

Maria Grazia Pia

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/4109757/publications.pdf>

Version: 2024-02-01

158
papers

26,954
citations

136885

32
h-index

36008

97
g-index

158
all docs

158
docs citations

158
times ranked

18668
citing authors

#	ARTICLE	IF	CITATIONS
1	Validation of e^+e^- Pair Production Total Cross Sections for Monte Carlo Particle Transport. IEEE Transactions on Nuclear Science, 2022, 69, 858-870.	1.2	1
2	Evolutions in Photoelectric Cross Section Calculations and Their Validation. IEEE Transactions on Nuclear Science, 2020, 67, 492-501.	1.2	3
3	Validation of Geant4 Simulation of Proton Energy Straggling: First Results. , 2018, , .		0
4	Validation of Shell Ionization Cross Sections for Monte Carlo Electron Transport. IEEE Transactions on Nuclear Science, 2018, 65, 2279-2302.	1.2	4
5	First Assessment of ENDF/B-VIII and EPICS Atomic Data Libraries. IEEE Transactions on Nuclear Science, 2018, 65, 2268-2278.	1.2	16
6	Propagation of input uncertainties in particle transport and the distribution of the sum of n independent stochastic variables a generalization of the Irwin-Hall distribution. Chinese Journal of Physics, 2017, 55, 652-666.	2.0	0
7	Application of econometric and ecology analysis methods in physics software. Journal of Physics: Conference Series, 2017, 898, 072018.	0.3	0
8	Analysis Methods for Data Comparison. , 2017, , .		0
9	Measurements and Trends of Geant4 Software Evolution. , 2017, , .		0
10	Tutorial on Statistical Methods for Validation Tests. , 2017, , .		0
11	The Systematics of Fluorescence Yields. , 2017, , .		0
12	HEPData beyond HEP. , 2017, , .		0
13	Old and New Cross Sections. , 2017, , .		0
14	Evaluated Atomic Data: a Review of Their Validation. , 2017, , .		0
15	Quantification of the validity of simulations based on Geant4 and FLUKA for photo-nuclear interactions in the high energy range. EPJ Web of Conferences, 2017, 153, 06023.	0.1	2
16	Simulation validation epistemics in a Geant4 case study. , 2016, , .		0
17	Application of econometric data analysis methods to physics software. , 2016, , .		2
18	Quantitative Test of the Evolution of Geant4 Electron Backscattering Simulation. IEEE Transactions on Nuclear Science, 2016, 63, 2849-2865.	1.2	13

#	ARTICLE	IF	CITATIONS
19	Comments by the Guest Editor. IEEE Transactions on Nuclear Science, 2016, 63, 1445-1445.	1.2	0
20	Geant4 maintainability assessed with respect to software engineering references. , 2016, , .		0
21	Validation of Cross Sections for Monte Carlo Simulation of the Photoelectric Effect. IEEE Transactions on Nuclear Science, 2016, 63, 1117-1146.	1.2	34
22	Methods, techniques and recent results in Monte Carlo simulation validation for sensitive applications. , 2015, , .		0
23	Testable physics by design. Journal of Physics: Conference Series, 2015, 664, 062047.	0.3	0
24	How do particle physicists learn the programming concepts they need?. Journal of Physics: Conference Series, 2015, 664, 062048.	0.3	1
25	First statistical analysis of Geant4 quality software metrics. Journal of Physics: Conference Series, 2015, 664, 062053.	0.3	7
26	Experimental quantification of Geant4 PhysicsList recommendations: methods and results. Journal of Physics: Conference Series, 2015, 664, 072037.	0.3	5
27	Validation Test of Geant4 Simulation of Electron Backscattering. IEEE Transactions on Nuclear Science, 2015, 62, 451-479.	1.2	63
28	Investigation of Geant4 Simulation of Electron Backscattering. IEEE Transactions on Nuclear Science, 2015, 62, 1805-1812.	1.2	47
29	An exact framework for uncertainty quantification in Monte Carlo simulation. Journal of Physics: Conference Series, 2014, 513, 022033.	0.3	4
30	The Physics of the B Factories. European Physical Journal C, 2014, 74, 1.	1.4	292
31	Theoretical Grounds for the Propagation of Uncertainties in Monte Carlo Particle Transport. IEEE Transactions on Nuclear Science, 2014, 61, 877-887.	1.2	1
32	Scholarly literature and the press: scientific impact and social perception of physics computing. Journal of Physics: Conference Series, 2014, 513, 062039.	0.3	1
33	Geant4 and beyond: Precision physics modeling and validation. , 2014, , .		0
34	Photons Revisited. , 2014, , .		1
35	Radioactive Decays in Geant4. IEEE Transactions on Nuclear Science, 2013, 60, 2966-2983.	1.2	49
36	Validation of Geant4 Simulation of Electron Energy Deposition. IEEE Transactions on Nuclear Science, 2013, 60, 2934-2957.	1.2	25

