List of Publications

Dr. Alexander Schenkel

Preprints

[P-1] M. Benini, A. Schenkel and U. Schreiber,
"The stack of Yang-Mills fields on Lorentzian manifolds,"
arXiv:1704.01378 [math-ph].

Articles in peer reviewed journals

[J-31] C. Dappiaggi, S. Murro and A. Schenkel,
"Non-existence of natural states for Abelian Chern-Simons theory,"
J. Geom. Phys. **116**, 119–123 (2017) [arXiv:1612.04080 [math-ph]].

[J-30] M. Benini and A. Schenkel,
"Quantum field theories on categories fibered in groupoids,"
Commun. Math. Phys. **356**, 19 (2017) [arXiv:1610.06071 [math-ph]].

[J-29] A. Schenkel and J. Zahn,
"Global anomalies on Lorentzian space-times,"
Annales Henri Poincaré **18**, 2693–2714 (2017) [arXiv:1609.06562 [hep-th]].

[J-28] G. E. Barnes, A. Schenkel and R. J. Szabo,
"Mapping spaces and automorphism groups of toric noncommutative spaces,"
Lett. Math. Phys. **107**, 1591–1628 (2017) [arXiv:1606.04775 [math.QA]].

[J-27] P. Aschieri, P. Bieliavsky, C. Pagani and A. Schenkel,
"Noncommutative principal bundles through twist deformation,"
Commun. Math. Phys. **352**, 287 (2017) [arXiv:1604.03542 [math.QA]].

[J-26] M. Benini and A. Schenkel,
"Poisson algebras for non-linear field theories in the Cahiers topos,"
Annales Henri Poincaré **18**, 1435–1464 (2017) [arXiv:1602.00708 [math-ph]].

[J-25] C. Dappiaggi, H. Gimperlein, S. Murro and A. Schenkel,
"Wavefront sets and polarizations on supermanifolds,"
J. Math. Phys. **58**, 023504 (2017) [arXiv:1512.07823 [math-ph]].

[J-24] C. Becker, M. Benini, A. Schenkel and R. J. Szabo,
"Cheeger-Simons differential characters with compact support and Pontryagin duality,"
to appear in Communications in Analysis and Geometry [arXiv:1511.00324 [math.DG]].

[J-23] C. Becker, M. Benini, A. Schenkel and R. J. Szabo,
"Abelian duality on globally hyperbolic spacetimes,"
Commun. Math. Phys. **349**, 361 (2017) [arXiv:1511.00316 [hep-th]].

[J-22] G. E. Barnes, A. Schenkel and R. J. Szabo,
"Nonassociative geometry in quasi-Hopf representation categories II:
Connections and curvature,"
J. Geom. Phys. **106**, 234–255 (2016) [arXiv:1507.02792 [math.QA]].

[J-21] M. Benini, A. Schenkel and R. J. Szabo,
"Homotopy colimits and global observables in Abelian gauge theory,"
Lett. Math. Phys. **105**, 1193–1222 (2015) [arXiv:1503.08839 [math-ph]].

[J-20] T. -P. Hack, F. Hanisch and A. Schenkel,
"Supergeometry in locally covariant quantum field theory,"
Commun. Math. Phys. **342**, 615 (2016) [arXiv:1501.01520 [math-ph]].

[J-19] G. E. Barnes, A. Schenkel and R. J. Szabo,
"Nonassociative geometry in quasi-Hopf representation categories I:
Bimodules and their internal homomorphisms,"
J. Geom. Phys. **89**, 111–152 (2015) [arXiv:1409.6331 [math.QA]].

[J-18] C. Becker, A. Schenkel and R. J. Szabo,
"Differential cohomology and locally covariant quantum field theory,"
Rev. Math. Phys. **29**, 1750003 (2017) [arXiv:1406.1514 [hep-th]].

[J-17] C. J. Fewster and A. Schenkel,
"Locally covariant quantum field theory with external sources,"
Annales Henri Poincaré **16**, 2303–2365 (2015) [arXiv:1402.2436 [math-ph]].

[J-16] A. Schenkel and C. F. Uhlemann,
"Dirac operators on noncommutative curved spacetimes,"
SIGMA **9**, 080 (2013) [arXiv:1308.1929 [hep-th]].

