

Mathai Varghese

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/2922002/publications.pdf>

Version: 2024-02-01

99
papers

2,200
citations

236925

25
h-index

243625

44
g-index

107
all docs

107
docs citations

107
times ranked

454
citing authors

#	ARTICLE	IF	CITATIONS
1	Superconnections, thom classes, and equivariant differential forms. <i>Topology</i> , 1986, 25, 85-110.	0.3	297
2	T-Duality: Topology Change from H-Flux. <i>Communications in Mathematical Physics</i> , 2004, 249, 383-415.	2.2	171
3	Twisted K-Theory and K-Theory of Bundle Gerbes. <i>Communications in Mathematical Physics</i> , 2002, 228, 17-49.	2.2	146
4	T-Duality for Torus Bundles with H-Fluxes via Noncommutative Topology. <i>Communications in Mathematical Physics</i> , 2005, 253, 705-721.	2.2	107
5	D-branes, B-fields and twisted K-theory. <i>Journal of High Energy Physics</i> , 2000, 2000, 007-007.	4.7	99
6	Nonassociative Tori and Applications to T-Duality. <i>Communications in Mathematical Physics</i> , 2006, 264, 41-69.	2.2	87
7	Approximating L_2 -invariants and the Atiyah conjecture. <i>Communications on Pure and Applied Mathematics</i> , 2003, 56, 839-873.	3.1	79
8	Topology and H-Flux of T-Dual Manifolds. <i>Physical Review Letters</i> , 2004, 92, 181601.	7.8	72
9	Quantum Hall Effect on the Hyperbolic Plane. <i>Communications in Mathematical Physics</i> , 1998, 190, 629-673.	2.2	65
10	L_2 -analytic torsion. <i>Journal of Functional Analysis</i> , 1992, 107, 369-386.	1.4	51
11	T -duality for torus bundles with H -fluxes via noncommutative topology. II. The high-dimensional case and the T -duality group. <i>Advances in Theoretical and Mathematical Physics</i> , 2006, 10, 123-158.	0.6	48
12	T-duality for principal torus bundles. <i>Journal of High Energy Physics</i> , 2004, 2004, 018-018.	4.7	43
13	Some Relations between Twisted K-theory and E8 Gauge Theory. <i>Journal of High Energy Physics</i> , 2004, 2004, 016-016.	4.7	37
14	The Novikov Conjecture for Low Degree Cohomology Classes. <i>Geometriae Dedicata</i> , 2003, 99, 1-15.	0.3	36
15	T-duality for principal torus bundles and dimensionally reduced Gysin sequences. <i>Advances in Theoretical and Mathematical Physics</i> , 2005, 9, 749-773.	0.6	35
16	Approximating L_2 -Invariants of Amenable Covering Spaces: A Combinatorial Approach. <i>Journal of Functional Analysis</i> , 1998, 154, 359-378.	1.4	32
17	Chern Character in Twisted K -Theory: Equivariant and Holomorphic Cases. <i>Communications in Mathematical Physics</i> , 2003, 236, 161-186.	2.2	32
18	Spectral flow, eta invariants, and von Neumann algebras. <i>Journal of Functional Analysis</i> , 1992, 109, 442-456.	1.4	31