#	ARTICLE	IF	CITATIONS
37	Validation of Geant4-Based Radioactive Decay Simulation. IEEE Transactions on Nuclear Science, 2013, 60, 2984-2997.	1.2	22
38	Progress with Uncertainty Quantification in generic Monte Carlo simulations. , 2013, , .		0
39	The BB detector: Upgrades, operation and performance. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2013, 729, 615-701.	0.7	148
40	Corrected ISICSoo class version. Computer Physics Communications, 2013, 184, 2232-2233.	3.0	3
41	PIXE simulation: Models, methods and technologies. , 2013, , .		0
42	Editorial Conference Comments by the Editors. IEEE Transactions on Nuclear Science, 2013, 60, 480-481.	1.2	0
43	Data analysis with R in an experimental physics environment. , 2013, , .		0
44	Negative improvements, relative validity and elusive goodness. , 2013, , .		0
45	Validation of Compton scattering Monte Carlo simulation models. , 2013, , .		3
46	Physics methods for the simulation of photoionisation. , 2013, , .		1
47	Refactoring, reengineering and evolution: paths to Geant4 uncertainty quantification and performance improvement. Journal of Physics: Conference Series, 2012, 396, 022038.	0.3	1
48	Background simulations for the wide field imager aboard the ATHENA X-ray Observatory. Proceedings of SPIE, 2012, , .	0.8	1
49	Publication patterns in HEP computing. Journal of Physics: Conference Series, 2012, 396, 062015.	0.3	1
50	A new development cycle of the Statistical Toolkit. Journal of Physics: Conference Series, 2012, 396, 052010.	0.3	0
51	Photon Elastic Scattering Simulation: Validation and Improvements to Geant4. IEEE Transactions on Nuclear Science, 2012, 59, 1636-1664.	1.2	36
52	Uncertainty quantification (UQ) in generic MonteCarlo simulations. , 2012, , .		7
53	Algorithms and parameters for improved accuracy in physics data libraries. Journal of Physics: Conference Series, 2012, 396, 022039.	0.3	1
54	Precision analysis of Geant4 condensed transport effects on energy deposition in detectors. Journal of Physics: Conference Series, 2012, 396, 022004.	0.3	0

#	ARTICLE	IF	CITATIONS
55	ISICSoo: A class for the calculation of ionization cross sections from ECPSSR and PWBA theory. Computer Physics Communications, 2012, 183, 398-404.	3.0	13
56	Validation of Proton Ionization Cross Section Generators for Monte Carlo Particle Transport. IEEE Transactions on Nuclear Science, 2011, 58, 3269-3280.	1.2	10
57	Ionization Cross Sections for Low Energy Electron Transport. IEEE Transactions on Nuclear Science, 2011, 58, 3219-3245.	1.2	16
58	Evaluation of Atomic Electron Binding Energies for Monte Carlo Particle Transport. IEEE Transactions on Nuclear Science, 2011, 58, 3246-3268.	1.2	23
59	New data libraries and physics data management tools. Journal of Physics: Conference Series, 2011, 331, 042010.	0.3	2
60	Background simulations of the wide field imager of the ATHENA X-ray observatory. , 2011, , .		0
61	An activation experiment with laser-accelerated high-energy protons to optimize the graded-z shield design for the IXO/ATHENA satellite missions. , 2011, , .		0
62	Design and performance evaluations of generic programming techniques in a R&D prototype of Geant4 physics. Journal of Physics: Conference Series, 2010, 219, 042019.	0.3	8
63	R&D on co-working transport schemes in Geant4. Journal of Physics: Conference Series, 2010, 219, 032055.	0.3	0
64	Physics-Related Epistemic Uncertainties in Proton Depth Dose Simulation. IEEE Transactions on Nuclear Science, 2010, 57, 2805-2830.	1.2	18
65	Ionisation models for nano-scale simulation. , 2010, , .		1
66	New models for PIXE simulation with Geant4. Journal of Physics: Conference Series, 2010, 219, 032018.	0.3	4
67	Quantifying the unknown. , 2010, , .		0
68	Physics data management tools for Monte Carlo transport: Computational evolutions and benchmarks. , 2010, , .		1
69	New physics data libraries for Monte Carlo transport. , 2010, , .		0
70	The butterfly effect: Correlations between modeling in nuclear-particle physics and socioeconomic factors. , 2010, , .		0
71	Atomic parameters for Monte Carlo transport simulation: Survey, validation and induced systematic effects. , 2010, , .		0
72	Geant4 in scientific literature. , 2009, , .		6