[J-15] M. Benini, C. Dappiaggi, T. -P. Hack and A. Schenkel,
"A C^*-algebra for quantized principal $U(1)$-connections on globally hyperbolic Lorentzian manifolds,"
Commun. Math. Phys. **332**, 477 (2014) [arXiv:1307.3052 [math-ph]].

[J-14] M. Benini, C. Dappiaggi and A. Schenkel,
"Quantized Abelian principal connections on Lorentzian manifolds,"
Commun. Math. Phys. **330**, 123 (2014) [arXiv:1303.2515 [math-ph]].

[J-13] M. Benini, C. Dappiaggi and A. Schenkel,
"Quantum field theory on affine bundles,"
Annales Henri Poincaré **15**, 171–211 (2014) [arXiv:1210.3457 [math-ph]].

[J-12] P. Aschieri and A. Schenkel,
"Noncommutative connections on bimodules and Drinfeld twist deformation,"
Adv. Theor. Math. Phys. **18**, 513–612 (2014) [arXiv:1210.0241 [math.QA]].

[J-11] T. -P. Hack and A. Schenkel,
"Linear bosonic and fermionic quantum gauge theories on curved spacetimes,"
Gen. Rel. Grav. **45**, 877 (2013) *(Editor's choice)* [arXiv:1205.3484 [math-ph]].

[J-10] A. Schenkel,
"Module parallel transports in fuzzy gauge theory,"
Int. J. Geom. Meth. Mod. Phys. **11**, 1450021 (2014) [arXiv:1201.4785 [math-ph]].

[J-9] A. Schenkel and C. F. Uhlemann,
"Quantization of the massive gravitino on FRW spacetimes,"
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[J-8] A. Schenkel,
"QFT on homothetic Killing twist deformed curved spacetimes,"
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[J-7] A. Schenkel and C. F. Uhlemann,
"Field Theory on Curved Noncommutative Spacetimes,"
SIGMA **6**, 061 (2010) [arXiv:1003.3190 [hep-th]].

[J-6] A. Schenkel and C. F. Uhlemann,
"High energy improved scalar quantum field theory from noncommutative geometry without UV/IR-mixing,"
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[J-5] T. Ohl, A. Schenkel and C. F. Uhlemann,
"Spacetime Noncommutativity in Models with Warped Extradimensions,"
JHEP **1007**, 029 (2010) [arXiv:1002.2884 [hep-th]].

[J-4] T. Ohl and A. Schenkel,
"Algebraic approach to quantum field theory on a class of noncommutative curved spacetimes,"
Gen. Rel. Grav. **42**, 2785 (2010) [arXiv:0912.2252 [hep-th]].

[J-3] T. Koslowski and A. Schenkel,
"Preferred foliation effects in Quantum General Relativity,"
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[J-2] T. Ohl and A. Schenkel,
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[J-1] T. Ohl and A. Schenkel,
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[C-7] A. Schenkel,
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to appear in Oberwolfach Reports.
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[C-6] G. E. Barnes, A. Schenkel and R. J. Szabo,
"Working with Nonassociative Geometry and Field Theory,"
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"Quantized Abelian principal connections on Lorentzian manifolds,"
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[C-4] A. Schenkel,
"Twist deformations of module homomorphisms and connections,"
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Noncommutative Field Theory and Gravity, September 2011, Corfu.

[C-3] A. Schenkel,
"Quantum Field Theory on Curved Noncommutative Spacetimes,"
PoS(CNCFG2010)029 [arXiv:1101.3492 [hep-th]].
Noncommutative Field Theory and Gravity, September 2010, Corfu.

[C-2] A. Schenkel,
"Quantum Field Theory on Noncommutative Curved Spacetimes,"
in Oberwolfach Reports, Volume 7, Issue 3, pp. 2503–2560 (2010).
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[C-1] A. Schenkel,
"Symmetry Reduction and Exact Solutions in Twisted Noncommutative Gravity,"
Acta Phys. Polon. B Proc. Suppl. 2: 657 (2009) [arXiv:0908.0434 [hep-th]].
Non-perturbative Gravity and Quantum Chromodynamics, June 2009, Zakopane.

PhD thesis

[T-1] A. Schenkel,
"Noncommutative Gravity and Quantum Field Theory on Noncommutative Curved Spacetimes,"
PhD thesis, Würzburg University (2011) [arXiv:1210.1115 [math-ph]].