, 706-711.	1.6	308
6	Long-term monitoring and data analysis of the Tamar Bridge. Mechanical Systems and Signal Processing, 2013, 35, 16-34.	8.0	293
7	Machine learning algorithms for damage detection under operational and environmental variability. Structural Health Monitoring, 2011, 10, 559-572.	7.5	289
8	TIMEâ€“FREQUENCY ANALYSIS IN GEARBOX FAULT DETECTION USING THE WIGNERâ€“VILLE DISTRIBUTION AND PATTERN RECOGNITION. Mechanical Systems and Signal Processing, 1997, 11, 673-692.	8.0	282
9	The application of machine learning to structural health monitoring. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2007, 365, 515-537.	3.4	269
10	Optimal sensor placement for fault detection. Engineering Structures, 2001, 23, 885-901.	5.3	261
11	Statistical Damage Classification Under Changing Environmental and Operational Conditions. Journal of Intelligent Material Systems and Structures, 2002, 13, 561-574.	2.5	244
12	STRUCTURAL FAULT DETECTION USING A NOVELTY MEASURE. Journal of Sound and Vibration, 1997, 201, 85-101.	3.9	239
13	Natural computing for mechanical systems research: A tutorial overview. Mechanical Systems and Signal Processing, 2011, 25, 4-111.	8.0	237
14	EXPERIMENTAL VALIDATION OF A STRUCTURAL HEALTH MONITORING METHODOLOGY: PART I. NOVELTY DETECTION ON A LABORATORY STRUCTURE. Journal of Sound and Vibration, 2003, 259, 323-343.	3.9	215
15	A review of nonlinear dynamics applications to structural health monitoring. Structural Control and Health Monitoring, 2008, 15, 540-567.	4.0	163
16	NOVELTY DETECTION IN A CHANGING ENVIRONMENT: REGRESSION AND INTERPOLATION APPROACHES. Journal of Sound and Vibration, 2002, 258, 741-761.	3.9	152
17	Cointegration: a novel approach for the removal of environmental trends in structural health monitoring data. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2011, 467, 2712-2732.	2.1	146
18	EXPERIMENTAL VALIDATION OF A STRUCTURAL HEALTH MONITORING METHODOLOGY: PART II. NOVELTY DETECTION ON A GNAT AIRCRAFT. Journal of Sound and Vibration, 2003, 259, 345-363.	3.9	134

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19	On damage diagnosis for a wind turbine blade using pattern recognition. Journal of Sound and Vibration, 2014, 333, 1833-1850.	3.9	133
20	Impact Location and Quantification on a Composite Panel using Neural Networks and a Genetic Algorithm. Strain, 2000, 36, 61-68.	2.4	125
21	Data processing and experiment design for the restoring force surface method, part I: integration and differentiation of measured time data. Mechanical Systems and Signal Processing, 1990, 4, 295-319.	8.0	121
22	IDENTIFICATION OF HYSTERETIC SYSTEMS USING THE DIFFERENTIAL EVOLUTION ALGORITHM. Journal of Sound and Vibration, 2001, 248, 289-314.	3.9	114
23	Sensor validation using principal component analysis. Smart Materials and Structures, 2005, 14, 36-42.	3.5	114
24	Locating acoustic emission sources in complex structures using Gaussian processes. Mechanical Systems and Signal Processing, 2010, 24, 211-223.	8.0	114
25	The benefits of Duffing-type nonlinearities and electrical optimisation of a mono-stable energy harvester under white Gaussian excitations. Journal of Sound and Vibration, 2012, 331, 4504-4517.	3.9	113
26	Identification of pre-sliding and sliding friction dynamics: Grey box and black-box models. Mechanical Systems and Signal Processing, 2007, 21, 514-534.	8.0	112
27	Fail-safe sensor distributions for impact detection in composite materials. Smart Materials and Structures, 2000, 9, 298-303.	3.5	106
28	EXPERIMENTAL VALIDATION OF A STRUCTURAL HEALTH MONITORING METHODOLOGY: PART III. DAMAGE LOCATION ON AN AIRCRAFT WING. Journal of Sound and Vibration, 2003, 259, 365-385.	3.9	102
29	Influence of the Autoregressive Model Order on Damage Detection. Computer-Aided Civil and Infrastructure Engineering, 2011, 26, 225-238.	9.8	102
30	Direct parameter estimation for linear and non-linear structures. Journal of Sound and Vibration, 1992, 152, 471-499.	3.9	99
31	A HARMONIC PROBING ALGORITHM FOR THE MULTI-INPUT VOLTERRA SERIES. Journal of Sound and Vibration, 1997, 201, 67-84.	3.9	99
32	Impact detection in an aircraft composite panelâ€"A neural-network approach. Journal of Sound and Vibration, 2007, 299, 672-682.	3.9	99
