Tracianne B Neilsen

List of Publications by Year
in descending order

117 papers	1,190 citations	448610 19 h-index	563245 28 g-index
174 all docs	174 docs citations	174 times ranked	482 citing authors

#	Article	IF	Citations
1	Statistical Inference of Sound Speed and Attenuation Dispersion of a Fine-Grained Marine Sediment. IEEE Journal of Oceanic Engineering, 2022, 47, 553-564.	2.1	6
2	Seabed Classification Using a Convolutional Neural Network on Explosive Sounds. IEEE Journal of Oceanic Engineering, 2022, 47, 670-679.	2.1	6
3	A CNN for Range and Seabed Estimation on Normalized and Extracted Time-Series Impulses. IEEE Journal of Oceanic Engineering, 2022, 47, 833-846.	2.1	5
4	Maximum entropy inference of seabed properties using waveguide invariant features from surface ships. Journal of the Acoustical Society of America, 2022, 151, 2885-2896.	0.5	4
5	Guest Editorial: Continued Exploration of Fine-Grained Sediments from SBCEX2017. IEEE Journal of Oceanic Engineering, 2022, 47, 497-502.	2.1	1
6	Learning location and seabed type from a moving mid-frequency source. Journal of the Acoustical Society of America, 2021, 149, 692-705.	0.5	23
7	Seabed type and source parameters predictions using ship spectrograms in convolutional neural networks. Journal of the Acoustical Society of America, 2021, 149, 1198-1210.	0.5	22
8	Validating deep learning seabed classification via acoustic similarity. JASA Express Letters, 2021, 1, .	0.5	5
9	Semi-supervised deep learning of source location and seabed class from unlabeled merchant ships in the shallow ocean. Journal of the Acoustical Society of America, 2021, 149, A113-A113.	0.5	0
10	Unsupervised learning for seabed type and source parameters from surface ship spectrograms. Journal of the Acoustical Society of America, 2021, 149, A86-A86.	0.5	0
11	Influence of seabed on very low frequency sound recorded during passage of merchant ships on the New England shelf. Journal of the Acoustical Society of America, 2021, 149, 3294-3300.	0.5	4
12	Acoustical Holography-Based Analysis of Spatiospectral Lobes in High-Performance Aircraft Jet Noise. AIAA Journal, 2021, 59, 4166-4178.	1.5	11
13	Seabed classification from merchant ship-radiated noise using a physics-based ensemble of deep learning algorithms. Journal of the Acoustical Society of America, 2021, 150, 1434-1447.	0.5	9
14	Sound Signal Classification in the New England Mud Patch. Proceedings of Meetings on Acoustics, 2021, , .	0.3	0
15	Impact of data augmentation on supervised learning for a moving mid-frequency source. Journal of the Acoustical Society of America, 2021, 150, 3914-3928.	0.5	5
16	Design of an underwater acoustics lab. Proceedings of Meetings on Acoustics, 2021, , .	0.3	1
17	Bandwidth extension of intensity-based sound power estimates. Journal of the Acoustical Society of America, 2020, 147, EL409-EL414.	0.5	0
18	Seabed and range estimation of impulsive time series using a convolutional neural network. Journal of the Acoustical Society of America, 2020, 147, EL403-EL408.	0.5	40

