

J Stuart Bolton

List of Publications by Year in descending order

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119
papers

2,214
citations

257450

24
h-index

254184

43
g-index

131
all docs

131
docs citations

131
times ranked

1061
citing authors

#	ARTICLE	IF	CITATIONS
1	A transfer-matrix approach for estimating the characteristic impedance and wave numbers of limp and rigid porous materials. <i>Journal of the Acoustical Society of America</i> , 2000, 107, 1131-1152.	1.1	306
2	SOUND TRANSMISSION THROUGH MULTI-PANEL STRUCTURES LINED WITH ELASTIC POROUS MATERIALS. <i>Journal of Sound and Vibration</i> , 1996, 191, 317-347.	3.9	244
3	Finite element modeling of isotropic elastic porous materials coupled with acoustical finite elements. <i>Journal of the Acoustical Society of America</i> , 1995, 98, 635-643.	1.1	117
4	Source visualization by using statistically optimized near-field acoustical holography in cylindrical coordinates. <i>Journal of the Acoustical Society of America</i> , 2005, 118, 2355-2364.	1.1	91
5	Effects of rotation on the dynamics of a circular cylindrical shell with application to tire vibration. <i>Journal of Sound and Vibration</i> , 2004, 275, 605-621.	3.9	77
6	The low frequency performance of metamaterial barriers based on cellular structures. <i>Applied Acoustics</i> , 2013, 74, 485-495.	3.3	65
7	A finite element model for sound transmission through foam-lined double-panel structures. <i>Journal of the Acoustical Society of America</i> , 1996, 99, 2755-2765.	1.1	60
8	Effect of circumferential edge constraint on the acoustical properties of glass fiber materials. <i>Journal of the Acoustical Society of America</i> , 2001, 110, 2902-2916.	1.1	59
9	Transverse loading of cellular topologically interlocked materials. <i>International Journal of Solids and Structures</i> , 2012, 49, 2394-2403.	2.7	56
10	Source characterization of a subsonic jet by using near-field acoustical holography. <i>Journal of the Acoustical Society of America</i> , 2007, 121, 967-977.	1.1	51
11	AN EFFICIENT PROCEDURE FOR VISUALIZING THE SOUND FIELD RADIATED BY VEHICLES DURING STANDARDIZED PASSBY TESTS. <i>Journal of Sound and Vibration</i> , 2000, 233, 137-156.	3.9	50
12	The Application of the Wigner Distribution to the Identification of Structure-borne Noise Components. <i>Journal of Sound and Vibration</i> , 1993, 163, 101-122.	3.9	49
13	Scan-based near-field acoustical holography and partial field decomposition in the presence of noise and source level variation. <i>Journal of the Acoustical Society of America</i> , 2006, 119, 382-393.	1.1	48
14	Normal incidence sound transmission through double-panel systems lined with relatively stiff, partially reticulated polyurethane foam. <i>Applied Acoustics</i> , 1993, 39, 23-51.	3.3	45
15	An equivalent source technique for recovering the free sound field in a noisy environment. <i>Journal of the Acoustical Society of America</i> , 2012, 131, 1260-1270.	1.1	38
16	Compensation for source nonstationarity in multireference, scan-based near-field acoustical holography. <i>Journal of the Acoustical Society of America</i> , 2003, 113, 360-368.	1.1	37
17	Transfer impedance of microperforated materials with tapered holes. <i>Journal of the Acoustical Society of America</i> , 2013, 134, 4752-4762.	1.1	37
18	Partial sound field decomposition in multireference near-field acoustical holography by using optimally located virtual references. <i>Journal of the Acoustical Society of America</i> , 2004, 115, 1641-1652.	1.1	34

