

LIST OF PUBLICATIONS

All papers submitted to the arxiv can be obtained at http://arxiv.org/a/schweigert_c_1

Publications in refereed journals:

1. “*On the classification of $N = 2$ superconformal coset models*”
Commun. Math. Phys. 149 (1992) 425 - 431
2. “*Non-Hermitian symmetric $N = 2$ coset models, Poincaré polynomials and string compactification*”
(with J. Fuchs)
Nucl. Phys. B 411 (1994) 181 - 222, arXiv:hep-th/9304133v1
3. “*Level-rank duality of WZW theories and isomorphisms of $N = 2$ coset models,*”
(with J. Fuchs)
Annals of Physics 234 (1994) 102 - 140, arXiv:hep-th/9307107v2
4. “*Poincaré polynomials and level-rank dualities in the $N = 2$ coset construction,*”
Theor. Math. Phys. 98 (1994) 326 - 334, arXiv:hep-th/9311168v1
5. “*On the configuration space of gauge theories,*”
(with J. Fuchs and M.G. Schmidt)
Nucl. Phys. B 426 (1994) 107 - 128, hep-th/9404059
6. “*Modular invariants and fusion rule automorphisms from Galois theory,*”
(with J. Fuchs, B. Gato-Rivera and A.N. Schellekens)
Phys. Lett. B 334 (1994) 113 - 120, arXiv:hep-th/9405153v1
7. “*Extended geometry of black holes,*”
(with K. Peeters and J.W. van Holten)
Class. Quantum Grav. 12 (1995) 173 - 179, arXiv:gr-qc/9407006v1
8. “*Galois modular invariants of WZW models,*”
(with J. Fuchs and A.N. Schellekens)
Nucl. Phys. B 437 (1995) 667 - 694, arXiv:hep-th/9410010v1
9. “*Quasi-Galois symmetries of the modular S -matrix,*”
(with J. Fuchs and A.N. Schellekens)
Commun. Math. Phys. 176 (1996) 447 - 465, arXiv:hep-th/9412009v1
10. “*On the extended Poincaré polynomial,*”
(with M. Kreuzer)
Phys. Lett. B 352 (1995) 276 - 285, arXiv:hep-th/9503174v1
11. “*From Dynkin diagram symmetries to fixed point structures,*”
(with J. Fuchs and A.N. Schellekens)
Commun. Math. Phys. 180 (1996) 39 - 97, arXiv:hep-th/9506135v3

12. “*The resolution of field identification fixed points in diagonal coset theories*,”
(with J. Fuchs and A.N. Schellekens)
Nucl. Phys. B 461 (1996) 371 - 404, arXiv:hep-th/9509105v1
13. “*A matrix S for all simple current extensions*,”
(with J. Fuchs and A.N. Schellekens)
Nucl. Phys. B 473 (1996) 323 - 366, arXiv:hep-th/9601078v2
14. “*Some automorphisms of Generalized Kac-Moody algebras*,”
(with J. Fuchs and U. Ray)
Journal of Algebra 191 (1997) 518 - 540, arXiv:q-alg/9605046v1
15. “*WZW fusion rings in the limit of infinite level*,”
(with J. Fuchs)
Commun. Math. Phys. 185 (1997) 641 - 670, arXiv:hep-th/9609124v1
16. “*On moduli spaces of flat connections with non-simply connected structure group*,”
Nucl. Phys. B 492 (1997) 743 - 755, arXiv:hep-th/9611092v1
17. “*Systematic approach to cyclic orbifolds*,”
(with L. Borisov and M.B. Halpern)
Int. J. Mod. Phys. A 13 (1998) 125 - 168, arXiv:hep-th/9811211v1
18. “*A classifying algebra for boundary conditions*,”
(with J. Fuchs)
Phys. Lett. B 414 (1997) 251 - 259, arXiv:hep-th/9708141v1
19. “*A note on the geometry of CHL heterotic strings*,”
(with W. Lerche, R. Minasian, and S. Theisen)
Phys. Lett. B 424 (1998) 53 - 59, arXiv:hep-th/9711104v1
20. “*Branes: from free fields to general backgrounds*,”
(with J. Fuchs)
Nucl. Phys. B 530 (1998) 99 - 136, arXiv:hep-th/9712257v2
21. “*The action of outer automorphisms on bundles of chiral blocks*,”
(with J. Fuchs)
Commun. Math. Phys. 206 (1999) 691 - 736. arXiv:hep-th/9805026v3
22. “*Completeness of boundary conditions for the critical three-state Potts model*,”
(with J. Fuchs)
Phys. Lett. B. 441 (1998) 141 - 146, arXiv:hep-th/9806121v1
23. “*Orbifold analysis of broken bulk symmetries*,”
(with J. Fuchs)
Phys. Lett. B. 447 (1999) 266 - 276, arXiv:hep-th/9811211v1
24. “*Symmetry breaking boundaries: I. General theory*,”
(with J. Fuchs)
Nucl. Phys. B, 558 (1999) 419 - 483, arXiv:hep-th/9902132v2
25. “*Symmetry breaking boundary conditions and WZW orbifolds*,”
(with L. Birke and J. Fuchs)
Adv. Th. Math. Phys. 3 (1999) 671 - 726, arXiv:hep-th/9905038v1