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19	Characterizing distinct components of tactical aircraft noise sources. Journal of the Acoustical Society of America, 2020, 147, 3550-3564.	0.5	2
20	Guest Editorial An Overview of the Seabed Characterization Experiment. IEEE Journal of Oceanic Engineering, 2020, 45, 1-13.	2.1	50
21	Three-Way Spectral Decompositions of High-Performance Military Aircraft Noise. AIAA Journal, 2019, 57, 3467-3479.	1.5	10
22	University student musician noise-dosage study measuring both ensemble and full-day noise exposure. Journal of the Acoustical Society of America, 2019, 145, EL494-EL500.	0.5	2
23	Source characterization of full-scale tactical jet noise from phased-array measurements. Journal of the Acoustical Society of America, 2019, 146, 665-680.	0.5	8
24	Bandwidth extension of narrowband-signal intensity calculation using additive, low-level broadband noise. Journal of the Acoustical Society of America, 2019, 145, 3146-3153.	0.5	1
25	A convolutional neural network for source range and ocean seabed classification using pressure time-series. Proceedings of Meetings on Acoustics, 2019, , .	0.3	8
26	A prototype soundproof box for isolating ground-air seismo-acoustic signals. Proceedings of Meetings on Acoustics, 2019, , .	0.3	0
27	A feedforward neural network for source range and ocean seabed classification using time-domain features. Proceedings of Meetings on Acoustics, 2019, , .	0.3	1
28	Data-educed broadband equivalent acoustic source model for supersonic jet noise. Journal of the Acoustical Society of America, 2019, 146, 3409-3424.	0.5	1
29	The effects of contaminating noise on the calculation of active acoustic intensity for pressure gradient methods. Journal of the Acoustical Society of America, 2019, 145, 173-184.	0.5	3
30	Three-microphone probe bias errors for acoustic intensity and specific acoustic impedance. Journal of the Acoustical Society of America, 2018, 143, EL81-EL86.	0.5	3
31	Characterizing acoustic shocks in high-performance jet aircraft flyover noise. Journal of the Acoustical Society of America, 2018, 143, 1355-1365.	0.5	3
32	Rating the perception of jet noise crackle. Proceedings of Meetings on Acoustics, 2018, , .	0.3	3
33	Obtaining acoustic intensity from multisource statistically optimized near-field acoustical holography. Proceedings of Meetings on Acoustics, 2018, , .	0.3	3
34	Optimal experimental design for machine learning using the Fisher information. Proceedings of Meetings on Acoustics, 2018, , .	0.3	1
35	Broadband shock-associated noise from a high-performance military aircraft. Journal of the Acoustical Society of America, 2018, 144, EL242-EL247.	0.5	11
36	Highly directional pressure sensing using the phase gradient. Journal of the Acoustical Society of America, 2018, 144, EL346-EL352.	0.5	1

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37	Partial-field decomposition analysis of full-scale supersonic jet noise using optimized-location virtual references. Journal of the Acoustical Society of America, 2018, 144, 1356-1367.	0.5	9
38	Spatiotemporal-correlation analysis of jet noise from a round nozzle high-performance aircraft. , 2018, , .		9
39	Dependence of High-performance Military Aircraft Noise on Frequency and Engine Power. , 2018, , .		5
40	Inclusion of Broadband Shock-Associated Noise in Spectral Decomposition of Noise from High-performance Military Aircraft. , 2018, , .		5
41	Subjective rating of the jet noise crackle percept. Journal of the Acoustical Society of America, 2018, 144, EL40-EL45.	0.5	12
42	Effect of Nozzle–Plate Distance on Acoustic Phenomena from Supersonic Impinging Jet. AIAA Journal, 2018, 56, 1943-1952.	1.5	21
43	Pre-class exposure to interactive simulations increases efficacy. Proceedings of Meetings on Acoustics, 2018, , .	0.3	0
44	Extending the bandwidth of an acoustic beamforming array using phase unwrapping and array interpolation. Journal of the Acoustical Society of America, 2017, 141, EL407-EL412.	0.5	10
45	Experimental validation of acoustic intensity bandwidth extension by phase unwrapping. Journal of the Acoustical Society of America, 2017, 141, EL357-EL362.	0.5	12
46	Testing two crackle criteria using modified jet noise waveforms. Journal of the Acoustical Society of America, 2017, 141, EL549-EL554.	0.5	8
47	Bias error analysis for phase and amplitude gradient estimation of acoustic intensity and specific acoustic impedance. Journal of the Acoustical Society of America, 2017, 142, 2208-2218.	0.5	13
48	Full-day noise exposure for student musicians at Brigham Young University. Proceedings of Meetings on Acoustics, 2017, , .	0.3	3
49	Higher-order estimation of active and reactive acoustic intensity. Proceedings of Meetings on Acoustics, 2017, , .	0.3	4
50	Coherence-based phase unwrapping for broadband acoustic signals. Proceedings of Meetings on Acoustics, 2017, , .	0.3	10
51	Acoustic intensity of narrowband sources using the phase and amplitude gradient estimator method. Proceedings of Meetings on Acoustics, 2017, , .	0.3	1
52	Exploring the use of time-sensitive sound quality metrics and related quantities for detecting crackle. Proceedings of Meetings on Acoustics, 2017, , .	0.3	3
53	Frequency-dependent jet noise source localization using cross-correlation between near and far-field microphone arrays. Proceedings of Meetings on Acoustics, 2017, , .	0.3	1
54	Numerical validation of using multisource statistically-optimized near-field acoustical holography in the vicinity of a high-performance military aircraft. Proceedings of Meetings on Acoustics, 2017, , .	0.3	1

