Pieter Maris

List of Publications by Year
in descending order

99 papers	3,306 citations	126907 33 h-index	149698 56 g-index
100 all docs	100 docs citations	100 times ranked	951 citing authors

#	Article	IF	Citations
1	Nonlocal Structure of the Leading Order ab initio Effective Potentials for Proton Elastic Scattering from Light Nuclei. Few-Body Systems, 2022, 63, 1.	1.5	0
2	Accelerating an iterative eigensolver for nuclear structure configuration interaction calculations on GPUs using OpenACC. Journal of Computational Science, 2022, 59, 101554.	2.9	6
3	Î±-Clustering in atomic nuclei from first principles with statistical learning and the Hoyle state character. Nature Communications, 2022, 13, 2234.	12.8	22
4	Natural orbitals for theab initiono-core configuration interaction approach. Physical Review C, 2022, 105, .	2.9	9
5	Accelerating Quantum Many-Body Configuration Interaction withÂDirectives. Lecture Notes in Computer Science, 2022, , 112-132.	1.3	0
6	Robust ab initio prediction of nuclear electric quadrupole observables by scaling to the charge radius. Physical Review C, 2022, 105, .	2.9	6
7	Nuclear spin features relevant to ab initio nucleon-nucleus elastic scattering. Physical Review C, 2021, 103, .	2.9	4
8	Light nuclei with semilocal momentum-space regularized chiral interactions up to third order. Physical Review C, 2021, 103, .	2.9	52
9	Semileptonic decay of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>B</mml:mi></mml:mrow><mml:mrow><mml:mi>c</mml:mi></mml:mrow></mml:msub></mml:mrow></mml:math> to <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>Î·</mml:mi></mml:mrow><mml:mrow><mml:mi>c</mml:mi></mml:mrow></mml:msub></mml:mrow></mml:math> and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="... Physical Review D, 2021, 104, .	4.7	2
10	Quadrupole moments and proton-neutron structure in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>p</mml:mi></mml:math> -shell mirror nuclei. Physical Review C, 2021, 104, .	2.9	8
11	Ground state properties of light self-conjugate nuclei in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mn>4</mml:mn><mml:mi>n</mml:mi></mml:mrow></mml:math> self-conjugate nuclei in ab initio no-core Monte Carlo shell model calculations with nonlocal <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>N</mml:mi><mml:mi>N</mml:mi></mml:mrow></mml:math> interactions. Physical Review C, 2021, 104, .	2.9	9
12	Ultrarelativistic quark-nucleus scattering in a light-front Hamiltonian approach. Physical Review D, 2020, 101, .	4.7	11
13	Heavy-light mesons on the light front. European Physical Journal C, 2020, 80, 1.	3.9	27
14	Ab initio leading order effective potentials for elastic nucleon-nucleus scattering. Physical Review C, 2020, 102, .	2.9	24
15	Improved description of light nuclei through chiral effective field theory at leading order. Physical Review C, 2020, 102, .	2.9	8
16	Probing ab initio emergence of nuclear rotation. European Physical Journal A, 2020, 56, 1.	2.5	15
17	Minkowski-space solutions of the Schwinger-Dyson equation for the fermion propagator with the rainbow-ladder truncation. , 2020, , .		3
18	On the light-front wave functions of quarkonia. , 2020, , .		3

