Michael Vorlaender

List of Publications by Year
in descending order

106 papers	1,725 citations	331259 21 h-index	315357 38 g-index
113 all docs	113 docs citations	113 times ranked	939 citing authors

#	Article	IF	Citations
1	Simulation of the transient and steadyâ€state sound propagation in rooms using a new combined rayâ€tracing/imageâ€source algorithm. Journal of the Acoustical Society of America, 1989, 86, 172-178.	0.5	195
2	Computer simulations in room acoustics: Concepts and uncertainties. Journal of the Acoustical Society of America, 2013, 133, 1203-1213.	0.5	123
3	Definition and measurement of random-incidence scattering coefficients. Applied Acoustics, 2000, 60, 187-199.	1.7	94
4	Switching in the cocktail party: Exploring intentional control of auditory selective attention.. Journal of Experimental Psychology: Human Perception and Performance, 2011, 37, 1140-1147.	0.7	89
5	The impact of background speech varying in intelligibility: Effects on cognitive performance and perceived disturbance. Ergonomics, 2008, 51, 719-736.	1.1	87
6	A round robin on room acoustical simulation and auralization. Journal of the Acoustical Society of America, 2019, 145, 2746-2760.	0.5	70
7	Virtual Reality System with Integrated Sound Field Simulation and Reproduction. Eurasip Journal on Advances in Signal Processing, 2007, 2007, .	1.0	61
8	Practical aspects of MLS measurements in building acoustics. Applied Acoustics, 1997, 52, 239-258.	1.7	50
9	A High Resolution and Full-Spherical Head-Related Transfer Function Database for Different Head-Above-Torso Orientations. AES: Journal of the Audio Engineering Society, 2017, 65, 841-848.	0.8	43
10	Calculation of Head-Related Transfer Functions for Arbitrary Field Points Using Spherical Harmonics Decomposition. Acta Acustica United With Acustica, 2012, 98, 72-82.	0.8	41
11	Virtual reality for architectural acoustics. Journal of Building Performance Simulation, 2015, 8, 15-25.	1.0	41
12	Generation and analysis of an acoustic radiation pattern database for forty-one musical instruments. Journal of the Acoustical Society of America, 2017, 141, 1246-1256.	0.5	41
13	How do shared-street design and traffic restriction improve urban soundscape and human experience? â€"An online survey with virtual reality. Building and Environment, 2018, 143, 318-328.	3.0	39
14	Auralization. RWTHedition, 2020, , .	0.6	35
15	Development of scattering surfaces for concert halls. Applied Acoustics, 2004, 65, 341-355.	1.7	33
16	Acoustic centering of sources measured by surrounding spherical microphone arrays. Journal of the Acoustical Society of America, 2011, 130, 2003-2015.	0.5	33
17	Comparison of Noise Compensation Methods for Room Acoustic Impulse Response Evaluations. Acta Acustica United With Acustica, 2014, 100, 320-327.	0.8	27
18	A demonstrator tool of web-based virtual reality for participatory evaluation of urban sound environment. Landscape and Urban Planning, 2018, 170, 276-282.	3.4	27

