

Konstantin Stepanyantz

List of Publications by Year in descending order

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Version: 2024-02-01

80
papers

1,415
citations

257450

24
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377865

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docs citations

80
times ranked

67
citing authors

#	ARTICLE	IF	CITATIONS
1	Finiteness of the triple gauge-ghost vertices in $\mathcal{N}=1$ supersymmetric gauge theories: the two-loop verification. European Physical Journal C, 2022, 82, 1.	3.9	7
2	The $\hat{\Gamma}^2$ -function of supersymmetric theories from vacuum supergraphs: A three-loop example. Modern Physics Letters A, 2022, 37, .	1.2	2
3	The three-loop anomalous dimension and the four-loop $\hat{\Gamma}^2$ -function for $\mathcal{N}=1$ SQED regularized by higher derivatives. Journal of High Energy Physics, 2022, 2022, 1.	4.7	9
4	NSVZ WITH HIGHER DERIVATIVES. , 2021, , .		0
5	THE THREE-LOOP ADLER β -FUNCTION FOR $\mathcal{N}=1$ SQCD WITH VARIOUS RENORMALIZATION PRESCRIPTIONS. , 2021, , .		0
6	TWO-LOOP ANOMALOUS DIMENSION OF THE FADDEEV-POPOV GHOSTS IN $\mathcal{N}=1$ SUPERSYMMETRIC THEORIES. , 2021, , .		0
7	Finiteness of the two-loop matter contribution to the triple gauge-ghost vertices in $\mathcal{N}=1$ supersymmetric gauge theories regularized by higher derivatives. Physical Review D, 2021, 104, .	4.7	9
8	Exact β -functions for $\mathcal{N}=1$ supersymmetric theories finite in the lowest loops. European Physical Journal C, 2021, 81, 1.	3.9	6
9	On the two-loop divergences in 6D $\mathcal{N}=1$ supersymmetric gauge theories regularized by higher derivatives. Journal of High Energy Physics, 2021, 820, 136516.	4.7	13
10	The NSVZ relations for $\mathcal{N}=1$ supersymmetric theories with multiple gauge couplings. Journal of High Energy Physics, 2021, 2021, 1.	4.7	13
11	NSVZ Relation and NSVZ Scheme in $\mathcal{N}=1$ Non-Abelian Supersymmetric Gauge Theories. Physics of Particles and Nuclei, 2020, 51, 599-603.	0.7	0
12	The Higher Covariant Derivative Regularization as a Tool for Revealing the Structure of Quantum Corrections in Supersymmetric Gauge Theories. Proceedings of the Steklov Institute of Mathematics, 2020, 309, 284-298.	0.3	10
13	Three-loop verification of a new algorithm for the calculation of a $\hat{\Gamma}^2$ -function in supersymmetric theories regularized by higher derivatives for the case of $\mathcal{N}=1$ SQED. Nuclear Physics B, 2020, 956, 115020.	2.5	12
14	Two-loop renormalization of the matter superfields and finiteness of $\mathcal{N}=1$ supersymmetric gauge theories regularized by higher derivatives. Journal of High Energy Physics, 2020, 2020, 1.	4.7	16
15	The NSVZ $\hat{\Gamma}^2$ -function for theories regularized by higher covariant derivatives: the all-loop sum of matter and ghost singularities. Journal of High Energy Physics, 2020, 2020, 1.	4.7	16
16	Supergraph calculation of one-loop divergences in higher-derivative 6D SYM theory. Journal of High Energy Physics, 2020, 2020, 1.	4.7	3
17	The all-loop perturbative derivation of the NSVZ β -function and the NSVZ scheme in the non-Abelian case by summing singular contributions. European Physical Journal C, 2020, 80, 1.	3.9	22
18	On-shell renormalization scheme for $\mathcal{N}=1$ SQED and the NSVZ relation. European Physical Journal C, 2019, 79, 1.	3.9	20

