

Leon Cohen

List of Publications by Year in descending order

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Version: 2024-02-01

71
papers

5,350
citations

430874

18
h-index

197818

49
g-index

72
all docs

72
docs citations

72
times ranked

2232
citing authors

#	ARTICLE	IF	CITATIONS
1	Time-frequency distributions-a review. Proceedings of the IEEE, 1989, 77, 941-981.	21.3	2,935
2	Generalized Phase-Space Distribution Functions. Journal of Mathematical Physics, 1966, 7, 781-786.	1.1	1,008
3	The scale representation. IEEE Transactions on Signal Processing, 1993, 41, 3275-3292.	5.3	179
4	Hierarchy equations for reduced density matrices. Physical Review A, 1976, 13, 927-930.	2.5	159
5	Positive time-frequency distribution functions. IEEE Transactions on Acoustics, Speech, and Signal Processing, 1985, 33, 31-38.	2.0	136
6	Local kinetic energy in quantum mechanics. Journal of Chemical Physics, 1979, 70, 788.	3.0	120
7	Can Quantum Mechanics Be Formulated as a Classical Probability Theory?. Philosophy of Science, 1966, 33, 317-322.	1.0	70
8	A Wigner approximation method for wave propagation. Journal of the Acoustical Society of America, 2005, 118, 1268-1271.	1.1	70
9	The history of noise [on the 100th anniversary of its birth]. IEEE Signal Processing Magazine, 2005, 22, 20-45.	5.6	60
10	Instantaneous Frequency, Its Standard Deviation And Multicomponent Signals. Proceedings of SPIE, 1988, 0975, 186.	0.8	59
11	The Wigner distribution for classical systems. Physics Letters, Section A: General, Atomic and Solid State Physics, 2002, 302, 149-155.	2.1	52
12	The Weyl Operator and its Generalization. , 2013, , .		49
13	Fitting the Mel scale. , 1999, , .		45
14	Exact and approximate moments of a propagating pulse. Journal of Modern Optics, 2008, 55, 3349-3358.	1.3	39
15	Local values in quantum mechanics. Physics Letters, Section A: General, Atomic and Solid State Physics, 1996, 212, 315-319.	2.1	38
16	Approximate wave function from approximate non-representable Wigner distributions. Journal of Modern Optics, 2008, 55, 3379-3387.	1.3	35
17	A general approach for obtaining joint representations in signal analysis. I. Characteristic function operator method. IEEE Transactions on Signal Processing, 1996, 44, 1080-1090.	5.3	28
18	Frequency warping and the Mel scale. IEEE Signal Processing Letters, 2002, 9, 104-107.	3.6	28

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19	Direct Time-Frequency Characterization of Linear Systems Governed by Differential Equations. IEEE Signal Processing Letters, 2004, 11, 721-724.	3.6	25
20	Dispersion-invariant features for classification. Journal of the Acoustical Society of America, 2008, 123, 832-841.	1.1	22
21	Rules of probability in quantum mechanics. Foundations of Physics, 1988, 18, 983-998.	1.3	16
22	The history of noise. , 2004, , .		16
23	Instantaneous frequency and group delay of a filtered signal. Journal of the Franklin Institute, 2000, 337, 329-346.	3.4	15
24	Phase-space approach to wave propagation with dispersion and damping. , 2004, , .		13
25	WIGNER DISTRIBUTIONS Local properties of dispersive pulses. Journal of Modern Optics, 2002, 49, 2645-2655.	1.3	11
26	Generalization of the Gram-Charlier/Edgeworth Series and Application to Time-Frequency Analysis. Multidimensional Systems and Signal Processing, 1998, 9, 363-372.	2.6	9
27	Current and quasi-probability phase-space distributions. Journal of Modern Optics, 2003, 50, 2305-2329.	1.3	9
28	Working in phase-space with Wigner and Weyl. Fortschritte Der Physik, 2017, 65, 1600092.	4.4	9
29	The tensor virial theorem in quantum mechanics. Journal of Mathematical Physics, 1978, 19, 1838-1840.	1.1	8
30	Generalized Wigner distributions, moments and conditional correspondence rules. Journal of Modern Optics, 2002, 49, 539-560.	1.3	8
31	A phase space approach to wave propagation with dispersion. Journal of the Acoustical Society of America, 2015, 138, 1122-1131.	1.1	8
32	Inverse Weyl transform/operator. Journal of Pseudo-Differential Operators and Applications, 2017, 8, 661-678.	0.7	7
33	The phase space of non-stationary noise. Journal of Modern Optics, 2004, 51, 2731-2740.	1.3	6
34	Construction and transformation of probability densities*. Integrated Computer-Aided Engineering, 2005, 12, 129-134.	4.6	6
35	Dispersion, Its Effects, and Compensation. , 2007, , 105-125.		6
36	Pulse propagation and windowed wave functions. Journal of Modern Optics, 2014, 61, 36-42.	1.3	5

