

# Michal Czakon

## List of Publications by Year in descending order

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89  
papers

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47006

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all docs

89  
docs citations

89  
times ranked

6844  
citing authors

#	ARTICLE	IF	CITATIONS
1	Total Top-Quark Pair-Production Cross Section at Hadron Colliders Through	7.8	933
2	Top++: A program for the calculation of the top-pair cross-section at hadron colliders. Computer Physics Communications, 2014, 185, 2930-2938.	7.5	782
3	Estimate of $B(\hat{A}^+ X_s^3)$ at $O(\hat{1}^2)$ . Physical Review Letters, 2007, 98, 022002.	7.8	564
4	Percent-Level-Precision Physics at the Tevatron: Next-to-Next-to-Leading Order QCD Corrections		
5	$T\hat{0}p$ -pair production at hadron colliders with next-to-next-to-leading logarithmic soft-gluon resummation. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2012, 710, 612-622.	4.1	413
6	The four-loop QCD $\hat{1}^2$ -function and anomalous dimensions. Nuclear Physics B, 2005, 710, 485-498.	2.5	405
7	NNLO corrections to top pair production at hadron colliders: the quark-gluon reaction. Journal of High Energy Physics, 2013, 2013, 1.	4.7	378
8	NNLO corrections to top-pair production at hadron colliders: the all-fermionic scattering channels. Journal of High Energy Physics, 2012, 2012, 1.	4.7	369
9	Updated Next-to-Next-to-Leading-Order QCD Predictions for the Weak Radiative $B \rightarrow \text{Meson Decays}$ . Physical Review Letters, 2015, 114, 221801.	7.8	336
10	Automatized analytic continuation of Mellin-Barnes integrals. Computer Physics Communications, 2006, 175, 559-571.	7.5	300
11	Quest for precision in hadronic cross sections at low energy: Monte Carlo tools vs. experimental data. European Physical Journal C, 2010, 66, 585-686.	3.9	270
12	A novel subtraction scheme for double-real radiation at NNLO. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2010, 693, 259-268.	4.1	232
13	Precise prediction for the $W$ -boson mass in the standard model. Physical Review D, 2004, 69, .	4.7	219
14	Assault on the NLO wishlist: $pp \rightarrow \hat{A}^+ t \bar{t} b$ . Journal of High Energy Physics, 2009, 2009, 109-109.	4.7	194
15	HELAC-NLO. Computer Physics Communications, 2013, 184, 986-997.	7.5	168
16	High-Precision Differential Predictions for Top-Quark Pairs at the LHC. Physical Review Letters, 2016, 116, 082003.	7.8	154
17	Complete off-shell effects in top quark pair hadroproduction with leptonic decay at next-to-leading order. Journal of High Energy Physics, 2011, 2011, 1.	4.7	148
18	Dominant QCD Backgrounds in Higgs Boson Analyses at the LHC: A Study of $pp \rightarrow H \rightarrow b\bar{b}$ at Next-to-Leading Order. Physical Review Letters, 2010, 104, 162002.		147

#	ARTICLE	IF	CITATIONS
19	Double-real radiation in hadronic top quark pair production as a proof of a certain concept. Nuclear Physics B, 2011, 849, 250-295.	2.5	135
20	Top-pair production at the LHC through NNLO QCD and NLO EW. Journal of High Energy Physics, 2017, 2017, 1.	4.7	121
21	ZFITTER: a semi-analytical program for fermion pair production in annihilation, from version 6.21 to version 6.42. Computer Physics Communications, 2006, 174, 728-758.	7.5	116
22	Resolving the Tevatron Top Quark Forward-Backward Asymmetry Puzzle: Fully Differential Next-to-Next-to-Leading-Order Calculation. Physical Review Letters, 2015, 115, 052001.	7.8	111
23	Tops from light quarks: Full mass dependence at two-loops in QCD. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2008, 664, 307-314.	4.1	108
24	Two-Loop Iteration of Five-Point N=4 Super-Yang-Mills Amplitudes. Physical Review Letters, 2006, 97, 181601.	7.8	105
25	Polarizing the dipoles. Journal of High Energy Physics, 2009, 2009, 085-085.	4.7	103
26	Dynamical scales for multi-TeV top-pair production at the LHC. Journal of High Energy Physics, 2017, 2017, 1.	4.7	103
27	Complete Two-Loop Electroweak Fermionic Corrections to the Effective Leptonic Weak Mixing Angle and Indirect Determination of the Higgs Boson Mass. Physical Review Letters, 2004, 93, 201805.	7.8	93
28	NNLO QCD predictions for fully-differential top-quark pair production at the Tevatron. Journal of High Energy Physics, 2016, 2016, 1.	4.7	93
29	Electroweak two-loop corrections to the effective weak mixing angle. Journal of High Energy Physics, 2006, 2006, 048-048.	4.7	91
30	Threshold resummation for top-pair hadroproduction to next-to-next-to-leading log. Physical Review D, 2009, 80, .	4.7	89
31	Heavy-quark production in gluon fusion at two loops in QCD. Nuclear Physics B, 2008, 798, 210-250.	2.5	87
32	Complete Two Loop Bosonic Contributions to the Muon Lifetime in the Standard Model. Physical Review Letters, 2002, 89, 241801.	7.8	84
33	Single scale tadpoles and corrections to the $\bar{s}$ -parameter. Nuclear Physics B, 2006, 755, 221-238.	2.5	83
34	Threshold expansion of the $\alpha_s$ parameter. Nuclear Physics B, 2006, 755, 221-238. <small>xmlns:xocs="http://www.elsevier.com/xml/xocs/dtd" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://www.elsevier.com/xml/ja/dtd" xmlns:ja="http://www.elsevier.com/xml/ja/dtd" xmlns:mml="http://www.w3.org/1998/Math/MathML" xmlns:tb="http://www.elsevier.com/xml/common/table/dtd" xmlns:sb="http://www.elsevier.com/xml/common/struct-bib/dtd" xmlns:ce="http://www.elsevier.com/xml/common/struct-cite/dtd"</small>	4.1	79
35	Complete two loop electroweak contributions to the muon lifetime in the Standard Model. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2003, 568, 48-54.	4.1	76
36	Heavy-quark production in massless quark scattering at two loops in QCD. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2007, 651, 147-159.	4.1	76