33	On robust regression analysis as a means of exploring environmental and operational conditions for SHM data. Journal of Sound and Vibration, 2015, 347, 279-296.	3.9	98
34	A timeâ€"frequency analysis approach for condition monitoring of a wind turbine gearbox under varying load conditions. Mechanical Systems and Signal Processing, 2015, 64-65, 188-216.	8.0	97
35	Features for damage detection with insensitivity to environmental and operational variations. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2012, 468, 4098-4122.	2.1	94
36	Damage identification using support vector machines. Smart Materials and Structures, 2001, 10, 540-547.	3.5	93

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37	An automatic impact monitor for a composite panel employing smart sensor technology. Smart Materials and Structures, 2005, 14, 265-271.	3.5	90
38	Feasibility study of structural damage detection using NARMAX modelling and Nonlinear Output Frequency Response Function based analysis. Mechanical Systems and Signal Processing, 2011, 25, 1045-1061.	8.0	90
39	Parameter estimation and model selection for a class of hysteretic systems using Bayesian inference. Mechanical Systems and Signal Processing, 2012, 32, 153-169.	8.0	90
40	A comparison of linear approaches to filter out environmental effects in structural health monitoring. Mechanical Systems and Signal Processing, 2018, 105, 1-15.	8.0	89
41	On switching response surface models, with applications to the structural health monitoring of bridges. Mechanical Systems and Signal Processing, 2018, 98, 139-156.	8.0	87
42	Digital Twins: State-of-the-Art and Future Directions for Modeling and Simulation in Engineering Dynamics Applications. ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering, 2020, 6, .	1.1	86
43	On the application of domain adaptation in structural health monitoring. Mechanical Systems and Signal Processing, 2020, 138, 106550.	8.0	84
44	A Bayesian approach based on a Markov-chain Monte Carlo method for damage detection under unknown sources of variability. Engineering Structures, 2014, 80, 1-10.	5.3	79
45	Lamb wave propagation modelling and simulation using parallel processing architecture and graphical cards. Smart Materials and Structures, 2012, 21, 075001.	3.5	77
46	Structural Damage Classification Using Extreme Value Statistics. Journal of Dynamic Systems, Measurement and Control, Transactions of the ASME, 2005, 127, 125-132.	1.6	72
47	A new methodology for automating acoustic emission detection of metallic fatigue fractures in highly demanding aerospace environments: An overview. Progress in Aerospace Sciences, 2017, 90, 1-11.	12.1	72
48	Wavelet signal processing for enhanced Lamb-wave defect detection in composite plates using optical fiber detection. Optical Engineering, 1997, 36, 1877.	1.0	71
49	Multivariate statistics process control for dimensionality reduction in structural assessment. Mechanical Systems and Signal Processing, 2008, 22, 155-171.	8.0	71
50	Foundations of population-based SHM, Part III: Heterogeneous populations â€“ Mapping and transfer. Mechanical Systems and Signal Processing, 2021, 149, 107142.	8.0	69
51	A Bayesian non-parametric clustering approach for semi-supervised Structural Health Monitoring. Mechanical Systems and Signal Processing, 2019, 119, 100-119.	8.0	67
52	Structural fault diagnosis and isolation using neural networks based on response-only data. Computers and Structures, 2003, 81, 2165-2172.	4.4	66
53	Impact damage characterisation of composite laminates using a statistical approach. Composites Science and Technology, 2012, 72, 1108-1120.	7.8	66
54	On impact damage detection and quantification for CFRP laminates using structural response data only. Mechanical Systems and Signal Processing, 2011, 25, 3135-3152.	8.0	65

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55	Rayleigh and Lamb Waves â€•Basic Principles. Strain, 2001, 37, 167-172.	2.4	63
56	Foundations of population-based SHM, Part I: Homogeneous populations and forms. Mechanical Systems and Signal Processing, 2021, 148, 107141.	8.0	63
