

Edwin Pb Reynders

List of Publications by Year in descending order

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95
papers

4,437
citations

147801

31
h-index

106344

65
g-index

100
all docs

100
docs citations

100
times ranked

2385
citing authors

#	ARTICLE	IF	CITATIONS
1	System Identification Methods for (Operational) Modal Analysis: Review and Comparison. Archives of Computational Methods in Engineering, 2012, 19, 51-124.	10.2	456
2	Vibration-based structural health monitoring using output-only measurements under changing environment. Mechanical Systems and Signal Processing, 2008, 22, 34-56.	8.0	441
3	An augmented Kalman filter for force identification in structural dynamics. Mechanical Systems and Signal Processing, 2012, 27, 446-460.	8.0	331
4	Uncertainty bounds on modal parameters obtained from stochastic subspace identification. Mechanical Systems and Signal Processing, 2008, 22, 948-969.	8.0	320
5	Fully automated (operational) modal analysis. Mechanical Systems and Signal Processing, 2012, 29, 228-250.	8.0	314
6	Reference-based combined deterministic and stochastic subspace identification for experimental and operational modal analysis. Mechanical Systems and Signal Processing, 2008, 22, 617-637.	8.0	304
7	Joint input-response estimation for structural systems based on reduced-order models and vibration data from a limited number of sensors. Mechanical Systems and Signal Processing, 2012, 29, 310-327.	8.0	203
8	Output-only structural health monitoring in changing environmental conditions by means of nonlinear system identification. Structural Health Monitoring, 2014, 13, 82-93.	7.5	176
9	Uncertainty quantification in operational modal analysis with stochastic subspace identification: Validation and applications. Mechanical Systems and Signal Processing, 2016, 66-67, 13-30.	8.0	132
10	Experimental and numerical analysis of a composite bridge for high-speed trains. Journal of Sound and Vibration, 2009, 320, 201-220.	3.9	130
11	Sensitivity-based finite element model updating using constrained optimization with a trust region algorithm. Journal of Sound and Vibration, 2007, 305, 211-225.	3.9	116
12	Damage Identification on the Tilff Bridge by Vibration Monitoring Using Optical Fiber Strain Sensors. Journal of Engineering Mechanics - ASCE, 2007, 133, 185-193.	2.9	88
13	Finite element model updating and structural damage identification using OMAX data. Mechanical Systems and Signal Processing, 2010, 24, 1306-1323.	8.0	87
14	A local flexibility method for vibration-based damage localization and quantification. Journal of Sound and Vibration, 2010, 329, 2367-2383.	3.9	86
15	Design of sensor networks for instantaneous inversion of modally reduced order models in structural dynamics. Mechanical Systems and Signal Processing, 2015, 52-53, 628-644.	8.0	77
16	The influence of environmental parameters on the dynamic behaviour of the San Frediano bell tower in Lucca. Engineering Structures, 2018, 156, 175-187.	5.3	73
17	Automated structural health monitoring based on adaptive kernel spectral clustering. Mechanical Systems and Signal Processing, 2017, 90, 64-78.	8.0	65
18	An improved finite element model updating method by the global optimization technique "Coupled Local Minimizers". Computers and Structures, 2008, 86, 1339-1352.	4.4	58