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19	On gauge dependence of the one-loop divergences in 6D, $N=(1,0)$ and $N=(1,1)$ SYM theories. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2019, 798, 134957.	4.1	5
20	Three-loop contribution of the Faddeev-Popov ghosts to the ζ -function of $\mathcal{N}=1$ supersymmetric gauge theories and the NSVZ relation. European Physical Journal C, 2019, 79, 1.	3.9	15
21	The three-loop Adler D-function for $\mathcal{N}=1$ SQCD regularized by dimensional reduction. Journal of High Energy Physics, 2019, 2019, 1.	4.7	13
22	Harmonic Superspace Approach to the Effective Action in Six-Dimensional Supersymmetric Gauge Theories. Symmetry, 2019, 11, 68.	2.2	10
23	The $\hat{\zeta}^2$ -function of $\mathcal{N}=1$ supersymmetric gauge theories regularized by higher covariant derivatives as an integral of double total derivatives. Journal of High Energy Physics, 2019, 2019, 1.	4.7	22
24	The NSVZ relation and the NSVZ scheme for $N=1$ non-Abelian supersymmetric theories, regularized by higher covariant derivatives. Journal of Physics: Conference Series, 2019, 1416, 012037.	0.4	0
25	Quantum properties of supersymmetric theories regularized by higher covariant derivatives. Journal of Physics: Conference Series, 2018, 965, 012039.	0.4	0
26	New form of the NSVZ relation at the two-loop level. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2018, 776, 417-423.	4.1	25
27	The Adler D-function for $N=1$ SQCD regularized by higher covariant derivatives in the three-loop approximation. Nuclear Physics B, 2018, 926, 295-320.	2.5	25
28	New form of the exact NSVZ $\hat{\zeta}^2$ -function: the three-loop verification for terms containing Yukawa couplings. Journal of High Energy Physics, 2018, 2018, 1.	4.7	26
29	Quantum properties of affine-metric gravity with the cosmological term. Classical and Quantum Gravity, 2018, 35, 085006.	4.0	1
30	NSVZ Relation in Supersymmetric Theories Regularized by Higher Derivatives. Physics of Particles and Nuclei, 2018, 49, 908-910.	0.7	0
31	Exact Results in Explicit Three-Loop Calculations Using Higher Derivatives for $\mathcal{N}=1$ SQCD. Physics of Particles and Nuclei, 2018, 49, 911-913.	0.7	0
32	Gauge dependence of the one-loop divergences in 6D, $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" overflow="scroll" \rangle \langle \text{mml:mi mathvariant="script" \rangle N \langle \text{mml:mi} \rangle \langle \text{mml:mo} \rangle = \langle \text{mml:mo} \rangle \langle \text{mml:mo} \rangle \langle \text{mml:mn} \rangle 1 \langle \text{mml:mn} \rangle \langle \text{mml:mo} \rangle, \langle \text{mml:mo} \rangle \langle \text{mml:mn} \rangle 0 \langle \text{mml:mn} \rangle \langle \text{mml:mo} \rangle \text{Tj ETQq0 0 0 rgBT /Overl}$	2.5	8
33	Supersymmetry, quantum corrections, and the higher derivative regularization. EPJ Web of Conferences, 2018, 191, 06002.	0.3	0
34	A class of the NSVZ renormalization schemes for $\langle \text{mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" overflow="scroll" \rangle \langle \text{mml:mi mathvariant="script" \rangle N \langle \text{mml:mi} \rangle \langle \text{mml:mo} \rangle = \langle \text{mml:mo} \rangle \langle \text{mml:mn} \rangle 1 \langle \text{mml:mn} \rangle \langle \text{mml:math} \rangle \text{SQED. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2018, 785, 561-566.}$	4.1	25
35	On the two-loop divergences of the 2-point hypermultiplet supergraphs for 6D, $N=(1,1)$ SYM theory. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2018, 778, 252-255.	4.1	12
36	Two-loop renormalization of the Faddeev-Popov ghosts in $\mathcal{N}=1$ supersymmetric gauge theories regularized by higher derivatives. Journal of High Energy Physics, 2018, 2018, 1.	4.7	19