57	An Introduction to Structural Health Monitoring. CISM International Centre for Mechanical Sciences, Courses and Lectures, 2010, , 1-17.	0.6	62
58	A Performance Monitoring Approach for the Novel Lillgrund Offshore Wind Farm. IEEE Transactions on Industrial Electronics, 2015, 62, 6636-6644.	7.9	61
59	Foundations of Population-based SHM, Part II: Heterogeneous populations â€“ Graphs, networks, and communities. Mechanical Systems and Signal Processing, 2021, 148, 107144.	8.0	61
60	Identification of pre-sliding friction dynamics. Chaos, 2004, 14, 420-430.	2.5	59
61	Active learning for semi-supervised structural health monitoring. Journal of Sound and Vibration, 2018, 437, 373-388.	3.9	59
62	Statistical Damage Classification Using Sequential Probability Ratio Tests. Structural Health Monitoring, 2003, 2, 57-74.	7.5	58
63	DAMAGE ASSESSMENT USING NEURAL NETWORKS. Mechanical Systems and Signal Processing, 2003, 17, 119-125.	8.0	56
64	Detection of defects in composite plates using Lamb waves and novelty detection. International Journal of Systems Science, 2000, 31, 1397-1409.	5.5	55
65	Model selection and parameter estimation in structural dynamics using approximate Bayesian computation. Mechanical Systems and Signal Processing, 2018, 99, 306-325.	8.0	55
66	Probabilistic modelling of wind turbine power curves with application of heteroscedastic Gaussian Process regression. Renewable Energy, 2020, 148, 1124-1136.	8.9	55
67	THEORETICAL AND EXPERIMENTAL IDENTIFICATION OF A NON-LINEAR BEAM. Journal of Sound and Vibration, 2001, 244, 597-613.	3.9	54
68	Fatigue life prediction of sandwich composite materials under flexural tests using a Bayesian trained artificial neural network. International Journal of Fatigue, 2007, 29, 738-747.	5.7	54
69	Robust methods of inclusive outlier analysis for structural health monitoring. Journal of Sound and Vibration, 2014, 333, 5181-5195.	3.9	54
70	Bayesian and Markov chain Monte Carlo methods for identifying nonlinear systems in the presence of uncertainty. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2015, 373, 20140405.	3.4	54
71	Novelty detection in a changing environment: A negative selection approach. Mechanical Systems and Signal Processing, 2010, 24, 1114-1128.	8.0	51
72	A numerically-enhanced machine learning approach to damage diagnosis using a Lamb wave sensing network. Journal of Sound and Vibration, 2014, 333, 4499-4525.	3.9	51

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73	Automatic Classification of Acoustic Emission Patterns. Strain, 2003, 39, 31-41.	2.4	50
74	Aspects of structural health and condition monitoring of offshore wind turbines. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2015, 373, 20140075.	3.4	50
75	On the identification of hysteretic systems. Part I: Fitness landscapes and evolutionary identification. Mechanical Systems and Signal Processing, 2012, 29, 201-212.	8.0	49
76	Nonlinear system identification of automotive dampers: A time and frequency-domain analysis. Mechanical Systems and Signal Processing, 2009, 23, 104-126.	8.0	48
77	A regime-switching cointegration approach for removing environmental and operational variations in structural health monitoring. Mechanical Systems and Signal Processing, 2018, 103, 381-397.	8.0	48
78	The use of pseudo-faults for novelty detection in SHM. Journal of Sound and Vibration, 2010, 329, 2349-2366.	3.9	47
79	Probabilistic uncertainty analysis of an FRF of a structure using a Gaussian process emulator. Mechanical Systems and Signal Processing, 2011, 25, 2962-2975.	8.0	47
80	A multiresolution approach to cointegration for enhanced SHM of structures under varying conditions â€“ An exploratory study. Mechanical Systems and Signal Processing, 2014, 47, 243-262.	8.0	47
81	Classification of faults in gearboxes ? pre-processing algorithms and neural networks. Neural Computing and Applications, 1997, 5, 160-183.	5.6	46
82	Visualisation and Dimension Reduction of Acoustic Emission Data for Damage Detection. Journal of Intelligent Material Systems and Structures, 2001, 12, 529-536.	2.5	46
83	Impact Damage Detection in Aircraft Composites Using Knowledge-based Reasoning. Structural Health Monitoring, 2008, 7, 215-230.	7.5	46