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19	Anthropometric Parameters Influencing Head-Related Transfer Functions. Acta Acustica United With Acustica, 2009, 95, 331-342.	0.8	24
20	Application of the Mirror Source Method for Low Frequency Sound Prediction in Rectangular Rooms. Acta Acustica United With Acustica, 2014, 100, 306-319.	0.8	24
21	Evaluation of Eustachian tube function by sonotubometry: results and reliability of 8ÂkHz signals in normal subjects. European Archives of Oto-Rhino-Laryngology, 2007, 264, 231-236.	0.8	22
22	Efficient Modelling of Absorbing Boundaries in Room Acoustic FE Simulations. Acta Acustica United With Acustica, 2010, 96, 1042-1050.	0.8	21
23	Integrating Real-Time Room Acoustics Simulation into a CAD Modeling Software to Enhance the Architectural Design Process. Buildings, 2014, 4, 113-138.	1.4	20
24	Combined wave and ray based room acoustic simulations of audio systems in car passenger compartments, Part I: Boundary and source data. Applied Acoustics, 2014, 76, 82-99.	1.7	20
25	Interactive simulation of aircraft noise in aural and visual virtual environments. Applied Acoustics, 2016, 101, 24-38.	1.7	20
26	Influence of wall scattering on the early fine structures of measured room impulse responses. Journal of the Acoustical Society of America, 2015, 137, 1108-1116.	0.5	19
27	Influence of â€œomnidirectionalâ€•loudspeaker directivity on measured room impulse responses. Journal of the Acoustical Society of America, 2013, 134, 3654-3662.	0.5	18
28	Combined wave and ray based room acoustic simulations of audio systems in car passenger compartments, Part II: Comparison of simulations and measurements. Applied Acoustics, 2014, 76, 52-65.	1.7	17
29	An Extended Binaural Real-Time Auralization System With an Interface to Research Hearing Aids for Experiments on Subjects With Hearing Loss. Trends in Hearing, 2018, 22, 233121651880087.	0.7	17
30	Audio-video virtual reality environments in building acoustics: An exemplary study reproducing performance results and subjective ratings of a laboratory listening experiment. Journal of the Acoustical Society of America, 2019, 146, EL310-EL316.	0.5	16
31	A Framework for the Calculation of Dynamic Crosstalk Cancellation Filters. IEEE/ACM Transactions on Audio Speech and Language Processing, 2014, 22, 1345-1354.	4.0	15
32	Uncertainty analysis of standardized measurements of random-incidence absorption and scattering coefficients. Journal of the Acoustical Society of America, 2015, 137, 63-74.	0.5	15
33	Acoustic centering of sources with high-order radiation patterns. Journal of the Acoustical Society of America, 2015, 137, 1947-1961.	0.5	15
34	Psychoacoustic analysis of noise and the application of earplugs in an ICU. European Journal of Anaesthesiology, 2016, 33, 14-21.	0.7	15
35	On the in situ impedance measurement with pu-probesâ€”Simulation of the measurement setup. Journal of the Acoustical Society of America, 2013, 134, 1082-1089.	0.5	13
36	Effect of boundary diffusers in a reverberation chamber: Standardized diffuse field quantifiers. Journal of the Acoustical Society of America, 2014, 135, 1898-1906.	0.5	13

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37	A benchmark for room acoustical simulation. Concept and database. Applied Acoustics, 2021, 176, 107867.	1.7	13
38	Relationship Between the Scattering Coefficients Determined with Coherent Averaging and with Directivity Correlation. Acta Acustica United With Acustica, 2009, 95, 669-677.	0.8	12
39	Interactive Real-Time Simulation and Auralization for Modifiable Rooms. Building Acoustics, 2014, 21, 65-73.	1.1	12
40	Room Acoustical Parameters as Predictors of Room Acoustical Impression: What Do We Know and What Would We Like to Know?. Acoustics Australia, 2015, 43, 41-48.	1.4	11
41	Sampling the sound field in auditoria using large natural-scale array measurements. Journal of the Acoustical Society of America, 2017, 141, EL300-EL306.	0.5	11
42	About just noticeable differences for aspects of spatial impressions in concert halls. Acoustical Science and Technology, 2005, 26, 185-192.	0.3	10
43	ROOM ACOUSTICAL SIMULATION ALGORITHM BASED ON THE FREE PATH DISTRIBUTION. Journal of Sound and Vibration, 2000, 232, 129-137.	2.1	9
44	Sound Field Classification in Small Microphone Arrays Using Spatial Coherences. IEEE Transactions on Audio Speech and Language Processing, 2013, 21, 1891-1899.	3.8	8
45	Virtual Acoustics. Archives of Acoustics, 2015, 39, 307-318.	0.9	8
46	Modelling of Urban Near-Road Atmospheric PM Concentrations Using an Artificial Neural Network Approach with Acoustic Data Input. Environments - MDPI, 2017, 4, 26.	1.5	8
47	Aircraft noiseâ€"Auralization-based assessment of weather-dependent effects on loudness and sharpness. Journal of the Acoustical Society of America, 2021, 149, 3565-3575.	0.5	8
48	Acoustic load on the ear caused by headphones. Journal of the Acoustical Society of America, 2000, 107, 2082-2088.	0.5	7
49	Interdisciplinary Auralization of Take-off and Landing Procedures for Subjective Assessment in Virtual Reality Environments. , 2012, , .		7
50	The image edge model. Acta Acustica, 2021, 5, 17.	0.4	7
51	Flexible data structures for dynamic virtual auditory scenes. Virtual Reality, 2018, 22, 281-295.	4.1	6
52	Atmospheric Ray Tracing: An efficient, open-source framework for finding eigenrays in a stratified, moving medium. Acta Acustica, 2021, 5, 26.	0.4	6
53	Auralization of spaces. Physics Today, 2009, 62, 35-40.	0.3	6
54	Noise Radiation of Switched Reluctance Drives. , 2007, , .		5

