

# Christian E ForssÃ©n

## List of Publications by Year in descending order

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95  
papers

3,244  
citations

136950

32  
h-index

149698

56  
g-index

96  
all docs

96  
docs citations

96  
times ranked

1817  
citing authors

#	ARTICLE	IF	CITATIONS
1	Accurate nuclear radii and binding energies from a chiral interaction. <i>Physical Review C</i> , 2015, 91, .	2.9	354
2	Neutron and weak-charge distributions of the $^{48}\text{Ca}$ nucleus. <i>Nature Physics</i> , 2016, 12, 186-190.	16.7	268
3	Optimized Chiral Nucleon-Nucleon Interaction at Next-to-Next-to-Leading Order. <i>Physical Review Letters</i> , 2013, 110, 192502.	7.8	267
4	Systematic investigation of the drip-line nuclei $^{11}\text{Li}$ and $^{14}\text{Be}$ and their unbound subsystems $^{10}\text{Li}$ and $^{13}\text{Be}$ . <i>Nuclear Physics A</i> , 2007, 791, 267-302.	1.5	113
5	Uncertainty Analysis and Order-by-Order Optimization of Chiral Nuclear Interactions. <i>Physical Review X</i> , 2016, 6, .	8.9	107
6	Hyperfine structure of hydrogenlike thallium isotopes. <i>Physical Review A</i> , 2001, 64, .	2.5	102
7	Large basisab initioshell model investigation of $^9\text{Be}$ and $^{11}\text{Be}$ . <i>Physical Review C</i> , 2005, 71, .	2.9	87
8	Lithium isotopes beyond the drip line. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2008, 666, 430-434.	4.1	79
9	Fermionization of two-component few-fermion systems in a one-dimensional harmonic trap. <i>New Journal of Physics</i> , 2014, 16, 063003.	2.9	79
10	Charge radii of exotic potassium isotopes challenge nuclear theory and the magic character of $N=2$ . <i>Nature Physics</i> , 2021, 17, 439-443.	16.7	79
11	Shell Structure of the Near-Dripline Nucleus $^{23}\text{O}$ . <i>Physical Review Letters</i> , 2004, 93, 062501.	7.8	78
12	Evidence for a New Low-Lying Resonance State in $^7\text{He}$ . <i>Physical Review Letters</i> , 2002, 88, 102501.	7.8	67
13	Accurate bulk properties of nuclei from $\chi$ to $\hat{z}$ from potentials with $\mathcal{C}$ <a href="https://arxiv.org/abs/2002.10014">https://arxiv.org/abs/2002.10014</a> . <i>Physical Review C</i> , 2020, 102, .	2.9	65
14	The unbound isotopes $^9,^{10}\text{He}$ . <i>Nuclear Physics A</i> , 2010, 842, 15-32.	1.5	64
15	Experimental evidence for the $^8\text{B}$ ground state configuration. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2002, 529, 36-41.	4.1	62
16	Infrared length scale and extrapolations for the no-core shell model. <i>Physical Review C</i> , 2015, 91, .	2.9	57
17	$^{14}\text{C}$ $T_{1/2} = 10.784314 \pm 0.000014$ s. <i>Physical Review Letters</i> , 2017, 118, 112501.	2.9	51
18	Properties of the $^7\text{He}$ ground state from $^8\text{He}$ neutron knockout. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2009, 679, 191-196.	4.1	50

#	ARTICLE	IF	CITATIONS
19	Living on the edge of stability, the limits of the nuclear landscape. <i>Physica Scripta</i> , 2013, T152, 014022.	2.5	50
20	Effective field theory for proton halo nuclei. <i>Physical Review C</i> , 2014, 89, .	2.9	50
21	Fast and Accurate Evaluation of Wigner $3j$ , $6j$ , and $9j$ Symbols Using Prime Factorization and Multiword Integer Arithmetic. <i>SIAM Journal of Scientific Computing</i> , 2016, 38, A376-A384.	2.8	50
22	Charge radii and electromagnetic moments of Li and Be isotopes from the <i>ab initio</i> no-core shell model. <i>Physical Review C</i> , 2009, 79, .	2.9	48
23	Three-body correlations in the decay of $^{10}\text{He}$ and $^{13}\text{Li}$ . <i>Nuclear Physics A</i> , 2010, 847, 66-88.	1.5	47
24	Converging sequences in the <i>ab initio</i> no-core shell model. <i>Physical Review C</i> , 2008, 77, .	2.9	43
25	Quantum magnetism in strongly interacting one-dimensional spinor Bose systems. <i>Scientific Reports</i> , 2015, 5, 10675.	3.3	43
26	Nuclear and Coulomb breakup of B. <i>Nuclear Physics A</i> , 2003, 720, 3-19.	1.5	42
27	Determining neutron capture cross sections via the surrogate reaction technique. <i>Physical Review C</i> , 2007, 75, .	2.9	42
28	Precise branching ratios to unbound $^{12}\text{C}$ states from $^{12}\text{N}$ and $^{12}\text{B}$ $\beta^2$ -decays. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 2009, 678, 459-464.	4.1	41
29	<i>Ab initio</i> no-core solutions for $^6\text{Li}$ . <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2017, 44, 075103.	3.6	38
30	Rigorous constraints on three-nucleon forces in chiral effective field theory from fast and accurate calculations of few-body observables. <i>Physical Review C</i> , 2021, 104, .	2.9	36
31	Large-scale exact diagonalizations reveal low-momentum scales of nuclei. <i>Physical Review C</i> , 2018, 97, .	2.9	35
32	Resonance parameters of the first $1/2^+$ state in $^9\text{Be}$ and astrophysical implications. <i>Physical Review C</i> , 2010, 82, .	2.9	34
33	Effective-interaction approach to the many-boson problem. <i>Physical Review A</i> , 2009, 79, .	2.5	32
34	Structure of $^{16}\text{C}$ : Testing shell model and <i>ab initio</i> approaches. <i>Physical Review C</i> , 2012, 86, .	2.9	32
35	Statistical uncertainties of a chiral interaction at next-to-next-to leading order. <i>Journal of Physics G: Nuclear and Particle Physics</i> , 2015, 42, 034003.	3.6	29
36	Constraining low-energy proton capture on beryllium-7 through charge radius measurements. <i>European Physical Journal A</i> , 2014, 50, 1.	2.5	28

