Brian R Mace

List of Publications by Year
in descending order

119 papers	5,553 citations	87843 38 h-index	88593 70 g-index
129 all docs	129 docs citations	129 times ranked	2398 citing authors

#	Article	IF	Citations
1	Potential benefits of a non-linear stiffness in an energy harvesting device. Nonlinear Dynamics, 2010, 59, 545-558.	2.7	364
2	Finite element prediction of wave motion in structural waveguides. Journal of the Acoustical Society of America, 2005, 117, 2835-2843.	0.5	347
3	Modelling wave propagation in two-dimensional structures using finite element analysis. Journal of Sound and Vibration, 2008, 318, 884-902.	2.1	291
4	Finite element analysis of the vibrations of waveguides and periodic structures. Journal of Sound and Vibration, 2006, 294, 205-220.	2.1	254
5	Wave reflection and transmission in beams. Journal of Sound and Vibration, 1984, 97, 237-246.	2.1	215
6	Numerical issues concerning the wave and finite element method for free and forced vibrations of waveguides. Journal of Sound and Vibration, 2009, 327, 92-108.	2.1	151
7	Periodically stiffened fluid-loaded plates, I: Response to convected harmonic pressure and free wave propagation. Journal of Sound and Vibration, 1980, 73, 473-486.	2.1	136
8	Wave motion and dispersion phenomena: Veering, locking and strong coupling effects. Journal of the Acoustical Society of America, 2012, 131, 1015-1028.	0.5	136
9	ENERGY FLOW MODELS FROM FINITE ELEMENT ANALYSIS. Journal of Sound and Vibration, 2000, 233, 369-389.	2.1	129
10	Formation and coupling of band gaps in a locally resonant elastic system comprising a string with attached resonators. Physics Letters, Section A: General, Atomic and Solid State Physics, 2011, 375, 1485-1491.	0.9	127
11	Internal resonance with commensurability induced by an auxiliary oscillator for broadband energy harvesting. Applied Physics Letters, 2016, 108, .	1.5	118
12	Active control of flexural vibrations. Journal of Sound and Vibration, 1987, 114, 253-270.	2.1	97
13	Free and forced vibrations of a tyre using a wave/finite element approach. Journal of Sound and Vibration, 2009, 323, 737-756.	2.1	97
14	Periodically stiffened fluid-loaded plates, II: Response to line and point forces. Journal of Sound and Vibration, 1980, 73, 487-504.	2.1	96
15	Statistical energy analysis, energy distribution models and system modes. Journal of Sound and Vibration, 2003, 264, 391-409.	2.1	95
16	Wave characterization of cylindrical and curved panels using a finite element method. Journal of the Acoustical Society of America, 2009, 125, 154-163.	0.5	86
17	Sound radiation from fluid loaded orthogonally stiffened plates. Journal of Sound and Vibration, 1981, 79, 439-452.	2.1	83
18	A tubular dielectric elastomer actuator: Fabrication, characterization and active vibration isolation. Mechanical Systems and Signal Processing, 2011, 25, 2879-2891.	4.4	83