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55	Including directivity patterns in room acoustical measurements. Proceedings of Meetings on Acoustics, 2013, , .	0.3	5
56	Through the Hourglass: A Faithful Audiovisual Reconstruction of the Old Montreux Casino. Acoustics Australia, 2015, 43, 49-57.	1.4	5
57	A Synthesis Model for a Moving Sound Source Based on Beamforming. Acta Acustica United With Acustica, 2018, 104, 351-362.	0.8	5
58	Directional sound field decay analysis in performance spaces. Building Acoustics, 2021, 28, 249-263.	1.1	5
59	The â€œMissing 6 dBâ€•Revisited: Influence of Room Acoustics and Binaural Parameters on the Loudness Mismatch Between Headphones and Loudspeakers. Frontiers in Psychology, 2021, 12, 623670.	1.1	5
60	Multizone Sound Field Reproduction Based on Equivalent Source Method. Acoustics Australia, 2021, 49, 317-329.	1.4	5
61	Multi-Detailed 3D Architectural Framework for Sound Perception Research in Virtual Reality. Frontiers in Built Environment, 2021, 7, .	1.2	5
62	Urban Sound Auralization and Visualization Frameworkâ€”Case Study at IHTApark. Sustainability, 2022, 14, 2026.	1.6	5
63	Recent Progress in Room Acoustical Computer Simulations. Building Acoustics, 1997, 4, 229-246.	1.1	4
64	Sound Fields in Complex Listening Environments. Trends in Amplification, 2011, 15, 106-115.	2.4	4
65	Comparative study of two geometrical acoustic simulation models. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2018, 40, 1.	0.8	4
66	Evaluating the Influence of Phoneme-Dependent Dynamic Speaker Directivity of Embodied Conversational Agents' Speech. , 2020, , .		4
67	Channel separation of crosstalk cancellation systems with mismatched and misaligned sound sources. Journal of the Acoustical Society of America, 2009, 126, 1796.	0.5	3
68	Inversion of a room acoustics model for the determination of acoustical surface properties in enclosed spaces. Proceedings of Meetings on Acoustics, 2013, , .	0.3	3
69	Predicting the Interaction Between Structure-Borne Sound Sources and Receiver Structures from Independently Measured Quantities: Case Study of a Washing Machine on a Wooden Joist Floor. Acta Acustica United With Acustica, 2014, 100, 79-92.	0.8	3
70	Comparison of Hanging Panels and Boundary Diffusers in a Reverberation Chamber. Building Acoustics, 2014, 21, 145-152.	1.1	3
71	Generation of a reference radiation pattern of string instruments using automatic excitation and acoustic centering. Journal of the Acoustical Society of America, 2015, 138, EL480-EL486.	0.5	3
72	In Situ Measurement of the Absorption Coefficient Based on a Time-Domain Subtraction Technique with a Particle Velocity Transducer. Acta Acustica United With Acustica, 2016, 102, 945-954.	0.8	3