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37	Four-dimensional formulation of the sector-improved residue subtraction scheme. Nuclear Physics B, 2015, 890, 152-227.	2.5	76
38	Inclusive heavy flavor hadroproduction in NLO QCD: The exact analytic result. Nuclear Physics B, 2010, 824, 111-135.	2.5	73
39	NNLO QCD corrections to three-photon production at the LHC. Journal of High Energy Physics, 2020, 2020, 1.	4.7	72
40	Four-loop anomalous dimensions for radiative flavour-changing decays. Journal of High Energy Physics, 2007, 2007, 008-008.	4.7	70
41	Constraints on the gluon PDF from top quark pair production at hadron colliders. Journal of High Energy Physics, 2013, 2013, 1.	4.7	67
42	The $(Q7, Q1,2)$ contribution to $B \rightarrow \hat{\alpha} \hat{s}^2$ $\overline{B} \rightarrow X \gamma$ at $\mathcal{O}(\alpha_s^2)$ . Journal of High Energy Physics, 2015, 2015, 1.	4.7	66
43	Virtual amplitudes and threshold behaviour of hadronic top-quark pair-production cross sections. Journal of High Energy Physics, 2014, 2014, 1.	4.7	64
44	Bosonic corrections to $t\bar{t}$ at the two-loop level. Physical Review D, 2003, 68, .	4.7	60
45	Hadronic top-quark pair production in association with two jets at next-to-leading order QCD. Physical Review D, 2011, 84, .	4.7	57
46	Master integrals for massive two-loop Bhabha scattering in QED. Physical Review D, 2005, 71, .	4.7	55
47	The singular behavior of one-loop massive QCD amplitudes with one external soft gluon. Nuclear Physics B, 2012, 856, 228-246.	2.5	51
48	Removing Gaps in the Exclusion of Top Squark Parameter Space. Physical Review Letters, 2014, 113, 201803.	7.8	47
49	Single-jet inclusive rates with exact color at $\mathcal{O}(\alpha_s^4)$ . Journal of High Energy Physics, 2019, 2019, 1.	4.7	47
50	Four-Loop Tadpoles: Applications in QCD. Nuclear Physics, Section B, Proceedings Supplements, 2006, 160, 160-164.	0.4	43
51	Pinning down the large-x gluon with NNLO top-quark pair differential distributions. Journal of High Energy Physics, 2017, 2017, 1.	4.7	43
52	NNLO fermionic corrections to the charm quark mass dependent matrix elements in $B_c \rightarrow X_s \gamma$ . Journal of High Energy Physics, 2007, 2007, 072-072.	4.7	39
53	Next-to-Next-to-Leading Order Study of Three-Jet Production at the LHC. Physical Review Letters, 2021, 127, 152001.	7.8	38
54	Complete Nagy-Soper subtraction for next-to-leading order calculations in QCD. Journal of High Energy Physics, 2013, 2013, 1.	4.7	36