#	ARTICLE	IF	CITATIONS
73	Validation of Geant4 Low Energy Electromagnetic Processes Against Precision Measurements of Electron Energy Deposition. IEEE Transactions on Nuclear Science, 2009, 56, 398-416.	1.2	35
74	Validation of $\{m K\}$ and $\{m L\}$ Shell Radiative Transition Probability Calculations. IEEE Transactions on Nuclear Science, 2009, 56, 3650-3661.	1.2	27
75	PIXE Simulation With Geant4. IEEE Transactions on Nuclear Science, 2009, 56, 3614-3649.	1.2	42
76	Validation of fluorescence transition probability calculations. , 2009, , .		0
77	Packaging Effects on RadFET Sensors for High Energy Physics Experiments. IEEE Transactions on Nuclear Science, 2009, 56, 2061-2069.	1.2	13
78	Writing Software or Writing Scientific Articles?. IEEE Transactions on Nuclear Science, 2008, 55, 671-678.	1.2	9
79	Application of the Geant4 PIXE implementation for space missions new models for PIXE simulation with Geant4. , 2008, , .		4
80	Measuring and Interpreting X-ray Fluorescence from Planetary Surfaces. Analytical Chemistry, 2008, 80, 8398-8405.	3.2	8
81	Effect of Normalization Algorithms on the Analysis of Bragg Peak Profiles. IEEE Transactions on Nuclear Science, 2008, 55, 3544-3549.	1.2	5
82	Validation of Geant4 X-ray fluorescence transitions - validation of Geant4 electromagnetic models against calorimetry measurements in the energy range up to 1 MeV. , 2008, , .		6
83	New Geant4 developments for doppler broadening simulation in Compton scattering - development of charge transfer simulation models in Geant4. , 2008, , .		4
84	The impact of technological research through an analysis of literature. , 2008, , .		0
85	Analysis of Geant4 simulations of proton depth dose profiles for radiotherapy applications. , 2008, , .		2
86	Benchmark of medical dosimetry simulation using the Grid. , 2007, , .		0
87	Evaluation of phase effects in Geant4 microdosimetry models for particle interactions in water. , 2007, , .		2
88	Analysis of statistical algorithms for the comparison of data distributions in physic experiments. , 2007, , .		0
89	Validation of Geant4 low energy physics models against electron energy deposition and backscattering data. , 2007, , .		5
90	Writing software or writing scientific articles?. , 2007, , .		1

#	ARTICLE	IF	CITATIONS
91	Geant4 Physics Processes for Microdosimetry Simulation: Design Foundation and Implementation of the First Set of Models. IEEE Transactions on Nuclear Science, 2007, 54, 2619-2628.	1.2	86
92	Geant4 Atomic Relaxation. IEEE Transactions on Nuclear Science, 2007, 54, 585-593.	1.2	55
93	Geant4 Model for the Stopping Power of Low Energy Negatively Charged Hadrons. IEEE Transactions on Nuclear Science, 2007, 54, 578-584.	1.2	6
94	Validation of Geant4 Atomic Relaxation Against the NIST Physical Reference Data. IEEE Transactions on Nuclear Science, 2007, 54, 594-603.	1.2	27
95	Geant4 Simulation for LHC Radiation Monitoring. , 2006, , .		3
96	New Developments of the Goodness-of-Fit Statistical Toolkit. IEEE Transactions on Nuclear Science, 2006, 53, 3834-3841.	1.2	36
97	Geant4 and its validation. Nuclear Physics, Section B, Proceedings Supplements, 2006, 150, 44-49.	0.5	46
98	Geant4 developments and applications. IEEE Transactions on Nuclear Science, 2006, 53, 270-278.	1.2	4,869
99	A Statistical Toolkit for Data Analysis. Nuclear Physics, Section B, Proceedings Supplements, 2006, 150, 50-53.	0.5	0
100	Technology transfer from HEP computing to the medical field: overview and application to dosimetry. Nuclear Physics, Section B, Proceedings Supplements, 2006, 150, 13-18.	0.5	1
101	The GEANT4 toolkit capability in the hadron therapy field: simulation of a transport beam line. Nuclear Physics, Section B, Proceedings Supplements, 2006, 150, 54-57.	0.5	19
102	Evaluation of the power of Goodness-of-Fit tests for the comparison of data distributions. , 2006, , .		5
103	Geant4 Anthropomorphic Phantoms. , 2006, , .		5
104	Geant4 Simulation in a Distributed Computing Environment. , 2006, , .		1
105	Geant4 model for the stopping power of low energy negatively charged hadrons. , 2006, , .		2
106	Comparison of Geant4 electromagnetic physics models against the NIST reference data. IEEE Transactions on Nuclear Science, 2005, 52, 910-918.	1.2	160
107	Radiation exposure and Mission Strategies for Interplanetary Manned Missions (REMSIM). Earth, Moon and Planets, 2005, 94, 279-285.	0.3	22
108	A new low-energy bremsstrahlung generator for GEANT4. Radiation Protection Dosimetry, 2005, 116, 59-64.	0.4	2