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19	Patch near-field acoustical holography in cylindrical geometry. Journal of the Acoustical Society of America, 2005, 118, 3721-3732.	1.1	34
20	Experiments on the low frequency barrier characteristics of cellular metamaterial panels in a diffuse sound field. Journal of the Acoustical Society of America, 2017, 141, 602-610.	1.1	32
21	Scaling of the Elastic Behavior of Two-Dimensional Topologically Interlocked Materials Under Transverse Loading. Journal of Applied Mechanics, Transactions ASME, 2014, 81, .	2.2	27
22	Sound cancellation by the use of secondary multipoles. Journal of the Acoustical Society of America, 1995, 98, 2343-2362.	1.1	26
23	Investigation of the vibrational modes of edge-constrained fibrous samples placed in a standing wave tube. Journal of the Acoustical Society of America, 2003, 113, 1833-1849.	1.1	26
24	Reconstruction of the free-field radiation from a vibrating structure based on measurements in a noisy environment. Journal of the Acoustical Society of America, 2013, 134, 2823-2832.	1.1	25
25	Adaptive mechanical properties of topologically interlocking material systems. Smart Materials and Structures, 2015, 24, 045037.	3.5	25
26	Application of cylindrical near-field acoustical holography to the visualization of aeroacoustic sources. Journal of the Acoustical Society of America, 2003, 114, 842-858.	1.1	23
27	Reconstruction of source distributions from sound pressures measured over discontinuous regions: Multipatch holography and interpolation. Journal of the Acoustical Society of America, 2007, 121, 2086-2096.	1.1	22
28	Sound transmission through elastic porous wedges and foam layers having spatially graded properties. Journal of the Acoustical Society of America, 1997, 102, 3319-3332.	1.1	20
29	Prediction of airflow resistivity of fibrous acoustical media having two fiber components and a distribution of fiber radii. Applied Acoustics, 2018, 134, 145-153.	3.3	19
30	Acoustic source reconstruction and visualization based on acoustic radiation modes. Journal of Sound and Vibration, 2018, 437, 358-372.	3.9	19
31	Optimal Design of Acoustical Foam Treatments. Journal of Vibration and Acoustics, Transactions of the ASME, 1996, 118, 498-504.	1.6	18
32	Elastic Porous Materials for Sound Absorption and Transmission Control. , 0, , .		18
33	Influence of fuel injection parameters on combustion-induced noise in a small diesel engine. International Journal of Engine Research, 2012, 13, 130-146.	2.3	18
34	A thermophone on porous polymeric substrate. Applied Physics Letters, 2012, 101, .	3.3	18
35	An axisymmetric poroelastic finite element formulation. Journal of the Acoustical Society of America, 1999, 106, 565-574.	1.1	17
36	The application of cepstral techniques to the measurement of transfer functions and acoustical reflection coefficients. Journal of Sound and Vibration, 1984, 93, 217-233.	3.9	16