84	On evolutionary system identification with applications to nonlinear benchmarks. Mechanical Systems and Signal Processing, 2018, 112, 194-232.	8.0	46
85	Considering discrepancy when calibrating a mechanistic electrophysiology model. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190349.	3.4	46
86	Data processing and experiment design for the restoring force surface method, part II: Choice of excitation signal. Mechanical Systems and Signal Processing, 1990, 4, 321-344.	8.0	45
87	Probabilistic active learning: An online framework for structural health monitoring. Mechanical Systems and Signal Processing, 2019, 134, 106294.	8.0	45
88	Genetic algorithm with an improved fitness function for (N)ARX modelling. Mechanical Systems and Signal Processing, 2007, 21, 994-1007.	8.0	44
89	Transmissibility of non-linear output frequency response functions with application in detection and location of damage in MDOF structural systems. International Journal of Non-Linear Mechanics, 2011, 46, 841-853.	2.6	44
90	Vibration-based damage assessment in steel frames using neural networks. Smart Materials and Structures, 2001, 10, 553-559.	3.5	43

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91	‹title›Novelty detection under changing environmental conditions‹/title›. , 2001, 4330, 108.		42
92	Outlier ensembles: A robust method for damage detection and unsupervised feature extraction from high-dimensional data. Journal of Sound and Vibration, 2019, 453, 126-150.	3.9	42
93	Towards semi-supervised and probabilistic classification in structural health monitoring. Mechanical Systems and Signal Processing, 2020, 140, 106653.	8.0	42
94	Uncertainty analysis of a neural network used for fatigue lifetime prediction. Mechanical Systems and Signal Processing, 2008, 22, 1395-1411.	8.0	41
95	A cellular automaton model for predicting intergranular corrosion. Corrosion Science, 2011, 53, 2518-2526.	6.6	40
96	Prediction of landing gear loads using machine learning techniques. Structural Health Monitoring, 2016, 15, 568-582.	7.5	39
97	On the identification and modelling of friction in a randomly excited energy harvester. Journal of Sound and Vibration, 2013, 332, 4696-4708.	3.9	38
98	A New Transmissibility Analysis Method for Detection and Location of Damage via Nonlinear Features in MDOF Structural Systems. IEEE/ASME Transactions on Mechatronics, 2015, 20, 1933-1947.	5.8	38
99	A machine learning approach to nonlinear modal analysis. Mechanical Systems and Signal Processing, 2017, 84, 34-53.	8.0	38
100	A novel design for panel radiators. Applied Thermal Engineering, 2004, 24, 1291-1300.	6.0	37
101	WAVELET ANALYSIS OF TIME-SERIES: COHERENT STRUCTURES, CHAOS AND NOISE. International Journal of Bifurcation and Chaos in Applied Sciences and Engineering, 1999, 09, 455-471.	1.7	36
102	Application of ultrasonic Lamb wave techniques to the evaluation of advanced composite structures. , 2000, 3986, 93.		36
103	Nonlinearity in experimental modal analysis. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2001, 359, 113-130.	3.4	36
104	Identification of response surface models using genetic programming. Mechanical Systems and Signal Processing, 2006, 20, 1819-1831.	8.0	36
105	Bayesian sensitivity analysis of a model of the aortic valve. Journal of Biomechanics, 2011, 44, 1499-1506.	2.1	36
106	Performance monitoring of a wind turbine using extreme function theory. Renewable Energy, 2017, 113, 1490-1502.	8.9	36
107	Use of the cointegration strategies to remove environmental effects from data acquired on historical buildings. Engineering Structures, 2019, 183, 1014-1026.	5.3	36
108	On the Non-Linear Characteristics of Automotive Shock Absorbers. Proceedings of the Institution of Mechanical Engineers, Part D: Journal of Automobile Engineering, 1992, 206, 3-16.	1.9	35

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109	Associated Linear Equations for Volterra operators. Mechanical Systems and Signal Processing, 2005, 19, 57-69.	8.0	35
110	Structural Health Monitoring of an Annular Component using a Statistical Approach. Strain, 2005, 41, 117-127.	2.4	35
111	Damage detection in operational wind turbine blades using a new approach based on machine learning. Renewable Energy, 2021, 168, 1249-1264.	8.9	35