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19	Sound radiation from a plate reinforced by two sets of parallel stiffeners. Journal of Sound and Vibration, 1980, 71, 435-441.	2.1	82
20	On the forced response of waveguides using the wave and finite element method. Journal of Sound and Vibration, 2010, 329, 5474-5488.	2.1	76
21	Wave propagation, reflection and transmission in curved beams. Journal of Sound and Vibration, 2007, 306, 636-656.	2.1	74
22	Multi-physics coupling in thermoacoustic devices: A review. Renewable and Sustainable Energy Reviews, 2021, 146, 111170.	8.2	74
23	Calculation of reflection and transmission coefficients of joints using a hybrid finite element/wave and finite element approach. Journal of Sound and Vibration, 2013, 332, 2149-2164.	2.1	72
24	A comprehensive study of 2:1 internal-resonance-based piezoelectric vibration energy harvesting. Nonlinear Dynamics, 2018, 91, 1817-1834.	2.7	68
25	Component mode synthesis as a framework for uncertainty analysis. Journal of Sound and Vibration, 2009, 324, 161-178.	2.1	66
26	Statistical energy analysis: coupling loss factors, indirect coupling and system modes. Journal of Sound and Vibration, 2005, 279, 141-170.	2.1	65
27	Estimation of the loss factor of viscoelastic laminated panels from finite element analysis. Journal of Sound and Vibration, 2010, 329, 3928-3939.	2.1	65
28	Wave propagation, reflection and transmission in non-uniform one-dimensional waveguides. Journal of Sound and Vibration, 2007, 304, 31-49.	2.1	64
29	Behaviour of fibre-reinforced honeycomb core under low velocity impact loading. Composite Structures, 2013, 100, 356-362.	3.1	57
30	Real-time control of a shape memory alloy adaptive tuned vibration absorber. Smart Materials and Structures, 2005, 14, 1184-1195.	1.8	56
31	Broadband piezoelectric vibration energy harvesting using a nonlinear energy sink. Journal Physics D: Applied Physics, 2018, 51, 185502.	1.3	55
32	A LOCAL MODAL/PERTURBATIONAL METHOD FOR ESTIMATING FREQUENCY RESPONSE STATISTICS OF BUILT-UP STRUCTURES WITH UNCERTAIN PROPERTIES. Journal of Sound and Vibration, 2001, 242, 793-811.	2.1	53
33	Modelling and analysis of a thermoacoustic-piezoelectric energy harvester. Applied Thermal Engineering, 2019, 150, 532-544.	3.0	53
34	Prediction of sound transmission through, and radiation from, panels using a wave and finite element method. Journal of the Acoustical Society of America, 2017, 141, 2452-2460.	0.5	47
35	The Statistical Energy Analysis of Two Continuous One-Dimensional Subsystems. Journal of Sound and Vibration, 1993, 166, 429-461.	2.1	43
36	Arbitrary active constrained layer damping treatments on beams: Finite element modelling and experimental validation. Computers and Structures, 2006, 84, 1384-1401.	2.4	42

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37	A mode-based approach for the mid-frequency vibration analysis of coupled long- and short-wavelength structures. Journal of Sound and Vibration, 2006, 289, 148-170.	2.1	39
38	Power flow between two continuous one-dimensional subsystems: A wave solution. Journal of Sound and Vibration, 1992, 154, 289-319.	2.1	38
39	On The Statistical Energy Analysis Hypothesis Of Coupling Power Proportionality And Some Implications Of Its Failure. Journal of Sound and Vibration, 1994, 178, 95-112.	2.1	37
40	STATISTICAL ENERGY ANALYSIS OF TWO EDGE-COUPLED RECTANGULAR PLATES: ENSEMBLE AVERAGES. Journal of Sound and Vibration, 1996, 193, 793-822.	2.1	36
41	A self-tuning electromagnetic vibration absorber with adaptive shunt electronics. Smart Materials and Structures, 2013, 22, 105013.	1.8	34
42	Calculating the forced response of cylinders and cylindrical shells using the wave and finite element method. Journal of Sound and Vibration, 2014, 333, 5340-5355.	2.1	34
43	HYBRID WAVE/MODE ACTIVE VIBRATION CONTROL. Journal of Sound and Vibration, 2001, 247, 765-784.	2.1	33
44	Suppression of bending waves in a beam using a tuned vibration absorber. Journal of Sound and Vibration, 2005, 288, 1157-1175.	2.1	33
45	Calculating the forced response of two-dimensional homogeneous media using the wave and finite element method. Journal of Sound and Vibration, 2011, 330, 5913-5927.	2.1	33
46	A wave finite element analysis of the passive cochlea. Journal of the Acoustical Society of America, 2013, 133, 1535-1545.	0.5	33
47	Theoretical and experimental investigation of the dynamic behaviour of a standing-wave thermoacoustic engine with various boundary conditions. International Journal of Heat and Mass Transfer, 2018, 123, 367-381.	2.5	33
48	WAVE PROPAGATION, REFLECTION AND TRANSMISSION IN TUNABLE FLUID-FILLED BEAMS. Journal of Sound and Vibration, 2001, 241, 735-754.	2.1	31
49	Acoustic response variability in automotive vehicles. Journal of Sound and Vibration, 2009, 321, 286-304.	2.1	31
50	On the performance of a dual-mode non-linear vibration energy harvesting device. Journal of Intelligent Material Systems and Structures, 2012, 23, 1423-1432.	1.4	31
51	THE VIBRATION OF PLATES ON TWO-DIMENSIONALLY PERIODIC POINT SUPPORTS. Journal of Sound and Vibration, 1996, 192, 629-643.	2.1	30
52	Bistability and triggering in a thermoacoustic engine: A numerical study. International Journal of Heat and Mass Transfer, 2020, 157, 119951.	2.5	30
53	TIME DOMAIN ESTIMATION OF RESPONSE AND INTENSITY IN BEAMS USING WAVE DECOMPOSITION AND RECONSTRUCTION. Journal of Sound and Vibration, 2000, 230, 561-589.	2.1	29
54	Modal characterisation of recyclable foam sandwich panels. Composite Structures, 2014, 113, 362-368.	3.1	29