#	ARTICLE	IF	CITATIONS
19	Twisted Index Theory on Good Orbifolds, II: Fractional Quantum Numbers. Communications in Mathematical Physics, 2001, 217, 55-87.	2.2	30
20	The index of projective families of elliptic operators. Geometry and Topology, 2005, 9, 341-373.	1.3	30
21	TWISTED INDEX THEORY ON GOOD ORBIFOLDS, I: NONCOMMUTATIVE BLOCH THEORY. Communications in Contemporary Mathematics, 1999, 01, 553-587.	1.2	29
22	D-Branes, RR-Fields and Duality on Noncommutative Manifolds. Communications in Mathematical Physics, 2008, 277, 643-706.	2.2	28
23	Geometric quantization for proper actions. Advances in Mathematics, 2010, 225, 1224-1247.	1.1	28
24	L2-torsion invariants. Journal of Functional Analysis, 1992, 110, 377-409.	1.4	27
25	Differential Topology of Semimetals. Communications in Mathematical Physics, 2017, 355, 561-602.	2.2	27
26	Approximating Spectral Invariants of Harper Operators on Graphs. Journal of Functional Analysis, 2002, 188, 111-136.	1.4	26
27	T-Duality Simplifies Bulk-Boundary Correspondence. Communications in Mathematical Physics, 2016, 345, 675-701.	2.2	23
28	Global topology of Weyl semimetals and Fermi arcs. Journal of Physics A: Mathematical and Theoretical, 2017, 50, 11LT01.	2.1	21
29	Geometric quantization and families of inner products. Advances in Mathematics, 2015, 282, 362-426.	1.1	19
30	Quantum Hall Effect on the Hyperbolic Plane in the Presence of Disorder. Letters in Mathematical Physics, 1999, 47, 215-236.	1.1	18
31	On a generalised Connes-Hochschild-Kostant-Rosenberg theorem. Advances in Mathematics, 2006, 200, 303-335.	1.1	17
32	T-duality of topological insulators. Journal of Physics A: Mathematical and Theoretical, 2015, 48, 42FT02.	2.1	17
33	Analytic Torsion for Twisted De Rham Complexes. Journal of Differential Geometry, 2011, 88, .	1.1	16
34	A noncommutative sigma-model. Journal of Noncommutative Geometry, 2011, 5, 265-294.	0.5	15
35	On Mysteriously Missing T-duals, H-flux and the T-duality Group. , 2006, , .		15
36	Non-commutative correspondences, duality and D-branes in bivariant K-theory. Advances in Theoretical and Mathematical Physics, 2009, 13, 497-552.	0.6	14

#	ARTICLE	IF	CITATIONS
37	T-Duality Simplifies Bulkâ€“Boundary Correspondence: Some Higher Dimensional Cases. Annales Henri Poincare, 2016, 17, 3399-3424.	1.7	13
38	Towards the fractional quantum Hall effect: a noncommutative geometry perspective. , 2006, , 235-261.		13
39	Approximating spectral invariants of Harper operators on graphs II. Proceedings of the American Mathematical Society, 2003, 131, 1917-1923.	0.8	13
40	Quantising proper actions on Spin^c -manifolds. Asian Journal of Mathematics, 2017, 21, 631-686.	0.3	11
41	T-duality simplifies bulkâ€“boundary correspondence: the noncommutative case. Letters in Mathematical Physics, 2018, 108, 1163-1201.	1.1	10
42	Flux compactifications on projective spaces and the \mathbb{S}^1 -duality puzzle. Advances in Theoretical and Mathematical Physics, 2006, 10, 345-394.	0.6	10
43	Exotic Twisted Equivariant Cohomology of Loop Spaces, Twisted Bismutâ€“Chern Character and T-Duality. Communications in Mathematical Physics, 2015, 337, 127-150.	2.2	9
44	L2 TORSION WITHOUT THE DETERMINANT CLASS CONDITION AND EXTENDED L2 COHOMOLOGY. Communications in Contemporary Mathematics, 2005, 07, 421-462.	1.2	8
45	PARAMETRIZED STRICT DEFORMATION QUANTIZATION OF C^* -BUNDLES AND HILBERT C^* -MODULES. Journal of the Australian Mathematical Society, 2011, 90, 25-38.	0.4	8
46	Twisted Chiral de Rham Complex, Generalized Geometry, and T-duality. Communications in Mathematical Physics, 2015, 339, 663-697.	2.2	8
47	Type-I D-branes in an H-flux and twisted KO-theory. Journal of High Energy Physics, 2003, 2003, 053-053.	4.7	7
48	Twisted analytic torsion. Science China Mathematics, 2010, 53, 555-563.	1.7	7
49	Spin-structures and proper group actions. Advances in Mathematics, 2016, 292, 1-10.	1.1	7
50	\mathbb{S}^1 -duality simplifies bulk-boundary correspondence: the parametrised case. Advances in Theoretical and Mathematical Physics, 2016, 20, 1193-1226.	0.6	7
51	Topological phases on the hyperbolic plane: fractional bulk-boundary correspondence. Advances in Theoretical and Mathematical Physics, 2019, 23, 803-840.	0.6	7
52	Conformal invariants of twisted Dirac operators and positive scalar curvature. Journal of Geometry and Physics, 2013, 70, 39-47.	1.4	6
53	Spherical T-duality II: An infinity of spherical T-duals for non-principal $SU(2)$ -bundles. Journal of Geometry and Physics, 2015, 92, 46-54.	1.4	6
54	Gap-labelling conjecture with nonzero magnetic field. Advances in Mathematics, 2018, 325, 116-164.	1.1	6

