Rudolf Rabenstein

List of Publications by Year
in descending order

50 papers	369 citations	1040056 9 h-index	996975 15 g-index
52 all docs	52 docs citations	52 times ranked	249 citing authors

#	Article	IF	Citations
1	Active listening room compensation for massive multichannel sound reproduction systems using wave-domain adaptive filtering. Journal of the Acoustical Society of America, 2007, 122, 354-369.	1.1	68
2	Digital sound synthesis of string instruments with the functional transformation method. Signal Processing, 2003, 83, 1673-1688.	3.7	24
3	Blocked-based physical modeling for digital sound synthesis. IEEE Signal Processing Magazine, 2007, 24, 42-54.	5.6	18
4	TDOA-Based Speed of Sound Estimation for Air Temperature and Room Geometry Inference. IEEE Transactions on Audio Speech and Language Processing, 2013, 21, 234-246.	3.2	18
5	Minimization of transient signals in recursive time-varying digital filters. Circuits, Systems, and Signal Processing, 1988, 7, 345-359.	2.0	12
6	Sound Field Synthesis. , 2004, , 323-344.		12
7	Sound Field Reproduction. , 2008, , 1095-1114.		12
8	Closed-form estimation of the speed of propagating waves from time measurements. Multidimensional Systems and Signal Processing, 2014, 25, 361-378.	2.6	12
9	Representation of two-dimensional wave fields by multidimensional signals. Signal Processing, 2006, 86, 1341-1351.	3.7	11
10	Numerical iterative methods and repetitive processes. Multidimensional Systems and Signal Processing, 2012, 23, 163-183.	2.6	10
11	Acoustic Source Localization under Variable Speed of Sound Conditions. Wireless Communications and Mobile Computing, 2017, 2017, 1-17.	1.2	10
12	Transfer function models for distributed-parameter systems with impedance boundary conditions. International Journal of Control, 2018, 91, 2726-2742.	1.9	9
13	Implicit discretization of linear partial differential equations and repetitive processes. , 2009, , .		8
14	Analytical Models for Particle Diffusion and Flow in a Horizontal Cylinder with a Vertical Force. , 2019, , .		8
15	Providing Surround Sound with Loudspeakers: A Synopsis of Current Methods. Archives of Acoustics, 2012, 37, .	0.8	7
16	An nD Model for a Cylindrical Diffusion-Advection Problem with an Orthogonal Force Component. , 2018, , .		7
17	Spherical Diffusion Model with Semi-Permeable Boundary: A Transfer Function Approach. , 2020, , .		7
18	Transfer Function Models for Cylindrical MC Channels With Diffusion and Laminar Flow. IEEE Transactions on Molecular, Biological, and Multi-Scale Communications, 2021, 7, 271-287.	2.1	7

#	Article	IF	Citations
19	Resonant electric arcs in DC microgrids with low system impedance in the VLF-band. , 2017, , .		6
20	Stability of recursive time-varying digital filters by state vector transformation. Signal Processing, 1985, 8, 75-92.	3.7	5
21	Design of FIR digital filters with flatness constraints for the error function. Circuits, Systems, and Signal Processing, 1994, 13, 77-97.	2.0	5
22	Discrete Simulation of a Class of Distributed Systems Using Functional Analytic Methods. Multidimensional Systems and Signal Processing, 2006, 17, 177-209.	2.6	5
23	Geometric inference of the room geometry under temperature variations. , 2012, , .		5
24	Calculation of the transformation kernels for the functional transformation method. , 2017, , .		5
25	Refined Fault Detection in LVDC-Grids with Signal Processing, System Identification and Machine Learning Methods. , 2018, , .		5
26	An Eigenfunction Approach to Parameter Estimation for 1D Diffusion Problems. , 2019, , .		5
27	A multidimensional transfer function model for frequency dependent transmission lines. , 2017, , .		4
28	Signal Processing for Sound Synthesis: Computer-Generated Sounds and Music for All [From the Guest Editors]. IEEE Signal Processing Magazine, 2007, 24, 8-10.	5.6	3
29	Block-Based Physical Modeling with Applications in Musical Acoustics. International Journal of Applied Mathematics and Computer Science, 2008, 18, 295-305.	1.5	3
30	Sound Field Synthesis. Academic Press Library in Signal Processing, 2014, 4, 915-979.	0.8	3
31	Design of a Molecular Communication Channel by Modelling Enzyme Kinetics. IFAC-PapersOnLine, 2015, 48, 35-40.	0.9	3
32	A transfer function model for 1D diffusion processes. , 2017, , .		3
33	Safety Concepts and Circuit Protection for LVDC-Grids in Datacenters and in Telecommunications. , 2018, , .		3
34	Non-Recursive System Identification and Fault Detection in LVDC and ELVDC Grids. , 2018, , .		3
35	Stability of two-step repetitive processes based on a matrix formulation. , 2007, , .		2
36	Tubular Bells: A Physical and Algorithmic Model. IEEE Transactions on Audio Speech and Language Processing, 2010, 18, 881-890.	3.2	2

#	Article	IF	Citations
37	Speed of sound and air temperature estimation using the TDOA-based localization framework. , 2012, , .		2
38	Analysis of the quantization error in digital multipliers with small wordlength. , 2016, , .		2
39	Approximation of enzyme kinetics for high enzyme concentration by a first order perturbation approach. Journal of Mathematical Chemistry, 2018, 56, 1153-1183.	1.5	2
40	Feedback Structures for a Transfer Function Model of a Circular Vibrating Membrane. , 2019, , .		2
41	Design of 2D FIR digital filters with flatness constraints for the error function. Circuits, Systems, and Signal Processing, 1994, 13, 65-75.	2.0	1
42	Special issue on multidimensional signal processing applications. Multidimensional Systems and Signal Processing, 2014, 25, 245-246.	2.6	1
43	An analytical fault model for direct current lines. , 2016, , .		1
44	A Wave Digital Kalman Filter Approach for Fault Detection in DC Grids: A Case Study. , 2018, , .		1
45	Channel Responses for the Molecule Release From Spherical Homogeneous Matrix Carriers. IEEE Transactions on Molecular, Biological, and Multi-Scale Communications, 2022, 8, 212-228.	2.1	1
46	Determination of Low Activities Released by a Decommissioned Fuel Fabrication Plant Through Natural Air Exchange. Nuclear Technology, 1992, 99, 213-221.	1.2	0
47	Digital sound synthesis of string vibrations with physical and psychoacoustic models. , 2008, , .		0
48	Room acoustic analysis: Complementing 2D measurements by 3D simulations. , 2008, , .		0
49	New Entries to the SPL EDICS for Audio and Acoustic Signal Processing. IEEE Signal Processing Letters, 2012, 19, 918-921.	3.6	0
50	Spatio-Temporal Adaptive Inverse Filtering in the Wave Domain. Signals and Communication Technology, 2008, , 551-583.	0.5	0