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55	Vibration modelling of structural networks using a hybrid finite element/wave and finite element approach. Wave Motion, 2014, 51, 566-580.	1.0	29
56	Vibroacoustic analysis of periodic structures using a wave and finite element method. Journal of Sound and Vibration, 2019, 457, 333-353.	2.1	29
57	Numerical investigation of synthetic jets driven by thermoacoustic standing waves. International Journal of Heat and Mass Transfer, 2020, 146, 118859.	2.5	27
58	Vibrational response prediction of a pneumatic tyre using an orthotropic two-plate wave model. Journal of Sound and Vibration, 2003, 264, 929-950.	2.1	26
59	Adaptive active control of flexural waves in a beam in the presence of a nearfield. Journal of Sound and Vibration, 2005, 285, 149-171.	2.1	26
60	Structural intensity in beamsâ€"waves, transducer systems and the conditioning problem. Journal of Sound and Vibration, 1995, 185, 279-298.	2.1	25
61	Vibration modelling of helical springs with non-uniform ends. Journal of Sound and Vibration, 2012, 331, 2809-2823.	2.1	24
62	Subject-specific musculoskeletal parameters of wrist flexors and extensors estimated by an EMG-driven musculoskeletal model. Medical Engineering and Physics, 2012, 34, 531-540.	0.8	24
63	Wave propagation in one-dimensional waveguides with slowly varying random spatially correlated variability. Journal of Sound and Vibration, 2015, 343, 20-48.	2.1	24
64	Wave component analysis of energy flow in complex structures â€“ Part I: a deterministic model. Journal of Sound and Vibration, 2005, 285, 209-227.	2.1	22
65	Mode transition in a standing-wave thermoacoustic engine: A numerical study. Journal of Sound and Vibration, 2021, 504, 116119.	2.1	22
66	FEEDFORWARD ADAPTIVE CONTROL OF FLEXURAL VIBRATION IN A BEAM USING WAVE AMPLITUDES. Journal of Sound and Vibration, 2002, 254, 117-141.	2.1	21
67	The loss-factor of pre-stressed laminated curved panels and cylinders using a wave and finite element method. Journal of Sound and Vibration, 2013, 332, 1704-1711.	2.1	21
68	Wave and finite element method for predicting sound transmission through finite multi-layered structures with fluid layers. Computers and Structures, 2018, 204, 20-30.	2.4	21
69	Sound transmission through cylindrical structures using a wave and finite element method. Wave Motion, 2019, 87, 58-74.	1.0	21
70	Veering and Strong Coupling Effects in Structural Dynamics. Journal of Vibration and Acoustics, Transactions of the ASME, 2017, 139, .	1.0	20
71	A power mode approach to estimating vibrational power transmitted by multiple sources. Journal of Sound and Vibration, 2003, 265, 387-399.	2.1	19
72	A hybrid mode/Fourier-transform approach for estimating the vibrations of beam-stiffened plate systems. Journal of Sound and Vibration, 2004, 274, 547-565.	2.1	18