#	ARTICLE	IF	CITATIONS
55	Confronting electroweak precision measurements with New Physics models. European Physical Journal C, 2000, 13, 275-281.	3.9	35
56	The planar four-point master integrals for massive two-loop Bhabha scattering. Nuclear Physics B, 2006, 751, 1-17.	2.5	35
57	Matching the Nagy-Soper parton shower at next-to-leading order. Journal of High Energy Physics, 2015, 2015, 1.	4.7	35
58	NNLO QCD corrections to diphoton production with an additional jet at the LHC. Journal of High Energy Physics, 2021, 2021, 1.	4.7	35
59	Resummation for (boosted) top-quark pair production at NNLO+NNLL $\hat{\epsilon}^2$ in QCD. Journal of High Energy Physics, 2018, 2018, 1.	4.7	34
60	Virtual Hadronic and Leptonic Contributions to Bhabha Scattering. Physical Review Letters, 2008, 100, 131602.	7.8	32
61	Exact quark-mass dependence of the Higgs-gluon form factor at three loops in QCD. Journal of High Energy Physics, 2020, 2020, 1.	4.7	31
62	Two-loop electroweak fermionic corrections to. Nuclear Physics B, 2009, 813, 174-187.	2.5	28
63	Top-quark charge asymmetry at the LHC and Tevatron through NNLO QCD and NLO EW. Physical Review D, 2018, 98, .	4.7	28
64	Two-loop fermionic corrections to massive Bhabha scattering. Nuclear Physics B, 2007, 786, 26-51.	2.5	27
65	A complete set of scalar master integrals for massive 2-loop Bhabha scattering: where we are. Nuclear Physics, Section B: Proceedings Supplements, 2004, 135, 83-87.	0.4	26
66	Bosonic corrections to the effective weak mixing angle at $\mathcal{O}(\alpha_s^2)$ . Physical Review D, 2008, 78, 054011.	4.1	25
67	On the soft-gluon resummation in top quark pair production at hadron colliders. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2009, 680, 154-158.	4.1	25
68	NNLO QCD predictions for W+c-jet production at the LHC. Journal of High Energy Physics, 2021, 2021, 1.	4.7	23
69	Virtual hadronic and heavy-fermion $\mathcal{O}(\alpha_s^2)$ corrections to Bhabha scattering. Physical Review D, 2008, 78, .	4.7	20
70	NNLO soft function for top quark pair production at small transverse momentum. Journal of High Energy Physics, 2018, 2018, 1.	4.7	20
71	Exact Top-Quark Mass Dependence in Hadronic Higgs Production. Physical Review Letters, 2021, 127, 162002.	7.8	19
72	Muon decay to one loop order in the left-right symmetric model. Nuclear Physics B, 2002, 642, 157-172.	2.5	17

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73	The soft function for color octet production at threshold. Nuclear Physics B, 2014, 879, 236-255.	2.5	17
74	Two-loop Fermionic Electroweak Corrections to the Effective Leptonic Weak Mixing Angle in the Standard Model. Nuclear Physics, Section B, Proceedings Supplements, 2004, 135, 119-123.	0.4	16
75	Three-loop corrections to the muon and heavy quark decay rates. Physical Review D, 2021, 103, .	4.7	16
76	Polarized double-virtual amplitudes for heavy-quark pair production. Journal of High Energy Physics, 2018, 2018, 1.	4.7	13
77	Complete collection of one-loop triple-collinear splitting operators for dimensionally-regulated QCD. Journal of High Energy Physics, 2022, 2022, .	4.7	13
78	NLO QCD calculations with HELAC-NLO. Nuclear Physics, Section B, Proceedings Supplements, 2010, 205-206, 211-217.	0.4	11
79	Quantifying quark mass effects at the LHC: a study of $pp \rightarrow b\bar{b} + X$ at next-to-leading order. Journal of High Energy Physics, 2013, 2013, 1.	4.7	11
80	Bosonic corrections to the effective leptonic weak mixing angle at the two-loop level. Nuclear Physics, Section B, Proceedings Supplements, 2006, 157, 58-62.	0.4	9
81	Top quark pair production at complete NLO accuracy with NNLO+NNLL $\alpha^2$ corrections in QCD *. Chinese Physics C, 2020, 44, 083104.	3.7	8
82	Differential equations and massive two-loop Bhabha scattering: the B5l2m3 case. Nuclear Physics, Section B, Proceedings Supplements, 2006, 157, 16-20.	0.4	7
83	Planar two-loop master integrals for massive Bhabha scattering: $N_f = 1$ and $N_f = 2$ . Nuclear Physics, Section B, Proceedings Supplements, 2006, 160, 91-100.	0.4	7
84	Harmonic polylogarithms for massive Bhabha scattering. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2006, 559, 265-268.	1.6	5
85	Summary of the Topical Workshop on Top Quark Differential Distributions 2014. Journal of Physics G: Nuclear and Particle Physics, 2016, 43, 015004.	3.6	4
86	Confronting electroweak precision measurements with New Physics models. European Physical Journal C, 2000, 13, 275.	3.9	4
87	Seesaw mechanism and four light neutrino states. Physical Review D, 2001, 64, .	4.7	3
88	Precision top pair production at hadron colliders. Journal of Physics: Conference Series, 2013, 452, 012026.	0.4	0
89	Precision top-quark physics with applications. Nuclear and Particle Physics Proceedings, 2015, 261-262, 115-129.	0.5	0