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55	How understanding and addressing the concerns of women students benefits all students. Proceedings of Meetings on Acoustics, 2017, , .	0.3	1
56	Characterization of Supersonic Laboratory-Scale Jet Noise with Vector Acoustic Intensity. , 2017, , .		10
57	Preliminary Investigation of Multilobe Fighter Jet Noise Sources Using Acoustical Holography. , 2017, , .		9
58	Beamforming-Based Wavepacket Model for Noise Environment Predictions of Tactical Aircraft. , 2017, , .		6
59	Plane-wave tube validation of bandwidth extension for energy-based quantities using pressure gradient methods. Proceedings of Meetings on Acoustics, 2017, , .	0.3	0
60	Level-educed Wavepacket Representation of Mach 1.8 Laboratory-Scale Jet Noise. , 2017, , .		0
61	Teaching the descriptive physics of string instruments at the undergraduate level. Proceedings of Meetings on Acoustics, 2016, , .	0.3	2
62	Azimuthal coherence of the sound field in the vicinity of a high performance military aircraft. Proceedings of Meetings on Acoustics, 2016, , .	0.3	5
63	Characterization of ensemble rehearsal rooms and musician experiences at Brigham Young University. Proceedings of Meetings on Acoustics, 2016, , .	0.3	1
64	Acoustic measurements in the far field during QM-2 solid rocket motor static firing. Proceedings of Meetings on Acoustics, 2016, , .	0.3	2
65	Military jet noise source imaging using multisource statistically optimized near-field acoustical holography. Journal of the Acoustical Society of America, 2016, 139, 1938-1950.	0.5	36
66	Evolution of the derivative skewness for nonlinearly propagating waves. Journal of the Acoustical Society of America, 2016, 139, 1390-1403.	0.5	26
67	Quantitative analysis of a frequency-domain nonlinearity indicator. Journal of the Acoustical Society of America, 2016, 139, 2505-2513.	0.5	14
68	Acoustics for the Deaf: Can You See Me Now?. Physics Teacher, 2016, 54, 369-371.	0.2	8
69	Spatiotemporal-Correlation Analysis of Jet Noise from a High-Performance Military Aircraft. AIAA Journal, 2016, 54, 1554-1566.	1.5	21
70	Acoustical Environment During F-35B Vertical Landing Operations. Journal of Aircraft, 2016, 53, 1975-1979.	1.7	1
71	Comparative Analysis of NASA SP-8072's Core Length with Full-Scale Rocket Data. Transactions of the Japan Society for Aeronautical and Space Sciences Aerospace Technology Japan, 2016, 14, Po_2_17-Po_2_24.	0.1	1
72	Near-field spatial variation in similarity spectra decomposition of a Mach 1.8 laboratory-scale jet. Proceedings of Meetings on Acoustics, 2016, , .	0.3	6

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73	The sound of STEAM: Acoustics as the bridge between the arts and STEM. Proceedings of Meetings on Acoustics, 2016, , .	0.3	4
74	Propagation of crackle-containing jet noise from high-performance engines. Noise Control Engineering Journal, 2016, 64, 1-12.	0.2	20
75	Level-educed Wavepacket Representation of Noise Radiation from a High-Performance Military Aircraft. , 2016, , .		3
76	Mach stem formation in outdoor measurements of acoustic shocks. Journal of the Acoustical Society of America, 2015, 138, EL522-EL527.	0.5	7
77	Acoustic intensity near a high-powered military jet aircraft. Journal of the Acoustical Society of America, 2015, 138, EL1-EL7.	0.5	8
78	Quantitative nonlinearity analysis of model-scale jet noise. AIP Conference Proceedings, 2015, , .	0.3	1
79	@BYUAcoustics and @SoundstoAstound: Using social media to enhance research and outreach at Brigham Young University. Proceedings of Meetings on Acoustics, 2015, , .	0.3	1
80	Outdoor measurements of spherical acoustic shock decay. Journal of the Acoustical Society of America, 2015, 138, EL305-EL310.	0.5	6
81	Acoustical measurements during a static firing of the Space Launch System solid rocket motor. Proceedings of Meetings on Acoustics, 2015, , .	0.3	1
82	Source characterization of full-scale jet noise using acoustic intensity. Noise Control Engineering Journal, 2015, 63, 522-536.	0.2	24
83	Including source correlation and atmospheric turbulence in a ground reflection model for rocket noise. Proceedings of Meetings on Acoustics, 2015, , .	0.3	4
84	Evolution of the average steepening factor for nonlinearly propagating waves. Journal of the Acoustical Society of America, 2015, 137, 640-650.	0.5	16
85	Multisource statistically optimized near-field acoustical holography. Journal of the Acoustical Society of America, 2015, 137, 963-975.	0.5	31
86	Investigation of multi-lobed fighter jet noise sources using acoustical holography and partial field decomposition methods. , 2015, , .		6
87	Spatiotemporal Correlation Analysis of Jet Noise from a High-Performance Military Aircraft. , 2015, , .		2
88	A vector intensity-based equivalent wavepacket model for high-performance military aircraft jet noise. Proceedings of Meetings on Acoustics, 2015, , .	0.3	0
89	Comparison of two time-domain measures of nonlinearity in near-field propagation of high-power jet noise. , 2014, , .		5
90	Intensity analysis of the dominant frequencies of military jet aircraft noise. Proceedings of Meetings on Acoustics, 2014, , .	0.3	5