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73	A wave and finite element based homogenised model for predicting sound transmission through honeycomb panels. Journal of Sound and Vibration, 2019, 463, 114963.	2.1	18
74	Power flow between two coupled beams. Journal of Sound and Vibration, 1992, 159, 305-325.	2.1	17
75	Robust estimation of coupling loss factors from finite element analysis. Journal of Sound and Vibration, 2007, 303, 814-831.	2.1	17
76	Joint Uncertainty Propagation in Linear Structural Dynamics Using Stochastic Reduced Basis Methods. AIAA Journal, 2009, 47, 961-969.	1.5	17
77	Exploiting knowledge of jump-up and jump-down frequencies to determine the parameters of a Duffing oscillator. Communications in Nonlinear Science and Numerical Simulation, 2016, 37, 282-291.	1.7	17
78	Analysis of the vibroacoustic characteristics of cross laminated timber panels using a wave and finite element method. Journal of Sound and Vibration, 2021, 494, 115842.	2.1	17
79	Wave and vibration analysis of elastic metamaterial and phononic crystal beams with slowly varying properties. Wave Motion, 2021, 103, 102728.	1.0	17
80	A Finite Element Method for Modelling Waves in Laminated Structures. Advances in Structural Engineering, 2013, 16, 61-75.	1.2	16
81	Adaptive-passive control of vibration transmission in beams using electro/magnetorheological fluid filled inserts. IEEE Transactions on Control Systems Technology, 2001, 9, 209-220.	3.2	15
82	The statistics of power flow between two continuous one-dimensional subsystems. Journal of Sound and Vibration, 1992, 154, 321-341.	2.1	14
83	Modelling of spatial variations in vibration analysis with application to an automotive windshield. Finite Elements in Analysis and Design, 2011, 47, 55-62.	1.7	14
84	Wave transmission through structural inserts. Journal of the Acoustical Society of America, 2001, 109, 1417-1421.	0.5	13
85	Discussion of â€œDynamics of Phononic Materials and Structures: Historical Origins, Recent Progress and Future Outlookâ€•(Hussein, M. I., Leamy, M. J., and Ruzzene, M., 2014, ASME Appl. Mech. Rev., 66(4), p.) Tj ETQq1 1 0.784314 rg BT		
86	Comparison of convergence characteristics of adaptive IIR and FIR filters for active noise control in a duct. Applied Acoustics, 2007, 68, 729-738.	1.7	12
87	Modeling and harmonic analysis of energy extracting performance of a piezoelectric nonlinear energy sink system with AC and DC interface circuits. Mechanical Systems and Signal Processing, 2021, 155, 107609.	4.4	12
88	Isometric force generated by locust skeletal muscle: responses to single stimuli. Biological Cybernetics, 2010, 102, 503-511.	0.6	11
89	A Robust Adaptive Tuned Vibration Absorber Using Semi-Passive Shunt Electronics. IEEE Transactions on Industrial Electronics, 2016, , 1-1.	5.2	11
90	Approaches to estimating the reflection and transmission coefficients of discontinuities in waveguides from measured data. Journal of Sound and Vibration, 2007, 307, 280-294.	2.1	10

