Peter VÃ¡n

List of Publications by Year
in descending order

109	2,211	236912	254170
papers	citations	25 h-index	43 g-index

116	116	116	1050
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Influence of water content on the strength of rock. Engineering Geology, 2006, 84, 70-74.	6.3	275
2	Generalized heat conduction in heat pulse experiments. International Journal of Heat and Mass Transfer, 2015, 83, 613-620.	4.8	104
3	Universality in heat conduction theory: weakly nonlocal thermodynamics. Annalen Der Physik, 2012, 524, 470-478.	2.4	97
4	Entropy Principle and Recent Results in Non-Equilibrium Theories. Entropy, 2014, 16, 1756-1807.	2.2	93
5	Zeroth law compatibility of nonadditive thermodynamics. Physical Review E, 2011, 83, 061147.	2.1	79
6	Deviation from the Fourier law in room-temperature heat pulse experiments. Journal of Non-Equilibrium Thermodynamics, 2016, 41, 41-48.	4.2	75
7	Internal Variables and Dynamic Degrees of Freedom. Journal of Non-Equilibrium Thermodynamics, 2008, 33, .	4.2	70
8	First order and stable relativistic dissipative hydrodynamics. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2012, 709, 106-110.	4.1	65
9	Guyer-Krumhanslâ€“type heat conduction at room temperature. Europhysics Letters, 2017, 118, 50005.	2.0	62
10	Quark-gluon plasma connected to finite heat bath. European Physical Journal A, 2013, 49, 1.	2.5	58
11	Weakly nonlocal irreversible thermodynamics. Annalen Der Physik, 2003, 12, 146-173.	2.4	54
12	Relativistic hydrodynamics â€“ causality and stability. European Physical Journal: Special Topics, 2008, 155, 201-212.	2.6	54
13	Weakly nonlocal irreversible thermodynamicsâ€”the Guyerâ€“Krumhansl and the Cahnâ€“Hilliard equations. Physics Letters, Section A: General, Atomic and Solid State Physics, 2001, 290, 88-92.	2.1	46
14	Investigation of the relationship between dynamic and static deformation moduli of rocks. Geomechanics and Geophysics for Geo-Energy and Geo-Resources, 2020, 6, 1.	2.9	43
15	About the temperature of moving bodies. Europhysics Letters, 2010, 89, 30001.	2.0	37
16	Second sound and ballistic heat conduction: NaF experiments revisited. International Journal of Heat and Mass Transfer, 2018, 117, 682-690.	4.8	36
17	Statistical Power Law due to Reservoir Fluctuations and the Universal Thermostat Independence Principle. Entropy, 2014, 16, 6497-6514.	2.2	34
18	New entropy formula with fluctuating reservoir. Physica A: Statistical Mechanics and Its Applications, 2015, 417, 215-220.	2.6	32