#	Article	IF	Citations
19	Evaluation of the Communication Motif for a Distributed Eigensolver using the SST Network Simulation Tool. , 2020, , .		0
20	Frame dependence of transition form factors in light-front dynamics. Physical Review D, 2019, 100, .	4.7	6
21	Description of Continuum Spectrum States of Light Nuclei in the Shell Model. Physics of Particles and Nuclei, 2019, 50, 537-543.	0.7	6
22	Ab initio calculations of p-shell nuclei up to N²LO in chiral Effective Field Theory. Journal of Physics: Conference Series, 2019, 1291, 012005.	0.4	3
23	Deep learning: Extrapolation tool for ab initio nuclear theory. Physical Review C, 2019, 99, .	2.9	36
24	Ab initio folding potentials for nucleon-nucleus scattering based on no-core shell-model one-body densities. Physical Review C, 2019, 99, .	2.9	36
25	Few- and many-nucleon systems with semilocal coordinate-space regularized chiral two- and three-body forces. Physical Review C, 2019, 99, .	2.9	68
26	Effective interactions in the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>s</mml:mi><mml:mi>d</mml:mi></mml:mrow></mml:ma shell. Physical Review C, 2019, 100, .	2.9	22
27	Ab initio translationally invariant nonlocal one-body densities from no-core shell-model theory. Physical Review C, 2018, 97, .	2.9	18
28	Hadron Spectra, Decays and Scattering Properties Within Basis Light Front Quantization. Few-Body Systems, 2018, 59, 1.	1.5	7
29	Frame dependence of form factors in light-front dynamics. Physical Review D, 2018, 97, .	4.7	13
30	Accelerating nuclear configuration interaction calculations through a preconditioned block iterative eigensolver. Computer Physics Communications, 2018, 222, 1-13.	7.5	43
31	Radiative transitions between <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mn>0</mml:mn><mml:mrow><mml:mo form="prefix">â</mml:mo><mml:mo form="prefix">+</mml:mo></mml:mrow></mml:msup></mml:math> and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msup><mml:mn>1</mml:mn><mml:mrow><mml:mo>â</mml:mo><mml:mo>â</mml:mo></mml:mrow></mml:m heavy quarkonia on the light front. Physical Review D, 2018, 98, .	4.7	24
32	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mrow><mml:mi>B</mml:mi></mml:mrow><mml:mrow><mml:mi>c</mml:mi></mml:mrow></mml:msub></mml:mrow></mml:n mesons and their properties on the light front. Physical Review D, 2018, 98, .	4.7	27
33	Challenges in Developing MPI Fault-Tolerant Fortran Applications. , 2018, , .		2
34	Perspectives on Nuclear Structure and Scattering with the AbÂInitio No-Core Shell Model. , 2018, , .		3
35	Few-nucleon and many-nucleon systems with semilocal coordinate-space regularized chiral nucleon-nucleon forces. Physical Review C, 2018, 98, .	2.9	59
36	Ab initiono-core solutions for⁶Li. Journal of Physics G: Nuclear and Particle Physics, 2017, 44, 075103.	3.6	38

#	Article	IF	Citations
37	Microscopic Shell Model Calculations for sd-Shell Nuclei. , 2017, , .		1
38	Quarkonium as a relativistic bound state on the light front. Physical Review D, 2017, 96, .	4.7	76
39	Trends and Progress in Nuclear and Hadron Physics: A Straight or Winding Road. Few-Body Systems, 2017, 58, 1.	1.5	9
40	Ab initiono-core properties ofLi7andBe7with the JISP16 and chiralNNLOoptinteractions. Physical Review C, 2017, 95, .	2.9	8
41	A High Performance Block Eigensolver for Nuclear Configuration Interaction Calculations. IEEE Transactions on Parallel and Distributed Systems, 2017, 28, 1550-1563.	5.6	11
42	Natural orbital description of the halo nucleus 6He. Nuclear Science and Techniques/Hewuli, 2017, 28, 1.	3.4	17
43	Comparison of two Minkowski-space approaches to heavy quarkonia. European Physical Journal C, 2017, 77, 1.	3.9	15
44	Properties of⁴He and⁶Li with improved chiral EFT interactions. EPJ Web of Conferences, 2016, 113, 04015.	0.3	11
45	Efficacy of the SU(3) scheme for ab initio large-scale calculations beyond the lightest nuclei. Computer Physics Communications, 2016, 207, 202-210.	7.5	34
46	N3LO NN interaction adjusted to light nuclei in ab exitu approach. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2016, 761, 87-91.	4.1	72
47	Few-nucleon systems with state-of-the-art chiral nucleon-nucleon forces. Physical Review C, 2016, 93, .	2.9	106
48	Form factors and generalized parton distributions in basis light-front quantization. Physical Review C, 2016, 93, .	2.9	18
49	Basis Light-Front Quantization: Recent Progress and Future Prospects. Few-Body Systems, 2016, 57, 695-702.	1.5	15
50	Heavy quarkonium in a holographic basis. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2016, 758, 118-124.	4.1	92
51	AbÂinitioeffective interactions for<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>s</mml:mi><mml:mi>d</mml:mi></mml:mrow></mml:ma valence nucleons. Physical Review C, 2015, 91, .	2.9	44
52	Statistical error propagation inab initiono-core full configuration calculations of light nuclei. Physical Review C, 2015, 92, .	2.9	13
53	Ab initio approach to the non-perturbative scalar Yukawa model. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2015, 748, 278-283.	4.1	22
54	Performance analysis of distributed symmetric sparse matrix vector multiplication algorithm for multiâ€core architectures. Concurrency Computation Practice and Experience, 2015, 27, 5019-5036.	2.2	4