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91	A comparison of models of the isometric force of locust skeletal muscle in response to pulse train inputs. Biomechanics and Modeling in Mechanobiology, 2012, 11, 519-532.	1.4	10
92	Vibration energy harvesting based on a piezoelectric nonlinear energy sink with synchronized charge extraction interface circuit. Journal Physics D: Applied Physics, 2020, 53, 505502.	1.3	10
93	Active vibration control of periodic disturbances using a DEAP damper. Proceedings of SPIE, 2010, , .	0.8	8
94	A wave and finite element method for calculating sound transmission through rectangular panels. Mechanical Systems and Signal Processing, 2021, 151, 107357.	4.4	8
95	Dynamic analysis of the response of Duffing-type oscillators subject to interacting parametric and external excitations. Nonlinear Dynamics, 2022, 107, 99-120.	2.7	8
96	Identifying joints from measured reflection coefficients in beam-like structures with application to a pipe support. Mechanical Systems and Signal Processing, 2010, 24, 784-795.	4.4	7
97	System identification and controller design for individual pitch and trailing edge flap control on upscaled wind turbines. Wind Energy, 2016, 19, 1073-1088.	1.9	7
98	Sensitivity analysis of generalised eigenproblems and application to wave and finite element models. Journal of Sound and Vibration, 2020, 478, 115345.	2.1	7
99	Low-frequency measurements and predictions of the structural-acoustic properties of the INCE standard T-beam structure. Noise Control Engineering Journal, 2002, 50, 90.	0.2	6
100	On the behaviour of infinite, periodic, mono-coupled waveguides using a transmission coefficient phase method. Mechanical Systems and Signal Processing, 2020, 135, 106409.	4.4	6
101	Modelling the isometric force response to multiple pulse stimuli in locust skeletal muscle. Biological Cybernetics, 2011, 104, 121-136.	0.6	5
102	Improving Power Spectral Density Estimation of Unmanned Aerial Vehicle Rotor Noise by Learning from Non-Acoustic Information. , 2018, , .		5
103	On the response attainable in nonlinear parametrically excited systems. Applied Physics Letters, 2019, 115, 154102.	1.5	5
104	Locating damage in waveguides from the phase of point frequency response measurements. Mechanical Systems and Signal Processing, 2009, 23, 405-414.	4.4	4
105	Application of the Wave and Finite Element Method to Calculate Sound Transmission Through Cylindrical Structures. Journal of Physics: Conference Series, 2016, 744, 012240.	0.3	4
106	Ranking of sound transmission paths by wave and finite element analysis. Journal of Sound and Vibration, 2021, 492, 115765.	2.1	4
107	Analysis of the forced response of coupled panels using a hybrid finite element/wave and finite element method. Journal of Sound and Vibration, 2022, 537, 117174.	2.1	4
108	An EMG-driven musculoskeletal model for the estimation of biomechanical parameters of wrist flexors. , 2010, 2010, 4870-3.		3

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109	Slow motor neuron stimulation of locust skeletal muscle: model and measurement. Biomechanics and Modeling in Mechanobiology, 2013, 12, 581-596.	1.4	3
110	Response of linear parametric amplifiers with arbitrary direct and parametric excitations. Mechanics Research Communications, 2020, 109, 103585.	1.0	3
111	Estimating Power Spectral Density of Unmanned Aerial Vehicle Rotor Noise Using Multisensory Information. , 2018, , .		2
112	Reflection of waves in a waveguide from a boundary with nonlinear stiffness: application to axial and flexural vibrations. Nonlinear Dynamics, 2022, 109, 3051-3082.	2.7	2
113	A phenomenological model of active constrained layers. Journal of Sound and Vibration, 2005, 285, 281-302.	2.1	1
114	A Model of Force Generation by Locust Skeletal Muscle in Response to Individual Stimuli. , 2009, , .		1
115	Influence of disturbances on the control of PC-mouse, goal-directed arm movements. Medical Engineering and Physics, 2010, 32, 974-984.	0.8	1
116	A predictive model of the isometric force response of the locust extensor muscle. , 2010, 2010, 4517-20.		0
117	A model-based tuned vibration absorber with adaptive shunt electronics. , 2013, , .		0
118	Special Issue on â€œAdvances in Active Control of Sound and Vibrationâ€• Editorial. Asian Journal of Control, 2013, 15, 1563-1565.	1.9	0
119	Wave propagation and response statistics of short fibre composites from experimental estimation of material properties. , 0, , .		0