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37	Why do wave packets sometimes contract?. Journal of Modern Optics, 2002, 49, 2365-2382.	1.3	4
38	Wigner quasi-distributions for arbitrary operators. Journal of Modern Optics, 2004, 51, 2761-2769.	1.3	4
39	Equations of motion for rays in a Snell's law medium. Journal of the Acoustical Society of America, 2015, 137, EL171-EL177.	1.1	3
40	M-indeterminate distributions in quantum mechanics and the non-overlapping wave function paradox. Physics Letters, Section A: General, Atomic and Solid State Physics, 2018, 382, 2914-2921.	2.1	3
41	From von Neumann to Wigner and beyond. European Physical Journal: Special Topics, 2019, 227, 2171-2182.	2.6	3
42	Generating M-Indeterminate Probability Densities by Way of Quantum Mechanics. Journal of Theoretical Probability, 2022, 35, 1537-1555.	0.8	3
43	A time-frequency approach to the adjustable bandwidth concept. , 2006, 16, 454-467.		2
44	Local Virial and Tensor Theorems. Journal of Physical Chemistry A, 2011, 115, 12919-12923.	2.5	2
45	On the generalization of the Edgeworth/Gram-Charlier series. Journal of Mathematical Chemistry, 2011, 49, 625-628.	1.5	2
46	The conditional Weyl transform and its generalization. Journal of Pseudo-Differential Operators and Applications, 2013, 4, 1-12.	0.7	2
47	Modes and Noise Propagation in Phase Space. Coherent Optical Phenomena, 2015, 2, .	0.2	2
48	Quasi-distributions for arbitrary non-commuting operators. Physics Letters, Section A: General, Atomic and Solid State Physics, 2020, 384, 126393.	2.1	2
49	Note on "Time dependence of a general class of quantum distribution functions". Physical Review A, 1987, 35, 433-436.	2.5	1
50	The instantaneous spectral band. , 0, , .		1
51	Time-frequency Wigner evolution of the quantum Langevin equation. Journal of Modern Optics, 2005, 52, 2223-2232.	1.3	1
52	Reverberation noise in phase-space. Journal of Modern Optics, 2010, 57, 1949-1953.	1.3	1
53	Phase space approach to wave propagation using windowed wave functions. Journal of Modern Optics, 2016, 63, 17-22.	1.3	1
54	Transformation of quasi-distributions. Physica Scripta, 2018, 93, 094001.	2.5	1

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55	The Propagation of Noise Fields in a Dispersive Medium. , 2012, , 19-43.		1
56	Current and quasi-probability phase-space distributions. Journal of Modern Optics, 2003, 50, 2305-2329.	1.3	1
57	Time-Frequency Analysis: What We Know and What We Don't. Applied and Numerical Harmonic Analysis, 2020, , 75-101.	0.3	1
58	Time-frequency methods for biological signal estimation. , 0, , .		0
59	Wigner distribution for operators at different times. Journal of Modern Optics, 2006, 53, 2377-2385.	1.3	0
60	Bohm trajectories for wave propagation. Journal of Modern Optics, 2009, 56, 2137-2141.	1.3	0
61	Space-time autocorrelation function for reverberation propagation in a dispersive medium. Journal of Modern Optics, 2011, 58, 2002-2007.	1.3	0
62	Joint distributions, the uncertainty principle and positive distributions. Mathematical Structures in Computer Science, 2014, 24, .	0.6	0
63	On a modification of the Newtonian particle view of rays. Physica Scripta, 2015, 90, 108003.	2.5	0
64	Statistics of a space-time random pulse train. Journal of the Acoustical Society of America, 2016, 140, 1937-1944.	1.1	0
65	Pulse propagation in wavelet phase space. , 2016, , .		0
66	Snell's law and SOFAR channels: a particle view. Journal of Modern Optics, 2016, 63, 23-26.	1.3	0
67	Schrödinger and Heisenberg formulation of classical pulse propagation with dispersion and attenuation. Journal of Modern Optics, 2017, 64, 930-935.	1.3	0
68	The eigenvalue problem in phase space. Journal of Computational Chemistry, 2018, 39, 1059-1067.	3.3	0
69	The hyperviral and viral theorems in terms of Weyl symbols. Journal of Pseudo-Differential Operators and Applications, 2018, 9, 469-486.	0.7	0
70	Contracted Schrödinger equation in quantum phase space. Journal of Computational Chemistry, 2018, 39, 1068-1075.	3.3	0
71	Phase Space Analysis of the Telegraph Equation. IEEE Transactions on Antennas and Propagation, 2022, , 1-1.	5.1	0