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37	Exact renormalization of the photino mass in softly broken $N = 1$ SQED with N_f flavors regularized by higher derivatives. Journal of High Energy Physics, 2017, 2017, 1.	4.7	19
38	The NSVZ scheme for $N = 1$ SQED with N_f flavors, regularized by the dimensional reduction, in the three-loop approximation. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2017, 764, 222-227.	4.1	31
39	Three-loop NSVZ relation for terms quartic in the Yukawa couplings with the higher covariant derivative regularization. Nuclear Physics B, 2017, 920, 345-367.	2.5	34
40	RENORMALIZATION OF THE COUPLING CONSTANT AND THE HD REGULARIZATION IN SUPERSYMMETRIC THEORIES. , 2017, , 491-494.		0
41	Supergraph analysis of the one-loop divergences in 6D, $N = 1$ SYM theory. Journal of High Energy Physics, 2017, 2017, 1.	4.7	21
42	One-loop polarization operator of the quantum gauge superfield for $N = 1$ SYM regularized by higher derivatives. Modern Physics Letters A, 2017, 32, 1750194.	1.2	26
43	NSVZ-like scheme for the photino mass in softly broken $N = 1$ SQED regularized by higher derivatives. JETP Letters, 2017, 105, 69-73.	1.4	24
44	One-loop divergences in 6D, $N = 1$ SYM theory. Journal of High Energy Physics, 2017, 2017, 1.	4.7	21
45	Some aspects of $N = 1$ SYM renormalization. EPJ Web of Conferences, 2016, 125, 05014.	0.3	0
46	One-loop divergences in non-Abelian supersymmetric theories regularized by BRST-invariant version of the higher derivative regularization. Journal of High Energy Physics, 2016, 2016, 1.	4.7	34
47	Structure of three-loop contributions to the $\hat{\Gamma}^2$ -function of $N = 1$ supersymmetric QED with N_f flavors regularized by the dimensional reduction. JETP Letters, 2016, 103, 77-81.	1.4	27
48	Equation for one-loop divergences in two dimensions and its application to higher-spin fields. Theoretical and Mathematical Physics(Russian Federation), 2016, 187, 888-898.	0.9	0
49	One-loop divergences in the 6D, $N = 1$ SYM theory. Journal of High Energy Physics, 2016, 2016, 1.	4.7	21
50	Non-renormalization of the $Vc\bar{c}$ -vertices in $N = 1$ supersymmetric theories. Nuclear Physics B, 2016, 909, 316-335.	2.5	42
51	Derivation of the exact expression for the β -function in $N = 1$ SQED. Physical Review D, 2015, 91, .	4.7	25
52	Manifestly $N = 2$ supersymmetric regularization for $N = 2$ supersymmetric field theories. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2015, 751, 434-441.	4.1	37
53	Relation between two-point Green's functions of $N = 1$ SQED with N_f flavors, regularized by higher derivatives, in the three-loop approximation. Journal of Experimental and Theoretical Physics, 2015, 120, 618-631.	0.9	28
54	The NSVZ $\hat{\Gamma}^2$ -function in supersymmetric theories with different regularizations and renormalization prescriptions. Theoretical and Mathematical Physics(Russian Federation), 2014, 181, 1531-1540.	0.9	59