#	Article	IF	Citations
55	Non-perturbative Calculation of the Positronium Mass Spectrum in Basis Light-Front Quantization. Few-Body Systems, 2015, 56, 489-494.	1.5	5
56	Emergence of rotational bands inab initiono-core configuration interaction calculations of the Be isotopes. Physical Review C, 2015, 91, .	2.9	40
57	Electron-scattering form factors for<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mmultiscripts><mml:mi mathvariant="normal">Li</mml:mi><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>6</mml:mn></mml:mrow></mml:mmultiscripts></mml:math>in theab initio symmetry-guided framework. Physical Review C, 2015, 91, .	2.9	20
58	Non-perturbative Calculation of the Scalar Yukawa Theory in Four-Body Truncation. Few-Body Systems, 2015, 56, 495-501.	1.5	5
59	Collective rotation from ab initio theory. International Journal of Modern Physics E, 2015, 24, 1541002.	1.0	24
60	Ab initio no core full configuration approach for light nuclei. International Journal of Modern Physics E, 2014, 23, 1461004.	1.0	2
61	Low-energy neutron-deuteron reactions with N 3 LO chiral forces. European Physical Journal A, 2014, 50, 1.	2.5	45
62	<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mmultiscripts><mml:mi mathvariant="normal">C</mml:mi><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>12</mml:mn></mml:mrow></mml:mmultiscripts></mml:math>properties with evolved chiral three-nucleon interactions. Physical Review C, 2014, 90, .	2.9	23
63	Generalized parton distributions in a light-front nonperturbative approach. Physical Review D, 2014, 89, .	4.7	19
64	Nonperturbative Quantum Field Evolution. Few-Body Systems, 2014, 55, 555-560.	1.5	0
65	Improving the scalability of a symmetric iterative eigensolver for multiâ€core platforms. Concurrency Computation Practice and Experience, 2014, 26, 2631-2651.	2.2	62
66	Halo nucleiHe6andHe8with the Coulomb-Sturmian basis. Physical Review C, 2014, 90, .	2.9	26
67	Ab initio no core full configuration approach for light nuclei. , 2014, , .		0
68	Benchmark of the No-Core Monte Carlo Shell Model in Light Nuclei. Few-Body Systems, 2013, 54, 1371-1375.	1.5	2
69	Collective Modes in Light Nuclei from First Principles. Physical Review Letters, 2013, 111, 252501.	7.8	103
70	Emergence of rotational bands in ab initio no-core configuration interaction calculations of light nuclei. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2013, 719, 179-184.	4.1	36
71	Leveraging GPUs in Ab Initio Nuclear Physics Calculations. , 2013, , .		2
72	Scattering in time-dependent basis light-front quantization. Physical Review D, 2013, 88, .	4.7	40

