Barry D Ganapol

List of Publications by Year
in descending order

42	474	933447 10	713466 21
papers	citations	h-index	g-index

42	42	42	237
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Physics-informed neural networks for the point kinetics equations for nuclear reactor dynamics. Annals of Nuclear Energy, 2022, 167, 108833.	1.8	26
2	Physics-Informed Neural Networks for rarefied-gas dynamics: Poiseuille flow in the BGK approximation. Zeitschrift Fur Angewandte Mathematik Und Physik, 2022, 73, .	1.4	8
3	Solutions of Chandrasekharâ€™s basic problem in radiative transfer via theory of functional connections. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 259, 107384.	2.3	17
4	Matrix Riccati Equation Solution of the 1D Radiative Transfer Equation. Journal of Computational and Theoretical Transport, 2021, 50, 297-327.	0.8	2
5	Physics-informed neural networks for rarefied-gas dynamics: Thermal creep flow in the Bhatnagarâ€“Grossâ€“Krook approximation. Physics of Fluids, 2021, 33, .	4.0	34
6	Internal energy and hydrostatic pressure of a quantum relativistic ideal gas. Radiation Effects and Defects in Solids, 2019, 174, 140-147.	1.2	1
7	1D thermal creep channel flow in the BGK approximation by adding and doubling. Annals of Nuclear Energy, 2019, 134, 441-451.	1.8	3
8	Particle Transport in a 3D Duct by Adding and Doubling. Journal of Computational and Theoretical Transport, 2017, 46, 202-228.	0.8	5
9	Poiseuille channel flow by adding and doubling. AIP Conference Proceedings, 2016, , .	0.4	2
10	Wave Propagation in an Ideal Gas: First and Second Sound. Journal of Computational and Theoretical Transport, 2016, 45, 268-274.	0.8	0
11	A comment on â€œNumerical treatment for the point reactor kinetics equationsÂusing theta method, eigenvalues and eigenvectorsâ€•by AbdallahÂA.ÂNahla in Progress in Nuclear Energy 85 (2015) 756â€“763. Progress in Nuclear Energy, 2016, 92, 220-222.	2.9	0
12	The Specific Heat of Liquid Helium. Journal of Computational and Theoretical Transport, 2016, 45, 212-218.	0.8	1
13	Application of Non-Linear Extrapolations for the Convergence Acceleration of Source Iteration. Journal of Computational and Theoretical Transport, 2016, 45, 351-367.	0.8	2
14	Density distribution for the molecules of a liquid in a semi-infinite space. Modern Physics Letters B, 2015, 29, 1550112.	1.9	0
15	The response matrix discrete ordinates solution to the 1D radiative transfer equation. Journal of Quantitative Spectroscopy and Radiative Transfer, 2015, 154, 72-90.	2.3	22
16	Chandrasekhar Polynomials and the Solution to the Transport Equation in an Infinite Medium. Journal of Computational and Theoretical Transport, 2014, 43, 433-473.	0.8	4
17	A 1D Monoenergetic Neutron Transport Benchmark in an Infinite Medium. , 2014, , .		0
18	A highly accurate technique for the solution of the non-linear point kinetics equations. Annals of Nuclear Energy, 2013, 58, 43-53.	1.8	34

#	Article	IF	Citations
19	Dosimetry parameters calculation of two commercial iodine brachytherapy sources using SMARTEPANTS with EPDL97 library. Journal of Cancer Research and Therapeutics, 2012, 8, 610.	0.9	0
20	On Radiative Transfer in Dense Vegetation Canopies. Transport Theory and Statistical Physics, 2012, 41, 223-244.	0.4	3
21	Derivation of a Physically Based Hybrid Technique for the Solution of Source-Driven Time-Dependent Linear Boltzmann Equations. Transport Theory and Statistical Physics, 2012, 41, 23-39.	0.4	3
22	An Efficient Multiproblem Strategy for Accurate Solutions of Linear Particle Transport Problems in Spherical Geometry. Nuclear Science and Engineering, 2012, 170, 103-124.	1.1	9
23	A Hybrid Transport Point-Kinetic method for simulating source transients in subcritical systems. Annals of Nuclear Energy, 2011, 38, 2680-2688.	1.8	11
24	Solving radiative transfer problems in highly heterogeneous media via domain decomposition and convergence acceleration techniques. Applied Radiation and Isotopes, 2011, 69, 1146-1150.	1.5	3
25	Radiative transfer with internal reflection via the converged discrete ordinates method. Journal of Quantitative Spectroscopy and Radiative Transfer, 2011, 112, 693-713.	2.3	16
26	Estimating water and ice content on planetary soils using neutron measurements: a neural network approach. Radiation Effects and Defects in Solids, 2009, 164, 345-349.	1.2	0
27	Three-dimensional transport theory: An analytical solution for the internal beam searchlight problem, II. Annals of Nuclear Energy, 2009, 36, 1242-1255.	1.8	5
28	Modelling neutron transport in planetary media via analytical multigroup diffusion theory. Radiation Effects and Defects in Solids, 2009, 164, 340-344.	1.2	1
29	A Statistical Framework for the Sensitivity Analysis of Radiative Transfer Models. IEEE Transactions on Geoscience and Remote Sensing, 2008, 46, 4062-4074.	6.3	18
30	Forward and inverse models for photon transport in soil-ice mixtures and their application to the problem of retrieving optical properties of planetary surfaces. , 2008, , .		1
31	Spectral Theory for Photon Transport in Dense Vegetation Media: Caseology for the Canopy Equation. Transport Theory and Statistical Physics, 2007, 36, 107-135.	0.4	6
32	Vegetation Canopy Reflectance Modeling with Turbid Medium Radiative Transfer. , 2006, , 173-210.		1
33	Mining the discrete velocity method for high quality solutions for one-dimensional Poiseuille flow. Zeitschrift Fur Angewandte Mathematik Und Physik, 2006, 57, 1011-1024.	1.4	0
34	Fourier Transform Transport Solutions in Spherical Geometry. Transport Theory and Statistical Physics, 2003, 32, 587-605.	0.4	3
35	LCM2. Remote Sensing of Environment, 1999, 70, 153-166.	11.0	76
36	LEAFMOD. Remote Sensing of Environment, 1998, 63, 182-193.	11.0	127

#	Article	IF	Citations
37	The Greenâ€™s Function Method for Nuclear Engineering Applications. Nuclear Science and Engineering, 1997, 126, 293-313.	1.1	11
38	Distributed Neutron Sources in a Semi-Infinite Medium. Nuclear Science and Engineering, 1992, 110, 275-281.	1.1	5
39	A simplified formulation of photon transport in leaf canopies with scatterers of finite dimensions. Journal of Quantitative Spectroscopy and Radiative Transfer, 1991, 46, 135-140.	2.3	7
40	The Spencer-Lewis equation of electron transport theory: A benchmark. Transport Theory and Statistical Physics, 1986, 15, 871-895.	0.4	2
41	A Study of Fuel Removal via Inner Blanket Intersubassembly Gaps During the Disruption Phase of Hypothetical Loss of Flow Accidents in Heterogeneous LMFBR Cores. Nuclear Technology, 1985, 71, 145-161.	1.2	3
42	Determination of the density perturbation at the wall for the Rayleigh problem. Physics of Fluids, 1982, 25, 2211.	1.4	2