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37	On the use of evanescent plane waves for low-frequency energy transmission across material interfaces. <i>Journal of the Acoustical Society of America</i> , 2015, 138, 2062-2078.	1.1	15
38	Layered Fibrous Treatments for a Sound Absorption and Sound Transmission. , 1997, , .		14
39	Spatially sparse sound source localization in an under-determined system by using a hybrid compressive sensing method. <i>Journal of the Acoustical Society of America</i> , 2019, 146, 1219-1229.	1.1	12
40	Tire Surface Vibration and Sound Radiation Resulting from the Tire Cavity Mode. <i>Tire Science and Technology</i> , 2011, 39, 245-255.	0.4	12
41	Sound Propagation from an Arbitrarily Oriented Multi-Pole Placed Near a Plane, Finite Impedance Surface. <i>Journal of Sound and Vibration</i> , 1994, 170, 637-669.	3.9	11
42	Development of a New Sound Transmission Test for Automotive Sealant Materials. , 1997, , .		11
43	A one-step patch near-field acoustical holography procedure. <i>Journal of the Acoustical Society of America</i> , 2007, 122, 1662-1670.	1.1	11
44	Microstructure design of lightweight fibrous material acting as a layered damper for a vibrating stiff panel. <i>Journal of the Acoustical Society of America</i> , 2018, 143, 3254-3265.	1.1	11
45	Structural damping by lightweight poro-elastic media. <i>Journal of Sound and Vibration</i> , 2019, 459, 114866.	3.9	10
46	A Model Study of How Tire Construction and Materials Affect Vibration-Radiated Noise. , 0, , .		9
47	Sound cancellation by the use of secondary multipoles: Experiments. <i>Journal of the Acoustical Society of America</i> , 2000, 107, 1189-1202.	1.1	9
48	Reduction of sound radiation by using force radiation modes. <i>Applied Acoustics</i> , 2011, 72, 420-427.	3.3	9
49	Improved Model for Coupled Structural-Acoustic Modes of Tires. <i>SAE International Journal of Passenger Cars - Mechanical Systems</i> , 0, 8, 845-854.	0.4	9
50	Correlation of Tire Intensity Levels and Passby Sound Pressure Levels. , 1995, , .		8
51	A comparison of near-field beamforming and acoustical holography for sound source visualization. <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , 2009, 223, 819-834.	2.1	8
52	Development of Polyimide Foam for Aircraft Sidewall Applications. , 2013, , .		8
53	Sound power radiation from a vibrating structure in terms of structure-dependent radiation modes. <i>Journal of Sound and Vibration</i> , 2015, 335, 245-260.	3.9	8
54	Modeling and coupling of acoustical layered systems that consist of elements having different transfer matrix dimensions. <i>Journal of Applied Physics</i> , 2019, 126, .	2.5	8

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55	STATISTICAL PROPERTIES OF RANDOM SPARSE ARRAYS. <i>Journal of Sound and Vibration</i> , 2002, 255, 819-848.	3.9	7
56	Estimation of the combustion-related noise transfer matrix of a multi-cylinder diesel engine. <i>Measurement Science and Technology</i> , 2009, 20, 015106.	2.6	7
57	The acoustical absorption by air-saturated aerogel powders. <i>Journal of the Acoustical Society of America</i> , 2022, 151, 1502-1515.	1.1	7
58	The use of the discrete Fourier transform to calculate the spatial and temporal response of line-driven, layer-wise homogeneous acoustically loaded panels. <i>Journal of the Acoustical Society of America</i> , 1992, 92, 1473-1488.	1.1	6
59	Influence of Tire Size and Shape on Sound Radiation from a Tire in the Mid-Frequency Region. , 2007, , .		6
60	Perception of Diesel Engine Gear Rattle Noise. <i>SAE International Journal of Passenger Cars - Mechanical Systems</i> , 0, 8, 1097-1103.	0.4	5
61	On the completeness and the linear dependence of the Cartesian multipole series in representing the solution to the Helmholtz equation. <i>Journal of the Acoustical Society of America</i> , 2016, 140, EL149-EL153.	1.1	5
62	Sound field reconstruction using multipole equivalent source model with un-fixed source locations. <i>Journal of the Acoustical Society of America</i> , 2018, 144, 2674-2690.	1.1	5
63	Acoustic far-field prediction based on near-field measurements by using several different holography algorithms. <i>Journal of the Acoustical Society of America</i> , 2022, 151, 2171-2180.	1.1	5
64	The determination of acoustic reflection coefficients by using cepstral techniques, I: Experimental procedures and measurements of polyurethane foam. <i>Journal of Sound and Vibration</i> , 1986, 110, 179-202.	3.9	4
65	The determination of acoustic reflection coefficients by using cepstral techniques, II: Extensions of the technique and considerations of accuracy. <i>Journal of Sound and Vibration</i> , 1986, 110, 203-222.	3.9	4
66	Reduction of Low Frequency Noise Transmitted Through a Single-Pane Window. <i>Acta Acustica United With Acustica</i> , 2011, 97, 382-390.	0.8	4
67	Coupling mechanism analysis of structural modes and sound radiations of a tire tread band based on the S-mode technique. <i>Applied Acoustics</i> , 2015, 99, 161-170.	3.3	4
68	Structural Damping by Layers of Fibrous Media Applied to a Periodically-Constrained Vibrating Panel. <i>Journal of Physics: Conference Series</i> , 2019, 1264, 012043.	0.4	4
69	The identification of minimum-weight sound packages. <i>Noise Control Engineering Journal</i> , 2018, 66, 523-540.	0.3	4
70	Design of low-noise centrifugal blowers--Part 2: Optimization study. <i>Noise Control Engineering Journal</i> , 1995, 43, 117.	0.3	3
71	The Design and Evaluation of Microphone Arrays for the Visualization of Noise Sources on Moving Vehicles. , 0, , .		3
72	Enhancement of the barrier performance of porous linings by using internal constraints. <i>Noise Control Engineering Journal</i> , 2003, 51, 16.	0.3	3