112	Bayesian sensitivity analysis of a nonlinear finite element model. Mechanical Systems and Signal Processing, 2012, 32, 18-31.	8.0	34
113	Automatic Kernel Selection for Gaussian Processes Regression with Approximate Bayesian Computation and Sequential Monte Carlo. Frontiers in Built Environment, 2017, 3, .	2.3	34
114	Fault detection in rolling element bearings using wavelet-based variance analysis and novelty detection. JVC/Journal of Vibration and Control, 2016, 22, 396-411.	2.6	33
115	On the application of Gaussian process latent force models for joint input-state-parameter estimation: With a view to Bayesian operational identification. Mechanical Systems and Signal Processing, 2020, 140, 106580.	8.0	33
116	Higher-order spectra for identification of nonlinear modal coupling. Mechanical Systems and Signal Processing, 2009, 23, 1037-1061.	8.0	32
117	Simulation of ultrasonic lamb wave generation, propagation and detection for a reconfigurable air coupled scanner. Ultrasonics, 2011, 51, 258-269.	3.9	32
118	On the confidence bounds of Gaussian process NARX models and their higher-order frequency response functions. Mechanical Systems and Signal Processing, 2018, 104, 188-223.	8.0	32
119	Machine learning at the interface of structural health monitoring and non-destructive evaluation. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190581.	3.4	32
120	Equation discovery for nonlinear dynamical systems: A Bayesian viewpoint. Mechanical Systems and Signal Processing, 2021, 154, 107528.	8.0	32
121	Fault location in a framework structure using neural networks. Smart Materials and Structures, 1993, 2, 189-200.	3.5	31
122	Identification Of Nonlinear Wave Forces. Journal of Fluids and Structures, 1994, 8, 19-71.	3.4	31
123	Genetic optimisation of a neural damage locator. Journal of Sound and Vibration, 2008, 309, 529-544.	3.9	31
124	Acoustic emission for monitoring aircraft structures. Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, 2009, 223, 525-532.	1.3	31
125	Bayesian system identification of dynamical systems using highly informative training data. Mechanical Systems and Signal Processing, 2015, 56-57, 109-122.	8.0	31
126	Novelty detection and dimension reduction via guided ultrasonic waves: Damage monitoring of scarf repairs in composite laminates. Journal of Intelligent Material Systems and Structures, 2016, 27, 549-566.	2.5	31

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127	An improved nonlinear model for an automotive shock absorber. Nonlinear Dynamics, 1992, 3, 413-429.	5.2	31
128	Continuous debonding monitoring of a patch repaired helicopter stabilizer: Damage assessment and analysis. Composite Structures, 2015, 127, 231-244.	5.8	30
129	System identification using associated linear equations. Mechanical Systems and Signal Processing, 2004, 18, 431-455.	8.0	29
130	An evidence-based approach to damage location on an aircraft structure. Mechanical Systems and Signal Processing, 2009, 23, 1792-1804.	8.0	29
131	A nonlinear cointegration approach with applications to structural health monitoring. Journal of Physics: Conference Series, 2016, 744, 012025.	0.4	29
132	A probabilistic risk-based decision framework for structural health monitoring. Mechanical Systems and Signal Processing, 2021, 150, 107339.	8.0	29
133	A cointegration approach for heteroscedastic data based on a time series decomposition: An application to structural health monitoring. Mechanical Systems and Signal Processing, 2019, 120, 16-31.	8.0	28
134	On the transfer of damage detectors between structures: An experimental case study. Journal of Sound and Vibration, 2021, 501, 116072.	3.9	28
135	ON-LINE PHYSICAL PARAMETER ESTIMATION WITH ADAPTIVE FORGETTING FACTORS. Mechanical Systems and Signal Processing, 2000, 14, 705-730.	8.0	27
136	Some observations on uncertainty propagation through a simple nonlinear system. Journal of Sound and Vibration, 2005, 288, 601-621.	3.9	27
137	A novel information-gap technique to assess reliability of neural network-based damage detection. Journal of Sound and Vibration, 2006, 293, 96-111.	3.9	27