#	ARTICLE	IF	CITATIONS
109	Implementation of a new Monte Carlo-GEANT4 Simulation tool for the development of a proton therapy beam line and verification of the related dose distributions. IEEE Transactions on Nuclear Science, 2005, 52, 262-265.	1.2	66
110	Trends in computing. IEEE Transactions on Nuclear Science, 2004, 51, 2050-2055.	1.2	1
111	Correction to "A Goodness-of-Fit Statistical Toolkit". IEEE Transactions on Nuclear Science, 2004, 51, 3118-3118.	1.2	0
112	Geant4 applications and developments for medical physics experiments. IEEE Transactions on Nuclear Science, 2004, 51, 1412-1419.	1.2	45
113	A goodness-of-fit statistical toolkit. IEEE Transactions on Nuclear Science, 2004, 51, 2056-2063.	1.2	88
114	A powerful simulation tool for medical physics applications: Geant4. Nuclear Physics, Section B, Proceedings Supplements, 2003, 125, 80-84.	0.5	8
115	Monte Carlo dose calculation algorithm on a distributed system. Nuclear Physics, Section B, Proceedings Supplements, 2003, 125, 159-163.	0.5	3
116	Distributed geant4 simulation in medical and space science applications using DIANE framework and the GRID. Nuclear Physics, Section B, Proceedings Supplements, 2003, 125, 327-331.	0.5	9
117	Geant4's simulation toolkit. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2003, 506, 250-303.	0.7	17,893
118	The Geant4 Toolkit: simulation capabilities and application results. Nuclear Physics, Section B, Proceedings Supplements, 2003, 125, 60-68.	0.5	42
119	Measurement of D_s^+ and D_s^{*+} production in B meson decays and from continuum e^+e^- annihilation at $\sqrt{s}=10.6\text{GeV}$. Physical Review D, 2002, 65, .	1.6	13
120	Measurement of $B^0 \rightarrow B^+ B^-$ Flavor Oscillations in Hadronic B^0 Decays. Physical Review Letters, 2002, 88, 221802.	2.9	29
121	Publisher's Note: Measurement of the B^0 Lifetime with Partially Reconstructed $B^0 \rightarrow D^* \pi^+$ Decays [Phys. Rev. Lett. PRLA00031-900789, 011802 (2002)]. Physical Review Letters, 2002, 89, .	2.9	2
122	Search for T and CP Violation in $B^0 \rightarrow B^+ B^-$ Mixing with Inclusive Dilepton Events. Physical Review Letters, 2002, 88, 231801.	2.9	22
123	Direct CP violation searches in charmless hadronic B meson decays. Physical Review D, 2002, 65, .	1.6	17
124	Study of $B^+ \rightarrow \pi^+ \rho^0$ and $B^+ \rightarrow \pi^+ K^0$ decays: Measurement of the ratio of branching fractions and search for direct CP-violating charge asymmetries. Physical Review D, 2002, 65, .	1.6	5
125	Measurement of branching fractions for exclusive B decays to charmonium final states. Physical Review D, 2002, 65, .	1.6	56
126	Measurement of $B^+ \rightarrow K^* \pi^+$ Branching Fractions and Charge Asymmetries. Physical Review Letters, 2002, 88, 101805.	2.9	38