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19	Combined Experimental-Operational Modal Testing of Footbridges. Journal of Engineering Mechanics - ASCE, 2010, 136, 687-696.	2.9	55
20	Identification of axial forces in beam members by local vibration measurements. Journal of Sound and Vibration, 2013, 332, 5417-5432.	3.9	54
21	Vibration-based estimation of axial force for a beam member with uncertain boundary conditions. Journal of Sound and Vibration, 2013, 332, 795-806.	3.9	53
22	Damage identification using modal strains identified from operational fiber-optic Bragg grating data. Structural Health Monitoring, 2018, 17, 1441-1459.	7.5	52
23	An efficient approach to model updating for a multispan railway bridge using orthogonal diagonalization combined with improved particle swarm optimization. Journal of Sound and Vibration, 2020, 476, 115315.	3.9	50
24	Modal contribution and state space order selection in operational modal analysis. Mechanical Systems and Signal Processing, 2013, 38, 276-298.	8.0	48
25	Optimal sensor placement for multi-setup modal analysis of structures. Journal of Sound and Vibration, 2017, 401, 214-232.	3.9	48
26	Finite element modelling of a silo based on experimental modal analysis. Engineering Structures, 2006, 28, 532-542.	5.3	42
27	The role of modal parameters uncertainty estimation in automated modal identification, modal tracking and data normalization. Engineering Structures, 2020, 224, 111208.	5.3	41
28	A hybrid finite element " statistical energy analysis approach to robust sound transmission modeling. Journal of Sound and Vibration, 2014, 333, 4621-4636.	3.9	38
29	Uncertainty quantification in data-driven stochastic subspace identification. Mechanical Systems and Signal Processing, 2021, 151, 107338.	8.0	38
30	One-year operational modal analysis of a steel bridge from high-resolution macrostrain monitoring: Influence of temperature vs. retrofitting. Mechanical Systems and Signal Processing, 2021, 161, 107951.	8.0	38
31	Identification of modal strains using sub-microstrain FBG data and a novel wavelength-shift detection algorithm. Mechanical Systems and Signal Processing, 2017, 86, 58-74.	8.0	33
32	Offline synchronization of data acquisition systems using system identification. Journal of Sound and Vibration, 2016, 381, 264-272.	3.9	22
33	Predicting the sound insulation of finite double-leaf walls with a flexible frame. Applied Acoustics, 2018, 141, 93-105.	3.3	22
34	Influence of damage versus temperature on modal strains and neutral axis positions of beam-like structures. Mechanical Systems and Signal Processing, 2019, 134, 106311.	8.0	22
35	Pre- and Post-identification Merging for Multi-Setup OMA with Covariance-Driven SSI. Conference Proceedings of the Society for Experimental Mechanics, 2011, , 57-70.	0.5	22
36	On the applicability of the lognormal distribution in random dynamical systems. Journal of Sound and Vibration, 2013, 332, 3289-3302.	3.9	20

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37	Sound transmission through finite rib-stiffened and orthotropic plates. <i>Acta Acustica United With Acustica</i> , 2016, 102, 999-1010.	0.8	20
38	Cross-frequency and band-averaged response variance prediction in the hybrid deterministic-statistical energy analysis method. <i>Journal of Sound and Vibration</i> , 2018, 428, 119-146.	3.9	17
39	Fast mean and variance computation of the diffuse sound transmission through finite-sized thick and layered wall and floor systems. <i>Journal of Sound and Vibration</i> , 2018, 422, 131-145.	3.9	16
40	Model updating of periodic structures based on free wave characteristics. <i>Journal of Sound and Vibration</i> , 2019, 442, 281-307.	3.9	12
41	Response probability distribution of built-up vibro-acoustic systems. <i>Journal of the Acoustical Society of America</i> , 2012, 131, 1138-1149.	1.1	11
42	Development of a mechanical strain amplifying transducer with Bragg grating sensor for low-amplitude strain sensing. <i>Smart Materials and Structures</i> , 2017, 26, 075006.	3.5	11
43	Wireless-Based Identification and Model Updating of a Skewed Highway Bridge for Structural Health Monitoring. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 2347.	2.5	11
44	On the measurement and prediction of rainfall noise. <i>Applied Acoustics</i> , 2021, 171, 107636.	3.3	11
45	Consistent Impulse-Response Estimation and System Realization From Noisy Data. <i>IEEE Transactions on Signal Processing</i> , 2008, 56, 2696-2705.	5.3	10
46	Prediction and uncertainty quantification of structure-borne sound radiation into a diffuse field. <i>Journal of Sound and Vibration</i> , 2019, 463, 114984.	3.9	10
47	Vibration-Based Damage Identification: The Z24 Bridge Benchmark. , 2014, , 1-8.		10
48	Effects of initial conditions in operational modal analysis. <i>Structural Control and Health Monitoring</i> , 2014, 21, 557-573.	4.0	9
49	Numerical prediction and experimental validation of impact sound radiation by timber joist floors. <i>Applied Acoustics</i> , 2020, 162, 107182.	3.3	9
50	Automated interpretation of stabilization diagrams. <i>Conference Proceedings of the Society for Experimental Mechanics</i> , 2011, , 189-201.	0.5	9
51	Measurement of modal curvatures using optical fiber strain sensors and application to damage identification using vibration monitoring. , 2005, 5855, 1076.		8
52	Parametric uncertainty quantification of sound insulation values. <i>Journal of the Acoustical Society of America</i> , 2014, 135, 1907-1918.	1.1	8
53	Vibration-based monitoring of an FRP footbridge with embedded fiber-Bragg gratings: Influence of temperature vs. damage. <i>Composite Structures</i> , 2022, 287, 115295.	5.8	8
54	Vibration-based structural health monitoring using large sensor networks. <i>Smart Structures and Systems</i> , 2010, 6, 335-347.	1.9	7