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19	Distinguished rheological models for solids in the framework of a thermodynamical internal variable theory. Continuum Mechanics and Thermodynamics, 2015, 27, 971-986.	2.2	32
20	Site-selection criteria for the Einstein Telescope. Review of Scientific Instruments, 2020, 91, 094504.	1.3	32
21	Structure of variational principles in nonequilibrium thermodynamics. Physical Review E, 1995, 52, 3584-3590.	2.1	31
22	Emergence of Non-Fourier Hierarchies. Entropy, 2018, 20, 832.	2.2	30
23	Thermodynamical consistency of the dual-phase-lag heat conduction equation. Continuum Mechanics and Thermodynamics, 2018, 30, 1223-1230.	2.2	29
24	Models of Ballistic Propagation of Heat at Low Temperatures. International Journal of Thermophysics, 2016, 37, 1.	2.1	26
25	The effects of nonlocality on the evolution of higher order fluxes in nonequilibrium thermodynamics. Journal of Mathematical Physics, 2005, 46, 112901.	1.1	24
26	Weakly nonlocal thermoelasticity for microstructured solids: microdeformation and microtemperature. Archive of Applied Mechanics, 2014, 84, 1249-1261.	2.2	24
27	Can material time derivative be objective?. Physics Letters, Section A: General, Atomic and Solid State Physics, 2006, 353, 109-112.	2.1	23
28	Kinematic quantities of finite elastic and plastic deformation. Mathematical Methods in the Applied Sciences, 2012, 35, 1825-1841.	2.3	22
29	Mesoscopic dynamics of microcracks. Physical Review E, 2000, 62, 6206-6215.	2.1	21
30	Thermodynamic approach to generalized continua. Continuum Mechanics and Thermodynamics, 2014, 26, 403-420.	2.2	21
31	Size Effects and Beyond-Fourier Heat Conduction in Room-Temperature Experiments. Journal of Non-Equilibrium Thermodynamics, 2021, 46, 403-411.	4.2	21
32	Generalized heat-transport equations: parabolic and hyperbolic models. Continuum Mechanics and Thermodynamics, 2018, 30, 1245-1258.	2.2	20
33	Theories and heat pulse experiments of non-Fourier heat conduction. Communications in Applied and Industrial Mathematics, 2016, 7, 150-166.	0.3	19
34	Lagging heat models in thermodynamics and bioheat transfer: a critical review. Continuum Mechanics and Thermodynamics, 2022, 34, 637-679.	2.2	19
35	Hamilton formalism and variational principle construction. Annalen Der Physik, 1999, 8, 331-354.	2.4	18
36	Extra Mass Flux in Fluid Mechanics. Journal of Non-Equilibrium Thermodynamics, 2017, 42, 133-151.	4.2	17

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37	The Ginzburg-Landau equation as a consequence of the Second Law. Continuum Mechanics and Thermodynamics, 2005, 17, 165-169.	2.2	16
38	Stability of stationary solutions of the SchrÃ¶dingerâ€“Langevin equation. Physics Letters, Section A: General, Atomic and Solid State Physics, 2004, 323, 374-381.	2.1	15
39	Weakly non-local fluid mechanics: the SchrÃ¶dinger equation. Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences, 2006, 462, 541-557.	2.1	15
40	Internal Thermodynamic Variables and Failure of Microcracked Materials. Journal of Non-Equilibrium Thermodynamics, 2001, 26, .	4.2	14
41	Thermodynamic approach to the relaxation of viscosity and thermal conductivity. Physical Review C, 2008, 78, .	2.9	14
42	Griffith cracks in the mesoscopic microcrack theory. Journal of Physics A, 2004, 37, 5315-5328.	1.6	13
43	Internal energy in dissipative relativistic fluids. Journal of Mechanics of Materials and Structures, 2008, 3, 1161-1169.	0.6	13
44	Variational principles and nonequilibrium thermodynamics. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20190178.	3.4	13
45	Ballistic-Diffusive Model for Heat Transport in Superlattices and the Minimum Effective Heat Conductivity. Entropy, 2020, 22, 167.	2.2	13
46	Non-equilibrium theories of rarefied gases: internal variables and extended thermodynamics. Continuum Mechanics and Thermodynamics, 2021, 33, 307-325.	2.2	13
47	Weakly nonlocal continuum theories of granular media: restrictions from the Second Law. International Journal of Solids and Structures, 2004, 41, 5921-5927.	2.7	12
48	On the evolution of higher order fluxes in non-equilibrium thermodynamics. Mathematical and Computer Modelling, 2007, 45, 126-136.	2.0	12
49	Thermodynamic hierarchies of evolution equations. Proceedings of the Estonian Academy of Sciences, 2015, 64, 389.	1.5	12
50	Galilean relativistic fluid mechanics. Continuum Mechanics and Thermodynamics, 2017, 29, 585-610.	2.2	12
51	Nonadditive thermostatistics and thermodynamics. Journal of Physics: Conference Series, 2012, 394, 012002.	0.4	11
52	Nonequilibrium thermodynamics: emergent and fundamental. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2020, 378, 20200066.	3.4	11
53	Generalized ballistic-conductive heat transport laws in three-dimensional isotropic materials. Continuum Mechanics and Thermodynamics, 2021, 33, 403-430.	2.2	11
54	Mass distribution from a quark matter equation of state. Physical Review C, 2007, 75, .	2.9	10