#	ARTICLE	IF	CITATIONS
127	Measurement of the B^0 Lifetime with Partially Reconstructed $B^0 \rightarrow D^* \pi^+ \pi^-$ Decays. Physical Review Letters, 2002, 89, 011802.	2.9	11
128	Measurement of the $B^0 \rightarrow B^0$ Oscillation Frequency with Inclusive Dilepton Events. Physical Review Letters, 2002, 88, 221803.	2.9	22
129	The BABAR detector. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2002, 479, 1-116.	0.7	1,216
130	<title>HERMES: an imaging x-ray fluorescence spectrometer for the BepiColombo mission to Mercury</title>. , 2001, , .		7
131	Measurement of CP-Violating Asymmetries in B^0 Decays to CP Eigenstates. Physical Review Letters, 2001, 86, 2515-2522.	2.9	125
132	Measurement of the branching fractions for $\bar{\psi}(2S) \rightarrow e^+ e^-$ and $\bar{\psi}(2S) \rightarrow \frac{1}{4} + \frac{1}{4} \pi^+$. Physical Review D, 2001, 65, .	1.6	5
133	The muon and neutral hadron detector for BaBar. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1998, 409, 542-546.	0.7	8
134	The BaBar detector for muon identification and neutral hadron detection. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 1996, 379, 472-474.	0.7	6
135	Observation of $\bar{\psi}\psi$ production in the reaction at 1.4 GeV / c incident momentum. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1995, 345, 325-334.	1.5	24
136	Study of the $\psi(11S0)$ state of charmonium formed in $\bar{p}p$ annihilations and a search for the $\psi(21S0)$. Physical Review D, 1995, 52, 4839-4854.	1.6	32
137	Evidence for $\bar{\psi}\psi$ resonances in antiproton-proton annihilations at. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1993, 307, 394-398.	1.5	52
138	Light quark spectroscopy at the Fermilab antiproton accumulator. Nuclear Physics A, 1993, 558, 53-61.	0.6	1
139	Production of the $f_2(1520)$ resonance in antiproton-proton annihilations at. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1993, 307, 399-402.	1.5	18
140	Charmonium formation in annihilation by experiment E760. Nuclear Physics A, 1993, 558, 259-267.	0.6	0
141	Study of the angular distribution of the reaction $p\bar{p} \rightarrow \psi(2S) \pi^+ \pi^- e^+ e^-$. Physical Review D, 1993, 48, 3037-3044.		30
142	Proton electromagnetic form factors in the timelike region from 8.9 to 13.0 GeV ² . Physical Review Letters, 1993, 70, 1212-1215.	2.9	113
143	Measurement of the Γ^3 partial width of the $\psi(2S)$ charmonium resonance. Physical Review Letters, 1993, 70, 2988-2991.	2.9	32
144	Measurement of the $\bar{\psi}\psi$ and $\psi(2S)$ resonance parameters in $\bar{p}p$ annihilation. Physical Review D, 1993, 47, 772-783.	1.6	60

#	ARTICLE	IF	CITATIONS
145	Observation of the $1P_1$ state of charmonium. <i>Physical Review Letters</i> , 1992, 69, 2337-2340.	2.9	133
146	Precision measurements of charmonium states formed in $p\bar{p}$ annihilation. <i>Physical Review Letters</i> , 1992, 68, 1468-1471.	2.9	31
147	Measurement of the σ_{ann} cross section in annihilations at $\sqrt{s} \approx 3.0$ GeV. <i>Nuclear Physics B</i> , 1992, 368, 175-189.	0.9	2
148	Study of the χ_1 and χ_2 charmonium states formed in p annihilations. <i>Nuclear Physics B</i> , 1992, 373, 35-54.	0.9	66
149	Measurement of the χ_1 cross section in p annihilations at $\sqrt{s} \approx 3$ GeV. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1989, 231, 557-562.	1.5	7
150	Precision measurements of the antiproton-proton elastic scattering cross section at 90° in the incident momentum range between 3.5 GeV/c and 5.7 GeV/c. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1989, 225, 296-300.	1.5	4
151	J/ψ resonant formation and mass measurement in antiproton-proton annihilations. <i>Nuclear Physics B</i> , 1987, 286, 592-634.	0.9	32
152	A stack of two-dimensional multiwire proportional chambers as part of an electromagnetic calorimeter. <i>Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment</i> , 1987, 262, 269-283.	0.7	0
153	Direct observation and partial-width measurement of $\psi(3\psi)$ decay of charmonium states. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1987, 187, 191-197.	1.5	39
154	Angular distributions in the reactions. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1987, 195, 85-90.	1.5	10
155	Formation of the χ_1 and χ_2 charmonium resonances in antiproton-proton annihilation and measurements of their masses and total widths. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1986, 172, 455-460.	1.5	39
156	Search for the $1P_1$ charmonium state in annihilations at the CERN intersecting storage rings. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1986, 171, 135-141.	1.5	72
157	Upper limits of the proton magnetic form factor in the time-like region from $p\bar{p} \rightarrow e^+e^-$ at the CERN-ISR. <i>Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics</i> , 1985, 163, 400-403.	1.5	7
158	Geant4 atomic relaxation. , 0, , .		8