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73	Experimental investigations on sound energy propagation in acoustically coupled volumes using a high-spatial resolution scanning system. Journal of the Acoustical Society of America, 2018, 143, EL437-EL442.	0.5	3
74	Simulation of non-locally reacting boundaries with a single domain boundary element method. Proceedings of Meetings on Acoustics, 2013, , .	0.3	3
75	Synthesis of room impulse responses for arbitrary source directivities using spherical harmonic decomposition. , 2011, , .		2
76	Influence of various uncertainty factors on the result of beamforming measurements. Noise Control Engineering Journal, 2011, 59, 302.	0.2	2
77	Prediction and measurement of the random-incidence scattering coefficient of periodic reflective rectangular diffuser profiles. Proceedings of Meetings on Acoustics, 2013, , .	0.3	2
78	Evaluation and improvement of a model to predict the measurement uncertainty due to the directivity of room acoustical sound sources. Proceedings of Meetings on Acoustics, 2014, , .	0.3	2
79	Simulation and Evaluation of Acoustic Environments. Building Acoustics, 2014, 21, 11-20.	1.1	2
80	In-situ Measurements of Surface Reflection Properties. Building Acoustics, 2014, 21, 167-174.	1.1	2
81	Impulsive Noise Detection in Sweep Measurements. Acta Acustica United With Acustica, 2015, 101, 723-730.	0.8	2
82	Room Acoustics â€“ Fundamentals and Computer Simulation. Springer Handbooks, 2018, , 197-215.	0.3	2
83	Simulation of a coupled room scenario based on geometrical acoustics simulation models. Proceedings of Meetings on Acoustics, 2019, , .	0.3	2
84	Linking atmospheric and urban auralization models. Acta Acustica, 2022, 6, 28.	0.4	2
85	Open Measurements of Edge Diffraction from a Noise Barrier Scale Model. Building Acoustics, 2011, 18, 47-57.	1.1	1
86	Investigation Into the Importance of the Degrees of Freedom for the Characterisation of Structure-Borne Sound Sources: Case Study of a Washing Machine on a Wooden Floor. Acta Acustica United With Acustica, 2011, 97, 940-948.	0.8	1
87	The influence of noise on monaural room acoustic parameters utilizing different evaluation methods. Proceedings of Meetings on Acoustics, 2013, , .	0.3	1
88	Signal processing for hemispherical measurement data. Proceedings of Meetings on Acoustics, 2013, , .	0.3	1
89	Theoretic considerations on how the directivity of a sound source influences the measured impulse response. Proceedings of Meetings on Acoustics, 2013, , .	0.3	1
90	Effect of boundary diffusers in a reverberation chamber: Preliminary investigation. Proceedings of Meetings on Acoustics, 2013, , .	0.3	1

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91	Locally or Non-Locally Reacting Boundaries: Does it Make a Significant Acoustic Difference?. Building Acoustics, 2014, 21, 117-124.	1.1	1
92	A war of coefficients or a meaningless wrangle over practical unessentials?. Journal of the Acoustical Society of America, 2021, 150, R5-R6.	0.5	1
93	Virtual Room Acoustics. A NIME Reader Fifteen Years of New Interfaces for Musical Expression, 2013, , 219-242.	0.1	1
94	Simulation of Sound in Rooms. RWTHedition, 2020, , 171-224.	0.6	1
95	Comparison of Strategies to Model Spatial Fluctuations of Room Acoustic Single Number Quantities. Building Acoustics, 2013, 20, 323-334.	1.1	0
96	Acoustic centering of a baffled piston in the circular harmonics domain. Journal of the Acoustical Society of America, 2016, 139, 1372-1380.	0.5	0
97	Performance of Spatial Windows in the Spatial Fourier Transform Technique for the Angle-Dependent Reflection Factor Measurement. Acta Acustica United With Acustica, 2017, 103, 349-353.	0.8	0
98	Interactive real-time auralization of airborne sound insulation in buildings. Acta Acustica, 2021, 5, 19.	0.4	0
99	Direction of arrival estimation of partial sound sources of vehicles with a two-microphone array. Acta Acustica, 2021, 5, 18.	0.4	0
100	Design of the new public address (PA) system for the cathedral of Mul̂nster, Germany. Proceedings of Meetings on Acoustics, 2013, , .	0.3	0
101	Digitale Signalverarbeitung in der Messtechnik. Fachwissen Technische Akustik, 2018, , 1-28.	0.7	0
102	3D Sound Reproduction. RWTHedition, 2020, , 297-321.	0.6	0
103	Filter Construction for Real-Time Processing. RWTHedition, 2020, , 277-295.	0.6	0
104	Characterization of Sources. RWTHedition, 2020, , 119-133.	0.6	0
105	Sound Propagation. RWTHedition, 2020, , 31-49.	0.6	0
106	Cross-site investigation on head-related and headphone transfer functions: variabilities in relation to loudness balancing. Acta Acustica, 2021, 5, 58.	0.4	0