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55	An efficient probabilistic approach to vibro-acoustic analysis based on the Gaussian orthogonal ensemble. <i>Journal of the Acoustical Society of America</i> , 2014, 136, 201-212.	1.1	6
56	Operational Modal Analysis in Civil Engineering: An Overview. , 2014, , 1-9.		5
57	A study on the concurrent influence of liquid content and damage on the dynamic properties of a tank for the development of a modal-based SHM system. <i>Journal of Civil Structural Health Monitoring</i> , 2020, 10, 57-68.	3.9	5
58	Seismic demands and analysis of site effects in the Marmara region during the 1999 Kocaeli earthquake. <i>Natural Hazards</i> , 2007, 42, 169-191.	3.4	4
59	Towards a more realistic modelling of the uncertainty on identified mode shapes due to measurement noise. <i>Journal of Physics: Conference Series</i> , 2011, 305, 012002.	0.4	4
60	Uncertainty quantification of modal characteristics identified from frequency-domain stochastic subspace identification. <i>Procedia Engineering</i> , 2017, 199, 996-1001.	1.2	4
61	Subspace identification for operational modal analysis. <i>CISM International Centre for Mechanical Sciences, Courses and Lectures</i> , 2010, , 55-106.	0.6	3
62	Modal strain identification using sub-microstrain FBG data from a pre-stressed concrete beam during progressive damage testing. <i>Procedia Engineering</i> , 2017, 199, 1846-1851.	1.2	3
63	Gaussian orthogonal ensemble modeling of built-up systems containing general diffuse components and parametric uncertainty. <i>Journal of Sound and Vibration</i> , 2021, 501, 116045.	3.9	3
64	Shape optimization of studs in double-leaf plasterboard walls for maximal broadband sound insulation and minimal material use. <i>Applied Acoustics</i> , 2021, 183, 108307.	3.3	3
65	Vibration-Based Damage Identification: The Z24 Bridge Benchmark. , 2015, , 3871-3879.		3
66	Prediction of diffuse sound transmission through finite-sized periodic structures. <i>Journal of Sound and Vibration</i> , 2022, 528, 116851.	3.9	3
67	Experimental verification of optimal sensor placement for multi-setup modal testing. <i>Procedia Engineering</i> , 2017, 199, 1068-1073.	1.2	2
68	Broadband acoustic shape optimization of studs in double-leaf walls. <i>Journal of Sound and Vibration</i> , 2020, 485, 115562.	3.9	2
69	Assessment of Small Damage by Direct Modal Strain Measurements. <i>Lecture Notes in Civil Engineering</i> , 2018, , 3-16.	0.4	2
70	Dynamic Testing of Constructed Facilities. , 2010, , .		1
71	Mechanical strain-amplifying transducer for fiber Bragg grating sensors with applications in structural health monitoring. , 2017, , .		1
72	Damage Identification Using Sub-Microstrain FBG Data from a Pre-Stressed Concrete Beam During Progressive Damage Testing. <i>Proceedings (mdpi)</i> , 2018, 2, .	0.2	1