#	ARTICLE	IF	CITATIONS
55	Heat kernels and Thom forms. <i>Journal of Functional Analysis</i> , 1992, 104, 34-46.	1.4	5
56	Von Neumann spectra near the spectral gap. <i>Bulletin Des Sciences Mathematiques</i> , 1998, 122, 203-242.	1.0	5
57	Yang-Mills theory for bundle gerbes. <i>Journal of Physics A</i> , 2006, 39, 6039-6044.	1.6	5
58	Topology and Flux of T-Dual Manifolds with Circle Actions. <i>Communications in Mathematical Physics</i> , 2012, 316, 279-286.	2.2	5
59	Index type invariants for twisted signature complexes and homotopy invariance. <i>Mathematical Proceedings of the Cambridge Philosophical Society</i> , 2014, 156, 473-503.	0.4	5
60	Spherical T-Duality. <i>Communications in Mathematical Physics</i> , 2015, 337, 909-954.	2.2	5
61	T-Duality in an H-Flux: Exchange of Momentum and Winding. <i>Communications in Mathematical Physics</i> , 2018, 363, 333-350.	2.2	5
62	Positive scalar curvature and Poincaré duality for proper actions. <i>Journal of Noncommutative Geometry</i> , 2019, 13, 1381-1433.	0.5	5
63	Proof of the magnetic gap-labelling conjecture for principal solenoidal tori. <i>Journal of Functional Analysis</i> , 2020, 278, 108323.	1.4	5
64	Non-negative scalar curvature. <i>Annals of Global Analysis and Geometry</i> , 1992, 10, 103-123.	0.6	4
65	Von Neumann Algebra Invariants of Dirac Operators. <i>Journal of Functional Analysis</i> , 1998, 152, 1-21.	1.4	4
66	On the homotopy invariance of L^2 torsion for covering spaces. <i>Proceedings of the American Mathematical Society</i> , 1998, 126, 887-897.	0.8	4
67	Discrete Morse Theory and Extended L^2 Homology. <i>Journal of Functional Analysis</i> , 1999, 168, 84-110.	1.4	4
68	The geometry of determinant line bundles in noncommutative geometry. <i>Journal of Noncommutative Geometry</i> , 2009, 3, 559-578.	0.5	4
69	Harmonic Cheeger-Simons characters with applications. <i>Journal of Geometry and Physics</i> , 2009, 59, 663-672.	1.4	4
70	T-duality as a duality of loop group bundles. <i>Journal of Physics A: Mathematical and Theoretical</i> , 2009, 42, 162001.	2.1	4
71	Spectral sections, twisted rho invariants and positive scalar curvature. <i>Journal of Noncommutative Geometry</i> , 2015, 9, 821-850.	0.5	4
72	Geometry of pseudodifferential algebra bundles and Fourier integral operators. <i>Duke Mathematical Journal</i> , 2017, 166, .	1.5	4