138	Generalised NARX shunting neural network modelling of friction. Mechanical Systems and Signal Processing, 2007, 21, 553-572.	8.0	26
139	Numerical simulations of elastic wave propagation using graphical processing unitsâ€"Comparative study of high-performance computing capabilities. Computer Methods in Applied Mechanics and Engineering, 2015, 290, 98-126.	6.6	26
140	Structural Health Monitoring: from Structures to Systems-of-Systems â˜… â˜…The support of the UK Engineering and Physical Sciences Research Council (EPSRC) through grant reference numbers EP/J016942/1 and EP/K003836/2, and that of the EU Framework 7 Programme for the ITN project SYSWIND, is gratefully acknowledged.. IFAC-PapersOnLine, 2015, 48, 1-17.	0.9	26
141	Simultaneous Force Regression and Movement Classification of Fingers via Surface EMG within a Unified Bayesian Framework. Frontiers in Bioengineering and Biotechnology, 2018, 6, 13.	4.1	26
142	AN EXTENSION OF FORCE APPROPRIATION TO THE IDENTIFICATION OF NON-LINEAR MULTI-DEGREE OF FREEDOM SYSTEMS. Journal of Sound and Vibration, 2000, 237, 23-43.	3.9	25
143	Evaluation of Neural Network Robust Reliability Using Information-Gap Theory. IEEE Transactions on Neural Networks, 2006, 17, 1349-1361.	4.2	25
144	Albumin level and patient age predict outcomes in patients referred for gastrostomy insertion: internal and external validation of a gastrostomy score and comparison with artificial neural networks. Gastrointestinal Endoscopy, 2011, 74, 1033-1039.e3.	1.0	25

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145	The use of pseudo-faults for damage location in SHM: An experimental investigation on a Piper Tomahawk aircraft wing. Journal of Sound and Vibration, 2014, 333, 971-990.	3.9	25
146	Emerging Trends in Optimal Structural Health Monitoring System Design: From Sensor Placement to System Evaluation. Journal of Sensor and Actuator Networks, 2020, 9, 31.	3.9	25
147	FREQUENCY DOMAIN ANALYSIS OF NARX NEURAL NETWORKS. Journal of Sound and Vibration, 1998, 213, 915-941.	3.9	24
148	Damage location in an isotropic plate using a vector of novelty indices. Mechanical Systems and Signal Processing, 2007, 21, 1885-1906.	8.0	24
149	Some Recent Developments in SHM Based on Nonstationary Time Series Analysis. Proceedings of the IEEE, 2016, 104, 1589-1603.	21.3	24
150	A probabilistic compressive sensing framework with applications to ultrasound signal processing. Mechanical Systems and Signal Processing, 2019, 117, 383-402.	8.0	24
151	Model selection and parameter estimation of dynamical systems using a novel variant of approximate Bayesian computation. Mechanical Systems and Signal Processing, 2019, 122, 364-386.	8.0	24
152	A Bayesian methodology for localising acoustic emission sources in complex structures. Mechanical Systems and Signal Processing, 2022, 163, 108143.	8.0	24
153	<title>Structural damage monitoring based on an actuator-sensor system</title>. , 1999, , .		23
154	Approaches to nonlinear cointegration with a view towards applications in SHM. Journal of Physics: Conference Series, 2011, 305, 012069.	0.4	23
155	On the orthogonalised reverse path method for nonlinear system identification. Journal of Sound and Vibration, 2012, 331, 4488-4503.	3.9	23
156	Overcoming the problem of repair in structural health monitoring: Metric-informed transfer learning. Journal of Sound and Vibration, 2021, 510, 116245.	3.9	23
157	On spike-and-slab priors for Bayesian equation discovery of nonlinear dynamical systems via sparse linear regression. Mechanical Systems and Signal Processing, 2021, 161, 107986.	8.0	23
158	On a Grey Box Modelling Framework for Nonlinear System Identification. Conference Proceedings of the Society for Experimental Mechanics, 2017, , 167-178.	0.5	22
159	On Digital Twins, Mirrors, and Virtualizations: Frameworks for Model Verification and Validation. ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering, 2020, 6, .	1.1	22
160	<title>Overview of optimal sensor location methods for damage detection</title>. , 2001, , .		21
161	Strategies for using cellular automata to locate constrained layer damping on vibrating structures. Journal of Sound and Vibration, 2009, 319, 119-139.	3.9	21