#	Article	IF	Citations
73	Structure of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>p</mml:mi></mml:math>-shell nuclei using three-nucleon interactions evolved with the similarity renormalization group. Physical Review C, 2013, 87, .	2.9	67
74	AB INITIO NUCLEAR STRUCTURE CALCULATIONS OF p-SHELL NUCLEI WITH JISP16. International Journal of Modern Physics E, 2013, 22, 1330016.	1.0	52
75	SYMMETRY-ADAPTED NO-CORE SHELL MODEL FOR LIGHT NUCLEI. , 2013, , .		0
76	Lithium isotopes within theab initiono-core full configuration approach. Physical Review C, 2012, 86, .	2.9	56
77	Convergence properties ofab initiocalculations of light nuclei in a harmonic oscillator basis. Physical Review C, 2012, 86, .	2.9	95
78	Benchmarks of the full configuration interaction, Monte Carlo shell model, and no-core full configuration methods. Physical Review C, 2012, 86, .	2.9	75
79	An Out-of-Core Dataflow Middleware to Reduce the Cost of Large Scale Iterative Solvers. , 2012, , .		11
80	Ab Initio Nuclear Structure Calculations of Light Nuclei. Journal of Physics: Conference Series, 2012, 402, 012031.	0.4	16
81	Electron Anomalous Magnetic Moment in Basis Light-Front Quantization Approach. Few-Body Systems, 2012, 52, 339-344.	1.5	5
82	Phase-equivalent transformation which does not affect bound state properties and its manifestation in many-body systems. Bulletin of the Russian Academy of Sciences: Physics, 2012, 76, 496-501.	0.6	1
83	Light nuclei in ab initio approach with realistic inverse scattering NN-interaction. Bulletin of the Russian Academy of Sciences: Physics, 2011, 75, 463-467.	0.6	2
84	Origin of the Anomalous Long Lifetime of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mmultiscripts><mml:mi mathvariant="normal">C</mml:mi><mml:mprescripts /><mml:none /><mml:mn>14</mml:mn></mml:mmultiscripts></mml:math>. Physical Review Letters, 2011, 106, 202502.	7.8	95
85	Testing the density matrix expansion againstab initiocalculations of trapped neutron drops. Physical Review C, 2011, 84, .	2.9	44
86	Benchmark calculation of no-core Monte Carlo shell model in light nuclei. , 2011, , .		11
87	Further development of realistic JISP16 NN interaction. Bulletin of the Russian Academy of Sciences: Physics, 2010, 74, 538-541.	0.6	0
88	Ab-initio Hamiltonian approach to light nuclei and to quantum field theory. Pramana - Journal of Physics, 2010, 75, 39-49.	1.8	1
89	Scaling of ab-initio nuclear physics calculations on multicore computer architectures. Procedia Computer Science, 2010, 1, 97-106.	2.0	80
90	Hamiltonian light-front field theory in a basis function approach. Physical Review C, 2010, 81, .	2.9	131

#	Article	IF	Citations
91	Ab initio nuclear structure simulations: The speculative <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mmultiscripts><mml:mi mathvariant="normal">F</mml:mi><mml:mprescripts /><mml:none /><mml:mrow><mml:mn>14</mml:mn></mml:mrow></mml:mmultiscripts></mml:math> nucleus. Physical Review C, 2010, 81, .	2.9	62
92	Ab initio no-core full configuration calculations of light nuclei. Physical Review C, 2009, 79, .	2.9	181
93	Manifestation of Three-Body Forces in Three-Body Betheâ€“Salpeter and Light-Front Equations. Few-Body Systems, 2009, 46, 95-113.	1.5	24
94	Convergence in the no-core shell model with low-momentum two-nucleon interactions. Nuclear Physics A, 2008, 801, 21-42.	1.5	108
95	AB INITIO NO CORE METHODS: APPLICATIONS TO LIGHT NUCLEI. International Journal of Modern Physics E, 2008, 17, 109-121.	1.0	1
96	Elements of the ab initio No Core Shell Model. AIP Conference Proceedings, 2008, , .	0.4	0
97	AB INITIO AND AB EXITU NO CORE SHELL MODEL. , 2008, , .		0
98	QCD modeling of hadron physics. Nuclear Physics, Section B, Proceedings Supplements, 2006, 161, 136-152.	0.4	78
99	Ï€- andK-meson Bethe-Salpeter amplitudes. Physical Review C, 1997, 56, 3369-3383.	2.9	459