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37	Uncertainty quantification for proton–proton fusion in chiral effective field theory. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2016, 760, 584-589.	4.1	28
38	Excited-state transition-rate measurements in $^{18}\text{C}$ . Physical Review C, 2012, 86, .	2.9	27
39	Systematics of $2^+$ states in C isotopes from the no-core shell model. Journal of Physics G: Nuclear and Particle Physics, 2013, 40, 055105.	3.6	27
40	Reorientation-effect measurement of the $^{21}\text{F}$ matrix element in $^{10}\text{Be}$ . Physical Review C, 2012, 86, .	2.9	26
41	New information on $\hat{I}^2$ -delayed neutron emission from $^{12,14}\text{Be}$ . Nuclear Physics A, 1999, 658, 129-145.	1.5	23
42	Microscopic description of translationally invariant core–neutron overlap functions. Physical Review C, 2014, 89, .	2.9	23
43	Tunneling theory for tunable open quantum systems of ultracold atoms in one-dimensional traps. Physical Review A, 2015, 91, .	2.5	23
44	$^{10}\text{B}$ nuclear response functions for dark matter searches. Physical Review D, 2017, 95, .	4.7	23
45	Analytical E1 strength functions of two-neutron halo nuclei: $^{11}\text{Li}$ and $^{14}\text{Be}$ . Nuclear Physics A, 2002, 706, 48-60.	1.5	21
46	Bayesian optimization in ab initio nuclear physics. Journal of Physics G: Nuclear and Particle Physics, 2019, 46, 095101.	3.6	20
47	Power counting in chiral effective field theory and nuclear binding. Physical Review C, 2021, 103, .	2.9	20
48	Radiative capture and electromagnetic dissociation involving loosely bound nuclei: The $^8\text{Be}$ example. Physical Review C, 2003, 67, .	2.9	17
49	A correlated background in invariant mass spectra of three-body systems. Nuclear Physics A, 2000, 673, 143-156.	1.5	16
50	Thallium hyperfine anomaly. , 2000, 127, 347-352.		15
51	Range corrections in proton halo nuclei. Annals of Physics, 2016, 367, 13-32.	2.8	15
52	Hyperfine structure of heavy hydrogen-like ions. Nuclear Instruments & Methods in Physics Research B, 2003, 205, 62-65.	1.4	14
53	Analytical E1 strength functions of two-neutron halo nuclei: the $^6\text{He}$ example. Nuclear Physics A, 2002, 697, 639-654.	1.5	12
54	Three-Body Halo States in Effective Field Theory: Renormalization and Three-Body Interactions in the Helium-6 System. Few-Body Systems, 2017, 58, 1.	1.5	12