#	ARTICLE	IF	CITATIONS
55	The NSVZ $\hat{\Gamma}^2$ -function and the Schwinger-Dyson equations for $N = 1$ SQED with N_f flavors, regularized by higher derivatives. Journal of High Energy Physics, 2014, 2014, 1. Scheme independent consequence of the NSVZ relation for $N = 1$ SQED with N_f flavors, regularized by higher derivatives. Journal of High Energy Physics, 2014, 2014, 1.	4.7	37
56	NSVZ scheme with the higher derivative regularization for SQED. Nuclear Physics B, 2013, 875, 459-482.	4.1	58
57	Multiloop calculations in supersymmetric theories with the higher covariant derivative regularization. Journal of Physics: Conference Series, 2012, 368, 012052.	2.5	34
58	Derivation of the exact NSVZ $\hat{\Gamma}^2$ -function in $N = 1$ SQED regularized by higher derivatives by summation of Feynman diagrams. Journal of Physics: Conference Series, 2012, 343, 012115.	2.5	69
59	Factorization of Integrals Defining the $\hat{\Gamma}^2$ -Function into Integrals of Total Derivatives in $N = 1$ SQED, Regularized by Higher Derivatives. International Journal of Theoretical Physics, 2012, 51, 276-291.	0.4	12
60	Derivation of the exact NSVZ $\hat{\Gamma}^2$ -function in SQED, regularized by higher derivatives, by direct summation of Feynman diagrams. Nuclear Physics B, 2011, 852, 71-107.	0.4	22
61	Quantum corrections in $N = 1$ supersymmetric theories with cubic superpotential, regularized by higher covariant derivatives. Physics of Particles and Nuclei Letters, 2011, 8, 321-324.	1.2	3
62	Higher covariant derivative regularization for calculations in supersymmetric theories. Proceedings of the Steklov Institute of Mathematics, 2011, 272, 256-265.	2.5	60
63	Calculation of two-loop $\hat{\Gamma}^2$ -function for general supersymmetric Yang-Mills theory with the higher covariant derivative regularization. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2010, 686, 293-297.	0.4	9
64	REVEALING STRUCTURE OF QUANTUM CORRECTIONS IN $N = 1$ SUPERSYMMETRIC THEORIES USING THE SCHWINGER-DYSON EQUATIONS. , 2010, , .	0.3	17
65	A new relation restricting the Green functions of $N = 1$ supersymmetric electrodynamics. Moscow University Physics Bulletin (English Translation of Vestnik Moskovskogo Universiteta, Fizika), 2009, 64, 250-254.	4.1	47
66	Regularization by higher derivatives and quantum correction for $N = 1$ supersymmetric theories. Russian Physics Journal, 2008, 51, 444-479.	0.4	0
67	Summation of diagrams in $N = 1$ supersymmetric electrodynamics regularized by higher derivatives. Theoretical and Mathematical Physics (Russian Federation), 2006, 146, 321-334.	0.4	3
68	Four-loop verification of an algorithm for summing Feynman diagrams in the $N = 1$ supersymmetric electrodynamics. Theoretical and Mathematical Physics (Russian Federation), 2006, 147, 687-697.	0.9	14
69	Investigating the anomaly puzzle in $N = 1$ supersymmetric electrodynamics. Theoretical and Mathematical Physics (Russian Federation), 2005, 142, 29-47.	0.9	11
70	Universal Invariant Renormalization for the Supersymmetric Yang-Mills Theory. Theoretical and Mathematical Physics (Russian Federation), 2004, 139, 599-608.	0.9	19
71	Universal Invariant Renormalization for the Supersymmetric Yang-Mills Theory. Theoretical and Mathematical Physics (Russian Federation), 2004, 139, 599-608.	0.9	23

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73	Three-Loop $\hat{\Lambda}$ -Function of N=1 Supersymmetric Electrodynamics Regularized by Higher Derivatives. Theoretical and Mathematical Physics(Russian Federation), 2004, 140, 1264-1282.	0.9	63
74	Universal Invariant Renormalization for Supersymmetric Theories. Theoretical and Mathematical Physics(Russian Federation), 2003, 135, 673-684.	0.9	24
75	Title is missing!. Theoretical and Mathematical Physics(Russian Federation), 2003, 134, 377-391.	0.9	19
76	Detailed analysis of the dependence of 1-loop counter-terms on gauge and parametrization in Einstein gravity with a cosmological constant. Classical and Quantum Gravity, 1998, 15, 3777-3794.	4.0	17
77	One-loop counterterms for higher derivative regularized Lagrangians. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 1997, 414, 117-122.	4.1	29
78	One-loop effective action for an arbitrary theory. Theoretical and Mathematical Physics(Russian) Tj ETQq0 0 0 rgBT /Qverlock_10 Tf 50 5	0.9	4
79	ONE-LOOP BACKGROUND CALCULATIONS IN THE GENERAL FIELD THEORY. , 1996, , 441-469.		5
80	Projective invariance and one-loop effective action in affine metric gravity interacting with a scalar field. Classical and Quantum Gravity, 1994, 11, 2645-2652.	4.0	10