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91	Full-scale rocket motor acoustic tests and comparisons with empirical source models. Proceedings of Meetings on Acoustics, 2014, , .	0.3	4
92	Phased-array measurements of full-scale military jet noise. , 2014, , .		9
93	Cylindrical acoustical holography applied to full-scale jet noise. Journal of the Acoustical Society of America, 2014, 136, 1120-1128.	0.5	15
94	Resource Letter APPO-1: Acoustics for Physics Pedagogy and Outreach. American Journal of Physics, 2014, 82, 825-838.	0.3	8
95	Transformations of a crackling jet noise waveform and potential implications for quantifying the â€œcrackleâ€•percept. Proceedings of Meetings on Acoustics, 2014, , .	0.3	1
96	Use of a Just-in-Time Teaching technique in an introductory acoustics class. Proceedings of Meetings on Acoustics, 2013, , .	0.3	0
97	Similarity spectra analysis of high-performance jet aircraft noise. Journal of the Acoustical Society of America, 2013, 133, 2116-2125.	0.5	62
98	On the Evolution of Crackle in Jet Noise from High-Performance Engines. , 2013, , .		12
99	Near-field shock formation in noise propagation from a high-power jet aircraft. Journal of the Acoustical Society of America, 2013, 133, EL88-EL93.	0.5	26
100	Skewness and shock formation in laboratory-scale supersonic jet data. Journal of the Acoustical Society of America, 2013, 133, EL491-EL497.	0.5	25
101	Comparison of supersonic full-scale and laboratory-scale jet data and the similarity spectra for turbulent mixing noise. Proceedings of Meetings on Acoustics, 2013, , .	0.3	13
102	Spectral Characterization in the Near- and Mid-field of Military Jet Aircraft Noise. , 2013, , .		21
103	On autocorrelation analysis of jet noise. Journal of the Acoustical Society of America, 2013, 133, EL458-EL464.	0.5	17
104	The â€œsound Of Freedomâ€• Characterizing Jet Noise From High-Performance Military Aircraft. Acoustics Today, 2013, 9, 8.	1.0	5
105	Aeroacoustics of volcanic jets: Acoustic power estimation and jet velocity dependence. Journal of Geophysical Research: Solid Earth, 2013, 118, 6269-6284.	1.4	57
106	Infrasonic crackle and supersonic jet noise from the eruption of Nabro Volcano, Eritrea. Geophysical Research Letters, 2013, 40, 4199-4203.	1.5	30
107	Teaching principles of outdoor sound propagation using football game measurements. Proceedings of Meetings on Acoustics, 2013, , .	0.3	1
108	Modified statistically optimized near-field acoustical holography for jet noise characterization. Proceedings of Meetings on Acoustics, 2013, , .	0.3	5

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109	Creating an active-learning environment in an introductory acoustics course. Journal of the Acoustical Society of America, 2012, 131, 2500-2509.	0.5	21
110	Coherence length as a figure of merit in multireference near-field acoustical holography. Journal of the Acoustical Society of America, 2012, 132, EL215-EL221.	0.5	8
111	Near-field noise measurements of a high-performance military jet aircraft. Noise Control Engineering Journal, 2012, 60, 421-434.	0.2	57
112	Simple-source model of military jet aircraft noise. Noise Control Engineering Journal, 2012, 60, 435-449.	0.2	8
113	Application of active-learning techniques to enhance student-based learning objectives. Proceedings of Meetings on Acoustics, 2012, , .	0.3	1
114	The viability of reflection loss measurement inversion to predict broadband acoustic behavior. Journal of the Acoustical Society of America, 2006, 120, 135-144.	0.5	8
115	Localization of multiple acoustic sources in the shallow ocean. Journal of the Acoustical Society of America, 2005, 118, 2944-2953.	0.5	17
116	An iterative implementation of rotated coordinates for inverse problems. Journal of the Acoustical Society of America, 2003, 113, 2574-2586.	0.5	20
117	Extraction of acoustic normal mode depth functions using vertical line array data. Journal of the Acoustical Society of America, 2002, 111, 748-756.	0.5	45