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55	Absolute time derivatives. Journal of Mathematical Physics, 2007, 48, 053507.	1.1	10
56	Generic stability of dissipative non-relativistic and relativistic fluids. Journal of Statistical Mechanics: Theory and Experiment, 2009, 2009, P02054.	2.3	10
57	First report of long term measurements of the MGGL laboratory in the MÃ¡tra mountain range. Classical and Quantum Gravity, 2017, 34, 114001.	4.0	10
58	Weakly Nonlocal Non-equilibrium Thermodynamics â€“ Variational Principles and Second Law. , 2009, , 153-186.		10
59	Equation of state for distributed mass quark matter. Journal of Physics G: Nuclear and Particle Physics, 2006, 32, S205-S212.	3.6	9
60	Sensitivity analysis of GSI based mechanical parameters of the rock mass. Periodica Polytechnica: Civil Engineering, 2014, 58, 379-386.	0.6	9
61	Other Dynamic Laws in Thermodynamics. Physics Essays, 1995, 8, 457-465.	0.4	8
62	On the Structure of the Governing Principle of Dissipative Processes. Journal of Non-Equilibrium Thermodynamics, 1996, 21, .	4.2	7
63	Black hole horizons can hide positive heat capacity. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2018, 782, 228-231.	4.1	7
64	Unique additive information measuresâ€”Boltzmannâ€“Gibbsâ€“Shannon, Fisher and beyond. Physica A: Statistical Mechanics and Its Applications, 2006, 365, 28-33.	2.6	6
65	Microinertia and internal variables. Continuum Mechanics and Thermodynamics, 2016, 28, 1027-1037.	2.2	6
66	Objective time derivatives in nonequilibrium thermodynamics. Proceedings of the Estonian Academy of Sciences, 2008, 57, 127.	1.5	5
67	Publisherâ€™s Note: Zeroth law compatibility of nonadditive thermodynamics [Phys. Rev. E83, 061147 (2011)]. Physical Review E, 2011, 84, .	2.1	5
68	Long term measurements from the MÃ¡tra Gravitational and Geophysical Laboratory. European Physical Journal: Special Topics, 2019, 228, 1693-1743.	2.6	5
69	A Case Study of Non-Fourier Heat Conduction Using Internal Variables and GENERIC. Journal of Non-Equilibrium Thermodynamics, 2022, 47, 31-60.	4.2	5
70	Scalar, vectorial, and tensorial damage parameters from the mesoscopic background. Proceedings of the Estonian Academy of Sciences, 2008, 57, 132.	1.5	4
71	Thermodynamic consistency of third grade finite strain elasticity. Proceedings of the Estonian Academy of Sciences, 2010, 59, 126.	1.5	4
72	Kinetic equilibrium and relativistic thermodynamics. EPJ Web of Conferences, 2011, 13, 07004.	0.3	4

