

Julius O Smith

List of Publications by Year in descending order

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41
papers

1,296
citations

758635

12
h-index

377514

34
g-index

52
all docs

52
docs citations

52
times ranked

522
citing authors

#	ARTICLE	IF	CITATIONS
1	Spectral Modeling Synthesis: A Sound Analysis/Synthesis System Based on a Deterministic Plus Stochastic Decomposition. Computer Music Journal, 1990, 14, 12.	0.3	350
2	Physical Modeling Using Digital Waveguides. Computer Music Journal, 1992, 16, 74.	0.3	268
3	Fifty Years of Artificial Reverberation. IEEE Transactions on Audio Speech and Language Processing, 2012, 20, 1421-1448.	3.8	139
4	Extensions of the Karplus-Strong Plucked-String Algorithm. Computer Music Journal, 1983, 7, 56.	0.3	138
5	Automated Physical Modeling of Nonlinear Audio Circuits For Real-Time Audio Effectsâ€™Part I: Theoretical Development. IEEE Transactions on Audio Speech and Language Processing, 2010, 18, 728-737.	3.8	42
6	Adaptive Interpolated Time-Delay Estimation. IEEE Transactions on Aerospace and Electronic Systems, 1985, AES-21, 180-199.	2.6	33
7	Efficient Synthesis of Room Acoustics via Scattering Delay Networks. IEEE/ACM Transactions on Audio Speech and Language Processing, 2015, 23, 1478-1492.	4.0	31
8	Modeling Circuits With Arbitrary Topologies and Active Linear Multiports Using Wave Digital Filters. IEEE Transactions on Circuits and Systems I: Regular Papers, 2018, 65, 4233-4246.	3.5	31
9	Numerical Methods for Simulation of Guitar Distortion Circuits. Computer Music Journal, 2008, 32, 23-42.	0.3	25
10	Virtual Acoustic Musical Instruments: Review and Update. Journal of New Music Research, 2004, 33, 283-304.	0.6	22
11	Alias-Suppressed Oscillators Based on Differentiated Polynomial Waveforms. IEEE Transactions on Audio Speech and Language Processing, 2010, 18, 786-798.	3.8	16
12	A landmark article on nonlinear time-domain modeling in musical acoustics. Journal of the Acoustical Society of America, 2021, 150, R3-R4.	0.5	15
13	A general and explicit formulation for wave digital filters with multiple/multiport nonlinearities and complicated topologies. , 2015, , .		13
14	Theory of Banded Waveguides. Computer Music Journal, 2004, 28, 37-50.	0.3	12
15	Introduction to the Special Issue on Virtual Analog Audio Effects and Musical Instruments. IEEE Transactions on Audio Speech and Language Processing, 2010, 18, 713-714.	3.8	12
16	Multi-port nonlinearities in Wave Digital Structures. , 2015, , .		12
17	Wave digital filter modeling of circuits with operational amplifiers. , 2016, , .		12
18	Design of Recursive Digital Filters in Parallel Form by Linearly Constrained Pole Optimization. IEEE Signal Processing Letters, 2016, 23, 1547-1550.	2.1	12

#	ARTICLE	IF	CITATIONS
19	Efficient Antialiasing Oscillator Algorithms Using Low-Order Fractional Delay Filters. IEEE Transactions on Audio Speech and Language Processing, 2010, 18, 773-785.	3.8	9
20	Robust, Efficient Design of Allpass Filters for Dispersive String Sound Synthesis. IEEE Signal Processing Letters, 2010, 17, 406-409.	2.1	9
21	Converting Series Biquad Filters Into Delayed Parallel Form: Application to Graphic Equalizers. IEEE Transactions on Signal Processing, 2019, 67, 3785-3795.	3.2	9
22	Exploiting the harmonic structure for speech enhancement. , 2012, , .		7
23	Force-Sensitive Detents Improve User Performance for Linear Selection Tasks. IEEE Transactions on Haptics, 2013, 6, 206-216.	1.8	7
24	Joint Modeling of Bridge Admittance and Body Radiativity for Efficient Synthesis of String Instrument Sound by Digital Waveguides. IEEE/ACM Transactions on Audio Speech and Language Processing, 2017, 25, 1128-1139.	4.0	7
25	Modeling sound scattering using a combination of the edge source integral equation and the boundary element method. Journal of the Acoustical Society of America, 2018, 144, 131-141.	0.5	6
26	Audio Watermarking through Deterministic plus Stochastic Signal Decomposition. Eurasip Journal on Information Security, 2007, 2007, 1-12.	2.2	5
27	Analysis and Synthesis of Coupled Vibrating Strings Using a Hybrid Modal-Waveguide Synthesis Model. IEEE Transactions on Audio Speech and Language Processing, 2010, 18, 833-842.	3.8	5
28	Mobile Music, Sensors, Physical Modeling, and Digital Fabrication: Articulating the Augmented Mobile Instrument. Applied Sciences (Switzerland), 2017, 7, 1311.	1.3	5
29	Electric-to-acoustic pickup processing for string instruments: An experimental study of the guitar with a hexaphonic pickup. Journal of the Acoustical Society of America, 2021, 150, 385-397.	0.5	5
30	Optimized Polynomial Spline Basis Function Design for Quasi-Bandlimited Classical Waveform Synthesis. IEEE Signal Processing Letters, 2012, 19, 159-162.	2.1	4
31	A hybrid method combining the edge source integral equation and the boundary element method for scattering problems. Proceedings of Meetings on Acoustics, 2016, , .	0.3	3
32	Efficient time-varying loudness estimation via the hopping Goertzel DFT. Midwest Symposium on Circuits and Systems, 2007, , .	1.0	2
33	Variable fractional delay filters in bandlimited oscillator algorithms for music synthesis. , 2010, , .		2
34	State-space modeling of sound source directivity: An experimental study of the violin and the clarinet. Journal of the Acoustical Society of America, 2021, 149, 2768-2781.	0.5	2
35	Generative Model of Voice in Noise for Structured Coding Applications. , 2007, , .		1
36	Parameterized Finite Difference Schemes for Plates: Stability, the Reduction of Directional Dispersion and Frequency Warping. IEEE Transactions on Audio Speech and Language Processing, 2007, 15, 1488-1495.	3.8	1

#	ARTICLE	IF	CITATIONS
37	Digital modeling of string instrument bridge reflectance and body radiativity for sound synthesis by digital waveguides. , 2015, , .		1
38	An energetic interpretation of nonlinear wave digital filter lookup table error (invited paper). , 2015, , .		1
39	Improved Real-Time Monophonic Pitch Tracking with the Extended Complex Kalman Filter. AES: Journal of the Audio Engineering Society, 2020, 68, 78-86.	0.8	1
40	Singer-Dependent Falsetto Detection for Live Vocal Processing Based on Support Vector Classification. , 2006, , .		0
41	Virtual String Synthesis. , 2010, , 417-455.		0