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73	Sound Radiation Control Resulting from Tire Structural Vibration. , 0, , .		3
74	Dual surface beamforming and acoustical holography for sound field visualization in reverberant environments. Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, 2010, 224, 55-70.	2.1	3
75	The Application of Singular Value Decomposition to Determine the Sources of Far Field Diesel Engine Noise. SAE International Journal of Engines, 2013, 6, 1386-1393.	0.4	3
76	Structural Damping by the Use of Fibrous Materials. , 0, , .		3
77	Design of multi-chamber cylindrical silencers with microperforated elements. Noise Control Engineering Journal, 2016, 64, 532-543.	0.3	3
78	Diesel Engine Noise Source Visualization with Wideband Acoustical Holography. , 2017, , .		3
79	The Application of Acoustic Radiation Modes to Engine Oil Pan Design. , 0, , .		3
80	Point excitation of a coupled structural-acoustical tire model with experimental verification: Higher order cavity modes. Applied Acoustics, 2018, 136, 48-60.	3.3	3
81	Force Transmission Characteristics for a Loaded Structural-Acoustic Tire Model. SAE International Journal of Passenger Cars - Mechanical Systems, 0, 11, 305-319.	0.4	3
82	Calculation of acoustic radiation modes by using spherical waves and generalized singular value decomposition. Journal of the Acoustical Society of America, 2019, 146, EL347-EL351.	1.1	3
83	Prediction of sound fields radiated by finite-size sources in room environments by using equivalent source models: three-dimensional simulation and validation. Noise Control Engineering Journal, 2017, 65, 406-416.	0.3	3
84	The Use of the Wigner Distribution to Identify Wave-Types in Multi-Element Structures. , 1993, , .		2
85	An Efficient Procedure for Visualizing the Sound Field Radiated by Vehicles During Standardized Passby Tests. , 0, , .		2
86	Holographic visualization of multi-component sources by using reference measurements only. Noise Control Engineering Journal, 2007, 55, 257.	0.3	2
87	Assessment of Absorbers in Normal-Incidence Four-Microphone Transmission-Loss Systems to Measure Effectiveness of Materials in Lateral-Flow Configurations of Filled or Partially Filled Cavities. , 0, , .		2
88	Reduction of fan noise emission by enclosure modification. Noise Control Engineering Journal, 2008, 56, 4.	0.3	2
89	Reconstruction of Noise Source in a Ducted Fan Using a Generalized Nearfield Acoustical Holography. , 0, , .		2
90	Least-squares reconstruction of low-frequency inhomogeneous plane waves. Journal of Sound and Vibration, 2018, 430, 134-149.	3.9	2