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73	Title is missing!. Acta Physica Polonica B, 2012, 43, 811.	0.8	4
74	Thermodynamics and flow-frames for dissipative relativistic fluids. , 2014, , .		4
75	Splitting the Source Term for the Einstein Equation to Classical and Quantum Parts. Foundations of Physics, 2015, 45, 1465-1482.	1.3	4
76	Volume dependent extension of Kerr-Newman black hole thermodynamics. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2020, 803, 135344.	4.1	4
77	Fundamental Problems of Variational Principles: Objectivity, Symmetries and Construction. , 2005, , 57-74.		3
78	Topical issue on relativistic hydro- and thermodynamics. European Physical Journal A, 2012, 48, 1.	2.5	3
79	Thermodynamic aspects of rock friction. Acta Geodaetica Et Geophysica, 2014, 49, 135-146.	1.6	3
80	Weakly Nonlocal Non-Equilibrium Thermodynamics: the Cahn-Hilliard Equation. Advanced Structured Materials, 2018, , 745-760.	0.5	3
81	Thermodynamically consistent gradient elasticity with an internal variable. Theoretical and Applied Mechanics, 2020, 47, 1-17.	0.3	3
82	Emergence of extended Newtonian gravity from thermodynamics. Physica A: Statistical Mechanics and Its Applications, 2022, 588, 126505.	2.6	3
83	One- and two-component fluids: restrictions from the Second Law. Physica A: Statistical Mechanics and Its Applications, 2004, 340, 418-426.	2.6	2
84	Fluid dynamics as a diagnostic tool for heavy-ion collisions. Journal of Physics G: Nuclear and Particle Physics, 2007, 34, S1077-S1081.	3.6	2
85	What is Thermodynamics and what is it for?. Interdisciplinary Description of Complex Systems, 2012, 10, 66-72.	0.6	2
86	Hundred years after the first triaxial test. Periodica Polytechnica: Civil Engineering, 2012, 56, 115.	0.6	2
87	Seismic noise measures for underground gravitational wave detectors. Acta Geodaetica Et Geophysica, 2019, 54, 301-313.	1.6	2
88	Rock rheology â€“ time dependence of dilation and stress around a tunnel. , 2006, , 357-363.		2
89	Spectral Properties of Dissipation. Journal of Non-Equilibrium Thermodynamics, 2022, 47, 95-102.	4.2	2
90	Crossover in Extended Newtonian Gravity Emerging from Thermodynamics. Symmetry, 2022, 14, 1048.	2.2	2

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91	Derivation of the basic equations of MHD from the Governing Principle of Dissipative Processes. Acta Physica Hungarica, 1990, 68, 227-239.	0.1	1
92	Instead of Introduction. Solid Mechanics and Its Applications, 2017, , 1-18.	0.2	1
93	Internal Variables and Microinertia. Solid Mechanics and Its Applications, 2017, , 75-84.	0.2	1
94	Microdeformation and Microtemperature. Solid Mechanics and Its Applications, 2017, , 175-190.	0.2	1
95	Sensitivity analysis of the generalized Hoek-Brown failure criterion. , 2013, , 835-840.		1
96	Entropy Production in Phase Field Theories. Mathematics of Planet Earth, 2019, , 365-370.	0.1	1
97	Remeasurement of the EÃ¶tvÃ¶s experiment - status and first results. , 2019, , .		1
98	Classical and quantum parts in Madelung variables: Splitting the source term of the Einstein equation into classical and quantum parts. EPJ Web of Conferences, 2014, 78, 02003.	0.3	0
99	Non-Equilibrium Thermodynamical Framework for Rate- and State-Dependent Friction. Periodica Polytechnica: Civil Engineering, 2015, 59, 583-589.	0.6	0
100	One-Dimensional Thermoelasticity with Dual Internal Variables. Solid Mechanics and Its Applications, 2017, , 147-162.	0.2	0
101	Heat Conduction in Microstructured Solids. Solid Mechanics and Its Applications, 2017, , 131-145.	0.2	0
102	Thermomechanical Single Internal Variable Theory. Solid Mechanics and Its Applications, 2017, , 35-58.	0.2	0
103	Dual Internal VariablesDual internal variables. Solid Mechanics and Its Applications, 2017, , 59-72.	0.2	0
104	Dispersive Elastic Waves. Solid Mechanics and Its Applications, 2017, , 85-98.	0.2	0
105	One-Dimensional Microelasticity. Solid Mechanics and Its Applications, 2017, , 99-111.	0.2	0
106	Influence of Nonlinearity. Solid Mechanics and Its Applications, 2017, , 113-120.	0.2	0
107	The Role of Heterogeneity in Heat Pulse Propagation in a Solid with Inner Structure. Solid Mechanics and Its Applications, 2017, , 123-130.	0.2	0
108	Analyzing the influence of the water saturation on the strength of sandstones. , 2006, , 169-172.		0

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109	Hamilton formalism and variational principle construction. Annalen Der Physik, 1999, 511, 331-354.	2.4	0