#	ARTICLE	IF	CITATIONS
73	Group dualities, T-dualities, and twisted K-theory. Journal of the London Mathematical Society, 2018, 97, 1-23.	1.0	4
74	Positive scalar curvature and an equivariant Callias-type index theorem for proper actions. Annals of K-Theory, 2021, 6, 319-356.	0.4	4
75	T-duality for circle bundles via noncommutative geometry. Advances in Theoretical and Mathematical Physics, 2014, 18, 1437-1462.	0.6	4
76	Homotopy invariance of Novikov-Shubin invariants and L^2 Betti numbers. Proceedings of the American Mathematical Society, 1997, 125, 3757-3762.	0.8	3
77	Operator Algebra Quantum Homogeneous Spaces of Universal Gauge Groups. Letters in Mathematical Physics, 2011, 97, 263-277.	1.1	3
78	Bundle gerbes and moduli spaces. Journal of Geometry and Physics, 2012, 62, 1-10.	1.4	3
79	Higher abelian gauge theory associated to gerbes on noncommutative deformed M5-branes and S-duality. Journal of Geometry and Physics, 2015, 92, 240-251.	1.4	3
80	T-duality of singular spacetime compactifications in an H-flux. Journal of Geometry and Physics, 2018, 129, 269-278.	1.4	3
81	Projective elliptic genera and elliptic pseudodifferential genera. Advances in Mathematics, 2019, 358, 106860.	1.1	3
82	The Riemann-Roch Theorem on higher dimensional complex noncommutative tori. Journal of Geometry and Physics, 2020, 147, 103534.	1.4	3
83	Exotic Courant algebroids and T-duality. Journal of Geometry and Physics, 2021, 163, 104155.	1.4	3
84	Correspondences, von Neumann Algebras and Holomorphic L^2 Torsion. Canadian Journal of Mathematics, 2000, 52, 695-736.	0.6	2
85	Entire cyclic homology of stable continuous trace algebras. Bulletin of the London Mathematical Society, 2007, 39, 71-75.	0.8	2
86	Nonassociative Strict Deformation Quantization of C^* -Algebras and Nonassociative Torus Bundles. Letters in Mathematical Physics, 2012, 102, 107-123.	1.1	1
87	Formal geometric quantisation for proper actions. Journal of Homotopy and Related Structures, 2016, 11, 409-424.	0.7	1
88	Spherical T-duality and the spherical Fourier-Mukai transform. Journal of Geometry and Physics, 2018, 133, 303-314.	1.4	1
89	Fractional quantum numbers via complex orbifolds. Letters in Mathematical Physics, 2019, 109, 2473-2484.	1.1	1
90	T-Duality and the Exotic Chiral de Rham Complex. Communications in Mathematical Physics, 2021, 385, 1133.	2.2	1

#	ARTICLE	IF	CITATIONS
91	Fractional quantum numbers, complex orbifolds and noncommutative geometry. Journal of Physics A: Mathematical and Theoretical, 2021, 54, 314001.	2.1	1
92	Positive scalar curvature metrics via end-periodic manifolds. Annals of K-Theory, 2020, 5, 639-676.	0.4	1
93	Arithmetic Properties of Eigenvalues of Generalized Harper Operators on Graphs. Communications in Mathematical Physics, 2006, 262, 269-297.	2.2	0
94	T-Duality in Type II String Theory via Noncommutative Geometry and Beyond. Progress of Theoretical Physics Supplement, 2007, 171, 237-257.	0.1	0
95	Exotic twisted equivariant K-theory. Journal of Geometry and Physics, 2020, 158, 103930.	1.4	0
96	On the Chern Character in Higher Twisted K-Theory and Spherical T-Duality. Communications in Mathematical Physics, 2021, 385, 331-368.	2.2	0
97	The Ring Structure of Twisted Equivariant KK-Theory for Noncompact Lie Groups. Communications in Mathematical Physics, 2021, 385, 633.	2.2	0
98	Inequalities for the Novikov-Shubin invariants. Proceedings of the American Mathematical Society, 1996, 124, 2585-2588.	0.8	0
99	Witten Genus and Elliptic Genera for Proper Actions. Communications in Mathematical Physics, 2022, 389, 1215-1239.	2.2	0