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73	Identification of modal strains in concrete beams at sub-microstrain amplitude excitation using fibre Bragg grating sensors mounted on a strain-amplifying transducer. Structural Health Monitoring, 2021, 20, 1221-1230.	7.5	1
74	Numerical study of the impact of reverberation room design and test parameters on sound absorption measurements. INTER-NOISE and NOISE-CON Congress and Conference Proceedings, 2021, 263, 2372-2383.	0.1	1
75	Operational Modal Analysis in Civil Engineering: An Overview. , 2015, , 1757-1764.		1
76	OMAX testing of a steel bowstring footbridge. Conference Proceedings of the Society for Experimental Mechanics, 2011, , 173-182.	0.5	1
77	Coupling strength evaluation in vibro-acoustic systems. Journal of Sound and Vibration, 2022, 536, 117133.	3.9	1
78	Subspace identification of (AR)ARMAX, Box-Jenkins, and generalized model structures. IFAC Postprint Volumes IPPV / International Federation of Automatic Control, 2009, 42, 868-873.	0.4	0
79	Measurement and Prediction of the Pedestrian-Induced Vibrations of a Footbridge. Noise and Vibration Worldwide, 2009, 40, 10-19.	1.0	0
80	Bayesian parameter identification for vibro-acoustic models with nonparametric uncertainty. , 2014, , 4659-4666.		0
81	Synchronization of dynamic response measurements for the purpose of structural health monitoring. Journal of Physics: Conference Series, 2016, 744, 012093.	0.4	0
82	Vibration Monitoring of a Railway Bridge Using Distributed Macro-strain Data Obtained with Fiber Bragg Gratings. Lecture Notes in Civil Engineering, 2021, , 289-309.	0.4	0
83	An optimization method for reverberation room design. INTER-NOISE and NOISE-CON Congress and Conference Proceedings, 2021, 263, 2360-2371.	0.1	0
84	Predicting vibration transmission across junctions using diffuse field reciprocity. INTER-NOISE and NOISE-CON Congress and Conference Proceedings, 2021, 263, 722-733.	0.1	0
85	Diffuse sound absorption modelling of complex finite absorbers using a hybrid deterministic-statistical energy analysis approach. INTER-NOISE and NOISE-CON Congress and Conference Proceedings, 2021, 263, 355-366.	0.1	0
86	Impact sound prediction of finite floor structures with the modal transfer matrix method. INTER-NOISE and NOISE-CON Congress and Conference Proceedings, 2021, 263, 734-745.	0.1	0
87	Vibration-based structural health monitoring from operational long- gauge fiber optic strain data. , 2021, , .		0
88	Reference-based combined deterministic-stochastic subspace identification for experimental and operational modal analysis. , 2006, , 757-757.		0
89	Low cost dynamic structural identification system for extensive bridge monitoring. Bridge Maintenance, Safety and Management, 2012, , 3082-3088.	0.1	0
90	SEMI-DISCRETE COINCIDENCE IN THE MID-FREQUENCY SOUND TRANSMISSION THROUGH RIB-STIFFENED PANELS. , 2016, , .		0

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91	Advances and challenges in structural health monitoring. , 2016, , 32-37.		0
92	SYNCHRONIZATION OF DATA ACQUISITION SYSTEMS FOR THE PURPOSE OF STRUCTURAL HEALTH MONITORING. , 2017, , .		0
93	SENSITIVITY ANALYSIS OF THE FREE WAVE CHARACTERISTICS OF PERIODIC STRUCTURES. , 2017, , .		0
94	A Comparison of Two Data Acquisition Techniques for Modal Strain Identification from Sub-microstrain FBG Data. Lecture Notes in Civil Engineering, 2018, , 432-444.	0.4	0
95	TRACKING THE MODAL PARAMETERS OF THE BAIXO SABOR CONCRETE ARCH DAM WITH UNCERTAINTY QUANTIFICATION. , 2019, , .		0