26. “*Symmetry breaking boundaries: II. More structures, examples,*”
(with J. Fuchs)
Nucl. Phys. B 568 (2000) 543 - 593, arXiv:hep-th/9908025v1
27. “*New maverick coset theories,*”
(with B. Pedrini and J. Walcher)
Phys. Lett. B 466 (1999) 206 - 210, arXiv:hep-th/9908185v1
28. “*The geometry of WZW branes,*”
(with G. Felder, J. Fröhlich and J. Fuchs)
J. Geom. Phys. 34 (2000) 162 - 190, arXiv:hep-th/9909030v3
29. “*Conformal boundary conditions and three-dimensional topological field theory,*”
(with G. Felder, J. Fröhlich and J. Fuchs)
Phys. Rev. Lett. 84 (2000) 1659 - 1662, arXiv:hep-th/9909140v2
30. “*Correlation functions and boundary conditions in RCFT and three-dimensional topology,*”
(with G. Felder, J. Fröhlich and J. Fuchs)
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31. “*Universality in quantum Hall systems: coset construction of incompressible states,*”
(with J. Fröhlich, B. Pedrini and J. Walcher)
J. Stat. Phys 103 (2001) 527 - 567. Dedicated to the memory of Quin Luttinger.
arXiv:cond-mat/0002330v2 [cond-mat.mes-hall]
32. “*Flux Stabilization of D-branes,*”
(with C. Bachas and M. Douglas)
JHEP 5 (2000) Paper 048, 18 pp. arXiv:hep-th/0003037v2
33. “*Projections in string theory and boundary states for Gepner models,*”
(with J. Fuchs and J. Walcher)
Nucl. Phys. B 588 (2000) 110 - 148, arXiv:hep-th/0003298v1
34. “*Solitonic sectors, alpha induction and symmetry breaking boundaries,*”
(with J. Fuchs)
Phys. Lett. B 490 (2000) 163 - 172, arXiv:hep-th/0006181v2
35. “*Boundaries, crosscaps and simple currents,*”
(with J. Fuchs, L.R. Huiszoon, A.N. Schellekens and J. Walcher)
Phys. Lett. B 495 (2000) 427 - 434, arXiv:hep-th/0007174v2
36. “*Boundary Fixed Points, Enhanced Gauge Symmetry and Singular Bundles on K3,*”
(with J. Fuchs, P. Kaste, W. Lerche, A. Lütken and J. Walcher)
Nucl. Phys. B 598 (2001) 57 - 72, arXiv:hep-th/0007145v1
37. “*Flux stabilization in compact groups,*”
(with P. Bordalo and S. Ribault)
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38. “*D-Branes on ALE spaces and the ADE classification of conformal field theories*,”
(with W. Lerche and A. Lütken)
Nucl. Phys. B 622 (2002) 269 - 278, arXiv:hep-th/0006247v3
39. “*Conformal Correlation Functions, Frobenius Algebras and Triangulations*,”
(with J. Fuchs and I. Runkel)
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40. “*A reason for fusion rules to be even*,”
(with J. Fuchs and I. Runkel)
J. of Physics A 35 (2002) L255-260. arXiv:math/0110257v1 [math.QA]
41. “*TFT construction of RCFT correlators I: Partition functions*,”
(with J. Fuchs and I. Runkel)
Nucl. Phys. B 646 (2002) 353-544. arXiv:hep-th/0204148v2
42. “*An algorithm for twisted fusion rules*,”
(with T. Quella and I. Runkel)
Adv. Th. Math. Phys. 6 (2002) No. 2, 197- 206. arXiv:math/0203133v2 [math.QA]
43. “*The world sheet revisited*,”
(with J. Fuchs)
Fields Institute Comm. 39 (2003) 241-249. arXiv:hep-th/0105266v1
44. “*Category theory for conformal boundary conditions*,”
(with J. Fuchs)
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45. “*Topologization of chiral representations*,”
(with F. Conrady)
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46. “*TFT construction of RCFT correlators II: Unoriented world sheets*,”
(with J. Fuchs and I. Runkel)
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47. “*Kramers-Wannier duality from conformal defects*,”
(with J. Fröhlich, J. Fuchs and I. Runkel)
Phys. Rev. Lett. 93 (2004) 070601, arXiv:cond-mat/0404051v2 [cond-mat.stat-mech]
48. “*TFT construction of RCFT correlators III: Simple currents*,”
(with J. Fuchs and I. Runkel)
Nucl. Phys. B. 694 (2004) 277-353, arXiv:hep-th/0403157v2
49. “*Correspondences of ribbon categories*,”
(with J. Fröhlich, J. Fuchs and I. Runkel)
Adv. Math. 199 (2006) 192-329, arXiv:math/0309465v3 [math.CT]
50. “*TFT construction of RCFT correlators IV: Structure constants and correlation functions*,”
(with J. Fuchs and I. Runkel)
Nucl. Phys. B 715 (2005) 539-638, arXiv:hep-th/0412290v2