162	On the identification of hysteretic systems. Part II: Bayesian sensitivity analysis and parameter confidence. Mechanical Systems and Signal Processing, 2012, 29, 213-227.	8.0	21

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163	Variational Bayesian mixture of experts models and sensitivity analysis for nonlinear dynamical systems. Mechanical Systems and Signal Processing, 2016, 66-67, 178-200.	8.0	21
164	On Population-based structural health monitoring for bridges. Mechanical Systems and Signal Processing, 2022, 173, 108919.	8.0	21
165	Modeling and classification of non-linear systems using neural networks--I. Simulation. Mechanical Systems and Signal Processing, 1994, 8, 319-356.	8.0	20
166	Damage Localisation in a Stiffened Composite Panel. Strain, 2008, 44, 298-307.	2.4	20
167	Foundations of population-based SHM, Part IV: The geometry of spaces of structures and their feature spaces. Mechanical Systems and Signal Processing, 2021, 157, 107692.	8.0	20
168	A population-based SHM methodology for heterogeneous structures: Transferring damage localisation knowledge between different aircraft wings. Mechanical Systems and Signal Processing, 2022, 172, 108918.	8.0	20
169	The effect of Duffing-type non-linearities and Coulomb damping on the response of an energy harvester to random excitations. Journal of Intelligent Material Systems and Structures, 2012, 23, 2039-2054.	2.5	19
170	Damage detection in a laboratory wind turbine blade using techniques of ultrasonic NDT and SHM. Strain, 2018, 54, e12290.	2.4	19
171	A Volterra series approximation to the coherence of the Duffing oscillator. Journal of Sound and Vibration, 2005, 286, 529-547.	3.9	18
172	Analysis of time-invariant systems in the time and frequency domain by associated linear equations (ALEs). Mechanical Systems and Signal Processing, 2006, 20, 896-919.	8.0	18
173	Detecting and identifying artificial acoustic emission signals in an industrial fatigue environment. Measurement Science and Technology, 2009, 20, 045101.	2.6	18
174	Optimum Sensor Placement for Impact Location Using Trilateration. Strain, 2015, 51, 89-100.	2.4	18
175	On the application of kernelised Bayesian transfer learning to population-based structural health monitoring. Mechanical Systems and Signal Processing, 2022, 167, 108519.	8.0	18
176	CONFIDENCE BOUNDS FOR FREQUENCY RESPONSE FUNCTIONS FROM TIME SERIES MODELS. Mechanical Systems and Signal Processing, 1998, 12, 559-569.	8.0	17
177	Long-term stability of normal condition data for novelty detection. , 2000, , .		17
178	Improving Excitations for Active Sensing in Structural Health Monitoring via Evolutionary Algorithms. Journal of Vibration and Acoustics, Transactions of the ASME, 2007, 129, 784-802.	1.6	17
179	On the performance of a cointegration-based approach for novelty detection in realistic fatigue crack growth scenarios. Mechanical Systems and Signal Processing, 2019, 123, 84-101.	8.0	17
180	On the application of generative adversarial networks for nonlinear modal analysis. Mechanical Systems and Signal Processing, 2022, 166, 108473.	8.0	17

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181	Damage identification using multivariate statistics: Kernel discriminant analysis. Inverse Problems in Science and Engineering, 2000, 8, 25-46.	0.5	16
182	Spatial scanning for anomaly detection in acoustic emission testing of an aerospace structure. Mechanical Systems and Signal Processing, 2011, 25, 2462-2474.	8.0	16
183	Nonlinear modal analysis via nonâ€parametric machine learning tools. Strain, 2019, 55, e12297.	2.4	16
184	On risk-based active learning for structural health monitoring. Mechanical Systems and Signal Processing, 2022, 167, 108569.	8.0	16
185	On the Long-Term Stability of Normal Condition for Damage Detection in a Composite Panel. Key Engineering Materials, 2001, 204-205, 359-370.	0.4	15
186	Genetic identification of crack-tip parameters using thermoelastic isopachics. Measurement Science and Technology, 2003, 14, 176-183.	2.6	15
187	Bayesian sensitivity analysis of bifurcating nonlinear models. Mechanical Systems and Signal Processing, 2013, 34, 57-75.	8.0	15
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