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91	Acoustical characteristics of segmented plates with contact interfaces. <i>Journal of Sound and Vibration</i> , 2020, 485, 115584.	3.9	2
92	A method to calculate acoustic radiation modes based on spheroidal wave functions. <i>JASA Express Letters</i> , 2021, 1, .	1.1	2
93	Testing of axial fans with microperforated housings. <i>Noise Control Engineering Journal</i> , 2016, 64, 511-521.	0.3	2
94	Design of low-noise centrifugal blowers--Part 1: Measurement and analysis procedures. <i>Noise Control Engineering Journal</i> , 1995, 43, 103.	0.3	1
95	Acoustical Finite Element Model of Elastic Porous Materials. , 1995, , .		1
96	Transfer Matrix Approach to the Estimation of the Fundamental Acoustical Properties of Noise Control Materials. , 1999, , .		1
97	Numerical Modeling of the Damping Effect of Fibrous Acoustical Treatments. , 0, , .		1
98	Application of the Boundary Element Method to Prediction of Highway Noise Barrier Performance. <i>Transportation Research Record</i> , 2002, 1792, 65-74.	1.9	1
99	Response of a shell structure subject to distributed harmonic excitation. <i>Journal of Physics: Conference Series</i> , 2016, 744, 012187.	0.4	1
100	Enhanced acoustic transmission into dissipative solid materials through the use of inhomogeneous plane waves. <i>Journal of Physics: Conference Series</i> , 2016, 744, 012188.	0.4	1
101	Bounded inhomogeneous wave profiles for increased surface wave excitation efficiency at fluid-solids interfaces. <i>Journal of the Acoustical Society of America</i> , 2017, 141, 2779-2787.	1.1	1
102	A Comparison of Near-Field Acoustical Holography Methods Applied to Noise Source Identification. , 0, , .		1
103	An iterative transfer matrix approach for estimating the sound speed and attenuation constant of air in a standing wave tube. <i>Journal of the Acoustical Society of America</i> , 2022, 151, 4016-4027.	1.1	1
104	Powertrain Sound Power Measurement Using a Two-Degree-of-Freedom Positioning Mechanism. , 1989, , .		0
105	The Use of a Single-Parameter Model to Characterize the Condition of Asphalt Surfaces. <i>Noise Control Engineering Journal</i> , 1992, 38, 39.	0.3	0
106	Radiation efficiency calculations for verification of boundary element acoustic codes. <i>Noise Control Engineering Journal</i> , 1996, 44, 215.	0.3	0
107	The Use of Nearfield Acoustical Holography (NAH) and Partial Field Decomposition to Identify and Quantify the Sources of Exterior Noise Radiated from a Vehicle. , 1997, , .		0
108	Two-Microphone Measurements of the Acoustical Properties of SAE and ISO Passby Surfaces in the Presence of Wind and Temperature Gradients. , 0, , .		0

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109	Application of the edge-constraint effect to nearly-realistic barrier treatments. Noise Control Engineering Journal, 2003, 51, 5.	0.3	0
110	Acoustic source property prediction based on near-field measurements in planar coordinate. Journal of Sound and Vibration, 2009, 324, 587-607.	3.9	0
111	The use of equivalent source models for reduced order simulation in room acoustics. Proceedings of Meetings on Acoustics, 2013, , .	0.3	0
112	Experimental identification of force radiation modes. Noise Control Engineering Journal, 2013, 61, 81-86.	0.3	0
113	Response of a shell structure subject to distributed harmonic excitation. Journal of Physics: Conference Series, 2016, 744, 012150.	0.4	0
114	A Desktop Procedure for Measuring the Transmission Loss of Automotive Door Seals. , 0, , .		0
115	Case study: Purdue University's "Clapping Circle": An acoustical investigation. Noise Control Engineering Journal, 2021, 69, 288-300.	0.3	0
116	Reduction of sound radiation by using extended radiation modes: Effects of added mass. Acoustical Science and Technology, 2012, 33, 56-58.	0.5	0
117	Plane wave reflection coefficient estimation by use of spatial parametric signal modeling. Journal of the Acoustical Society of America, 1997, 102, 3169-3169.	1.1	0
118	Design of Lightweight Fibrous Vibration Damping Treatments to Achieve Optimal Performance in Realistic Applications. , 0, , .		0
119	The Identification of Minimum Weight Sound Packages That Meet Specified Vehicle Interior Sound Pressure Levels. , 0, , .		0