51. “*TFT construction of RCFT correlators V: Proof of modular invariance and factorisation,*”
(with J. Fjelstad, J. Fuchs and I. Runkel)
Theory and Applications of Categories 16 (2006) 342-433, arXiv:hep-th/0503194v2
52. “*Duality and defects in rational conformal field theory,*”
(with J. Fröhlich, J. Fuchs and I. Runkel)
Nucl. Phys. B 763 (2007) 354-430, arXiv:hep-th/0607247v2
53. “*Unoriented WZW Models and Holonomy of Bundle Gerbes,*”
(with U. Schreiber and K. Waldorf)
Commun. Math. Phys. 274 (2007) 31-64, arXiv:hep-th/0512283v2
54. “*Topological defects for the free boson CFT,*”
(with J. Fuchs, M. Gaberdiel and I. Runkel)
J. Phys. A: Math. Theor. 40 (2007) 11403-11440, arXiv:0705.3129v1 [hep-th]
55. “*Ribbon categories and (unoriented) CFT: Frobenius algebras, automorphisms, reversions,*”
(with J. Fuchs and I. Runkel)
Contemporary Mathematics 431 (2007) 203-224, arXiv:math/0511590v1 [math.CT]
56. “*Topological and conformal field theory as Frobenius algebras,*”
(with J. Fjelstad, J. Fuchs and I. Runkel)
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57. “*Bi-branes: Target Space Geometry for World Sheet topological Defects,*”
(with J. Fuchs and K. Waldorf)
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58. “*Uniqueness of open/closed rational CFT with given algebra of open states,*”
(with J. Fjelstad, J. Fuchs and I. Runkel)
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59. “*The fusion algebra of bimodule categories,*”
(with J. Fuchs and I. Runkel)
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60. “*Kramers-Wannier dualities for WZW theories and minimal models,*”
(with E. Tsouchnika)
Commun. Contemp. Math 10 (2008) 773-789, arXiv:0710.0783v2 [hep-th]
61. “*Some remarks on defects and T-duality,*”
(with G. Sarkissian)
Nucl. Phys. B 819 (2009) 478-490, arXiv:0810.3159v2 [hep-th]
62. “*The three-dimensional origin of the classifying algebra,*”
(with J. Fuchs and C. Stigner)
Nucl. Phys. B 824 (2010) 333-364, arXiv:0907.0685v1 [hep-th]
63. “*Twenty five years of two-dimensional rational conformal field theory,*”
(with J. Fuchs and I. Runkel)
J. Math. Phys. 51 (2010) 015210, arXiv:0910.3145v2 [hep-th]