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55	Surrogate Nuclear Reactions and the origin of the heavy elements. Nuclear Physics A, 2005, 758, 86-89.	1.5	9
56	Bayesian predictions for A=6 nuclei using eigenvector continuation emulators. Physical Review C, 2022, 105, .	2.9	9
57	Nuclear ab initio calculations of $6\text{He}$ $\beta^2$ -decay for beyond the Standard Model studies. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2022, 832, 137259.	4.1	9
58	Bayesian parameter estimation in chiral effective field theory using the Hamiltonian Monte Carlo method. Physical Review C, 2022, 105, .	2.9	8
59	Light exotic isotopes: recent beam developments and physics applications at ISOLDE. Nuclear Physics A, 2002, 701, 363-368.	1.5	7
60	One-neutron knockout of $^{23}\text{O}$ . European Physical Journal A, 2005, 25, 343-346.	2.5	7
61	Surrogate nuclear reactions: an indirect method for determining reaction cross sections. Journal of Physics C: Nuclear and Particle Physics, 2005, 31, S1687-S1690.	3.6	7
62	Systematic Nuclear Uncertainties in the Hypertriton System. Few-Body Systems, 2021, 62, 1.	1.5	7
63	Analysis of decay data from neutron-rich nuclei. European Physical Journal A, 2001, 11, 279-284.	2.5	6
64	Surrogate nuclear reaction methods for astrophysics. Nuclear Instruments & Methods in Physics Research B, 2007, 261, 1075-1078.	1.4	6
65	High-energy breakup of $^8\text{B}$ . Nuclear Physics A, 2003, 718, 431-433.	1.5	5
66	Determining neutron capture cross sections with the Surrogate Reaction Technique: Measuring decay probabilities with STARS. Nuclear Physics A, 2005, 758, 126-129.	1.5	5
67	The similarity renormalization group for three-body interactions in one dimension. European Physical Journal A, 2011, 47, 1.	2.5	5
68	The ab initio No-Core Shell Model and Light Nuclei. Few-Body Systems, 2011, 49, 11-18.	1.5	5
69	Nuclear structure of light exotic nuclei from break-up reactions. Nuclear Physics A, 2004, 746, 479-482.	1.5	4
70	Theoretical challenges of determining low-energy neutron-capture cross sections via the Surrogate Technique. Nuclear Physics A, 2005, 758, 130-133.	1.5	4
71	Ab initio no-core shell model calculations using realistic two- and three-body interactions. European Physical Journal A, 2005, 25, 481-484.	2.5	4
72	Normal-ordering approximations and translational (non)invariance. Physical Review C, 2021, 104, .	2.9	4

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73	Analytical approach to electromagnetic processes in loosely bound nuclei: application to $^8\text{B}$ . Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2002, 549, 79-84.	4.1	3
74	Structure of neutron-rich oxygen isotopes. Journal of Physics G: Nuclear and Particle Physics, 2005, 31, S1629-S1632.	3.6	2
75	Ab initio no core full configuration approach for light nuclei. International Journal of Modern Physics E, 2014, 23, 1461004.	1.0	2
76	Wave-packet continuum discretisation for nucleon-nucleon scattering predictions. Journal of Physics G: Nuclear and Particle Physics, 0, , .	3.6	2
77	The Ab Initio No-core Shell Model. Few-Body Systems, 2009, 45, 111-114.	1.5	1
78	Experimental study of the $^{15}\text{O}(^2\text{p}, \hat{1}^3)^{17}\text{Ne}$ cross section by Coulomb Dissociation for the $^2\text{p}$ process. Journal of Physics: Conference Series, 2016, 665, 012046.	0.4	1
79	Finite-size effects in heavy halo nuclei from effective field theory. European Physical Journal A, 2020, 56, 1.	2.5	1
80	Study of the $^{15}\text{O}(^2\text{p}, \gamma)^{17}\text{Ne}$ Cross Section by Coulomb Dissociation of $^{17}\text{Ne}$ for the $^2\text{p}$ Process of Nucleosynthesis. Acta Physica Polonica B, 2014, 45, 229.	0.8	1
81	Surrogate reactions: the Weisskopf-Ewing approximation and its limitations. , 2007, , .		1
82	Analytical studies of $^8\text{B}$ electromagnetic dissociation. Nuclear Physics A, 2003, 718, 434-436.	1.5	0
83	Spectroscopy of light exotic nuclei using nuclear break-up. AIP Conference Proceedings, 2004, , .	0.4	0
84	Nuclear Physics from Scratch. Acta Physica Hungarica A Heavy Ion Physics, 2006, 25, 187-196.	0.4	0
85	The Surrogate Method – An Indirect Approach to Compound-Nucleus Reactions. Acta Physica Hungarica A Heavy Ion Physics, 2006, 25, 211-218.	0.4	0
86	Exclusive measurements of nuclear breakup reactions of $^{17}\text{Ne}$ . EPJ Web of Conferences, 2014, 66, 03094.	0.3	0
87	Strongly Interacting Few-Fermion Systems in a Trap. Few-Body Systems, 2015, 56, 837-844.	1.5	0
88	Quantifying uncertainties in nuclear matrix elements for dark matter searches. AIP Conference Proceedings, 2019, , .	0.4	0
89	Low-lying resonance states in $^7\text{He}$ . , 2003, , 227-228.		0
90	Cross sections of light-ion reactions calculated from ab initio wave functions. , 2010, , .		0

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91	Compound-nuclear reaction cross sections via Surrogate measurements. , 2010, , .		0
92	MEASUREMENT OF THE SPECTROSCOPIC QUADRUPOLE MOMENT FOR THE $2^+_{1}$ STATE IN $^{10}\text{Be}$ : TESTING AB INITIO CALCULATIONS. , 2013, , .		0
93	Ab initio no core full configuration approach for light nuclei. , 2014, , .		0
94	Ab initio no-core shell model calculations using realistic two- and three-body interactions. , 2005, , 481-484.		0
95	One-neutron knockout of $^{23}\text{O}$ . , 2005, , 343-346.		0