64. “*On the Rosenberg-Zelinsky sequence in abelian monoidal categories,*”
(with T. Barmeier, J. Fuchs and I. Runkel)
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65. “*Module categories for permutation modular invariants,*”
(with T. Barmeier, J. Fuchs and I. Runkel)
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66. “*Hopf algebras and finite tensor categories in conformal field theory,*”
(with J. Fuchs)
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67. “*Equivariance in higher geometry,*”
(with T. Nikolaus)
Adv. Math. 226 (2011) 3367-3408, arXiv:1004.4558v1 [math.AT]
68. “*The classifying algebra for defects,*”
(with J. Fuchs and Carl Stigner)
Nucl. Phys. B 843 (2011) 673-723, arXiv:1007.0401v1 [hep-th]
69. “*Modular categories from finite crossed modules*”
(with J. Maier)
Journal of Pure and Applied Algebra, 215 (2011) 2196-2208, arXiv:1003.2070 [math.QA]
70. “*A Geometric Construction for Permutation Equivariant Categories from Modular Functors,*”
(with T. Barmeier)
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71. “*Equivariant modular categories via Dijkgraaf-Witten theory,*”
(with J. Maier and Th. Nikolaus)
Adv. Theor. Math. Phys. 16 (2012) 289-358, arXiv:1103.2963v1 [math.QA]
72. “*Modular invariant Frobenius algebras from ribbon Hopf algebra automorphisms,*”
(with J. Fuchs and C. Stigner)
J. Algebra 363 (2012) 29-72, arXiv:1106.0210v1 [math.QA]
73. “*Strictification of weakly equivariant Hopf algebras,*”
(with J. Maier and Th. Nikolaus)
Bull. Belgian Math. Soc. 20 (2013), 269-286, arXiv:1109.0236v1 [math.RA]
74. “*Bicategories for boundary conditions and for surface defects in 3-d TFT,*”
(with J. Fuchs and A. Valentino)
Commun. Math. Phys. 321 (2013) 543-575, arXiv:1203.4568v2 [hep-th]
75. “*Higher genus mapping class group invariants from factorizable Hopf algebras,*”
(with J. Fuchs and C. Stigner)
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76. “*From non-semisimple Hopf algebras to correlation functions for logarithmic CFT,*”
(with J. Fuchs and C. Stigner)
J. Phys. A: Math. Theor. 46 (2013) 494008.

77. “*A geometric approach to boundaries and surface defects in Dijkgraaf-Witten theories,*”
(with J. Fuchs and A. Valentino)
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78. “*A note on permutation twist defects in topological bilayer phases,*”
(with J. Fuchs)
Lett. Math. Phys. 104 (2014) 1385-1405, arXiv:1310.1329 [hep-th]
79. “*A Serre-Swan theorem for gerbe modules on étale Lie groupoids,*”
(with C. Tropp and A. Valentino)
Theory Appl. Cat. 29 (2014) 819–835, arXiv:1401.2824 [math.AT]
80. “*On the Brauer groups of symmetries of abelian Dijkgraaf-Witten theories,*”
(with J. Fuchs, J. Priel and A. Valentino)
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81. “*Partially dualized Hopf algebras have equivalent Yetter-Drinfel’d modules,*”
(with A. Barvels and S. Lentner)
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82. “*A trace for bimodule categories,*”
(with J. Fuchs and G. Schaumann)
Applied Categorical Structures 25 (2017) 227-268, arXiv:1412.6968 [math.CT]
83. “*Consistent systems of correlators in non-semisimple conformal field theory,*”
(with J. Fuchs)
Adv. Math. 307 (2017) 598-639, arXiv:1604.01143 [math.QA]
84. “*Frobenius algebras and homotopy fixed points of group actions on bicategories,*”
(with J. Hesse and A. Valentino)
Theory and Applications of Categories 32 (2017). 652-681, arXiv:1607.05148 [math.QA]
85. “*A GNS construction of three-dimensional abelian Dijkgraaf-Witten theories,*”
(with L. Müller)
Rev. Math. Phys. 30 (2018) 1850005, arXiv:1703.05018 [math.QA]
86. “*Hochschild Cohomology and the Modular Group,*”
(with S. Lentner, S. Mierach and Y. Sommerhäuser)
J. Algebra 507 (2018) 400-420, arXiv:1707.04032 [math.RA]
87. “*The logarithmic Cardy case: Boundary states and annuli,*”
(with J. Fuchs, T. Gannon and G. Schaumann)
Nucl. Phys. B 930 (2018) 287-327, arXiv:1712.01922 [math.QA]
88. “*A Parallel Section Functor for 2-Vector Bundles,*”
(with L. Woike)
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89. “*On unrolled Hopf algebras,*”
(with N. Andruskiewitsch)
J. Knot Theory and its Ramif. 27 (2018) 1850053, arXiv:1701.00153 [math.QA]

90. “*Orbifold Construction for Topological Field Theories*,”
(with L. Woike)
J. Pure and Applied Algebra (223) 2019 1167-1192, arXiv:1705.05171 [math.QA]
91. “*A Parallel Section Functor for 2-Vector Bundles*,”
(with L. Woike)
Theory and Applications of Categories 33 (2018) 644-690, arXiv:1711.08639 [math.CT]
92. “*Eilenberg-Watts calculus for finite categories and a bimodule Radford S^4 theorem*,”
(with J. Fuchs and G. Schaumann)
Trans. Amer. Math. Soc. 373 (2020) 1-40, arXiv:1612.04561 [math.RT]
93. “*Extended Homotopy Quantum Field Theories and their Orbifoldization*,”
(with L. Woike)
Journal of Pure and Applied Algebra (224) 2020, 106213 arXiv:1802.08512 [math.QA]
94. “*On isotypic decompositions for non-semisimple Hopf algebras*”
(with V. Koppen and E. Meir)
Algebr. Represent. Theor. (2021). <https://doi.org/10.1007/s10468-021-10029-x>, arXiv:1910.13161 [math.QA]
95. “*Matrix product operator symmetries and intertwiners in string-nets with domain walls*,”
(with L. Lootens, J. Fuchs, J. Haegeman and Frank Verstraete)
SciPost Phys. 10, 053 (2021), arXiv:2008.11187 [quant-ph]
96. “*Bulk from boundary in finite CFT by means of pivotal module categories*,”
(with J. Fuchs)
Nucl. Phys. B 967 (2021) 115392, arXiv:2012.10159 [hep-th]
97. “*CFT correlators for Cardy bulk fields via string-net models*,”
(with Y. Yang)
SIGMA 17 (2021) 040, arXiv:1911.10147 [hep-th]
98. “*Homotopy Coherent Mapping Class Group Actions and Excision for Hochschild Complexes of Modular Categories*,”
(with L. Woike)
Adv. Math. 386(2021)107814, arXiv:2004.14343 [math.QA]
99. “*Internal natural transformations and Frobenius algebras in the Drinfeld center*,”
(with J. Fuchs)
Transformation Groups 28 (2023) 733, arXiv:2008.04199 [math.CT]
100. “*The Hochschild Complex of a Finite Tensor Category*,”
(with L. Woike)
Algebraic & Geometric Topology 21 (2021) 3689–3734, arXiv:1910.00559 [math.QA]
101. “*A modular functor from state sums for finite tensor categories and their bimodules*,”
(with J. Fuchs and G. Schaumann)
Theory and Applications of Categories 38 (2022) 436-594, arXiv:1911.06214 [math.QA]
102. “*Frobenius-Schur Indicators and the Mapping Class Group of the Torus*,”
(with J. Farnsteiner)
Lett. Math. Phys. 112 (2022) 39, arXiv:2104.12742 [math.QA]

103. “*Equivariant Morita theory for graded tensor categories*,”
(with C. Galindo and D. Jaklitsch)
Bull. Belg. Math. Soc. Simon Stevin 29 (2022) 145–171, arXiv:2106.07440 [math.QA]
104. “*The Trace Field Theory of a Finite Tensor Category*,”
(with L. Woike)
Algebras and Representation Theory (2022), arXiv:2103.15772 [math.QA]
105. “*Domain walls between 3d phases of Reshetikhin-Turaev TQFTs*,”
(with V. Koppen, V. Mulevicius and I. Runkel)
Commun. Math. Phys. 396 (2022) 1187–1220, arXiv:2105.04613 [hep-th]
106. “*Davydov-Yetter cohomology, comonads and Ocneanu rigidity*,”
(with A. Gainutdinov and J. Haferkamp)
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107. “*The differential graded Verlinde Formula and the Deligne Conjecture*,”
(with L. Woike)
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108. “*Homotopy Invariants of Braided Commutative Algebras and the Deligne Conjecture for Finite Tensor Categories*,”
(with L. Woike)
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109. “*A G -equivariant String-Net Construction*,”
(with A. DeLazzer Meunier and M. Traube)
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110. “*Spherical Morita contexts and relative Serre functors*,”
(with J. Fuchs, C. Galindo and D. Jaklitsch)
accepted for publication in Kyoto J. Math., arXiv:2207.07031 [math.QA]
111. “*Davydov-Yetter cohomology and relative homological algebra*,”
(with M. Faitg and A. Gainutdinov)
Sel. Math. New Ser. 30, 26 (2024), arXiv:2202.12287 [math.QA]
112. “*Twisted Drinfeld Centers and Framed String-Nets*,”
(mit H. Knötzele und M. Traube)
Quantum Topol. 15 (2024) 537–566, arXiv:2302.14779 [math.QA]
113. “*The evaluation of graphs on surfaces for state-sum models with defects*,”
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114. “*All product eigenstates in Heisenberg models from a graphical construction*,”
(with F. Gerken, I. Runkel and T. Posske)
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115. “*Algebraic structures in two-dimensional conformal field theory*,”
(with J. Fuchs, S. Wood and Y. Yang)
Encyclopedia of Mathematical Physics (Second Edition). Elsevier Ltd, Volume 3. p. 604–617
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116. “*A manifestly Morita-invariant construction of Turaev-Viro invariant,*”
(with J. Fuchs, C. Galindo and D. Jaklitsch)
ZMP-HH/24-13, Hamburger Beiträge zur Mathematik Nr. 970, arXiv:2407.10018 [math.QA],
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Preprints:

1. “*Duality structures for module categories of vertex operator algebras and the Feigin Fuchs boson,*”
(with R. Allen, S. Lentner and S. Wood)
ZMP-HH/21-16, Hamburger Beiträge zur Mathematik Nr. 904, arXiv:2107.05718 [math.QA]
2. “*String-net models for pivotal bicategories,*”
(with J. Fuchs and Y. Yang)
ZMP-HH/23-1, Hamburger Beiträge zur Mathematik Nr. 937, arXiv:2302.01468 [math.QA]
3. “*Grothendieck-Verdier duality in categories of bimodules and weak module functors,*”
(with J. Fuchs, G. Schaumann and S. Wood)
ZMP-HH/23-11, Hamburger Beiträge zur Mathematik Nr. 945, arXiv:2306.17668 [math.CT]
4. “*The Lyubashenko Modular Functor for Drinfeld Centers via Non-Semisimple String-Nets,*”
(with L. Müller, L. Woike and Y. Yang)
ZMP-HH/23-23, Hamburger Beiträge zur Mathematik Nr. 955, arXiv:2312.14010 [math.QA]
5. “*Grothendieck-Verdier module categories, Frobenius algebras and relative Serre functors,*”
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ZMP-HH/24-11, Hamburger Beiträge zur Mathematik Nr. 966, arXiv:2405.20811 [math.CT]
6. “*Excision for Spaces of Admissible Skeins,*”
(with I. Runkel and Y.H. Tham)
ZMP-HH/24-14, Hamburger Beiträge zur Mathematik Nr. 971, arXiv:2407.09302 [math.QA]
7. “*An adjunction theorem for Davydov-Yetter cohomology and infinitesimal braidings,*”
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(with J. Fuchs)
Cambridge Monographs on Mathematical Physics, Cambridge University Press, 1997. xii+438 pp.
Paperback edition: October 2003, ISBN: 0521560012.
2. “*Softwarepraktikum - Analysis und Lineare Algebra,*”
(with D. Bahns)
Vieweg, 2007. ISBN 978-3-8348-0370-2
3. “*String-net construction of RCFT correlators,*”
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