

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.
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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)
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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)
J. Geom. Phys. 58 (2008) 576-598, arXiv:hep-th/0703145v1
58. “*Uniqueness of open/closed rational CFT with given algebra of open states,*”
(with J. Fjelstad, J. Fuchs and I. Runkel)
Adv. Theor. Math. Phys. 12 (2008) 1281 - 1373, arXiv:hep-th/0612306v2
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)
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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)
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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)
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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)
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77. “A geometric approach to boundaries and surface defects in Dijkgraaf-Witten theories,”
(with J. Fuchs and A. Valentino)
Commun. Math. Phys. 332 (2014) 981-1015, arXiv:1307.3632 [hep-th]
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)
J. Algebra 430 (2015) 303-342, arXiv:1402.2214 [math.QA]
82. “A trace for bimodule categories,”
(with J. Fuchs and G. Schaumann)
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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)
Theory and Applications of Categories 33 (2018) 644-690, arXiv:1711.08639 [math.CT]
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)
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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)
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112. “*Twisted Drinfeld Centers and Framed String-Nets*,”
(mit H. Knötzele und M. Traube)
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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. “*Algebraic structures in two-dimensional conformal field theory*,”
(with J. Fuchs, S. Wood and Y. Yang)
Invited contribution to the Encyclopedia of Mathematical Physics 2nd edition,

Reference Module in Materials Science and Materials Engineering, Elsevier, 2024, ISBN 9780128035818 arXiv:2305.02773

4. “*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]
5. “*All product eigenstates in Heisenberg models from a graphical construction*,”
(with F. Gerken, I. Runkel and T. Posske)
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6. “*The evaluation of graphs on surfaces for state-sum models with defects*,”
(with J. Farnsteiner)
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7. “*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]
8. “*Grothendieck-Verdier module categories, Frobenius algebras and relative Serre functors*,”
(with J. Fuchs, G. Schaumann and S. Wood)
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9. “*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]
10. “*A manifestly Morita-invariant construction of Turaev-Viro invariant*,”
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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*,”
(with J. Fuchs and Y. Yang)
Springer Briefs in Mathematical Physics 45 (2022), <https://doi.org/10.1007/978-3-031-14682-4>
arXiv:2112.12708 [math.QA]
4. “*Hochschild Cohomology, Modular Tensor Categories, and Mapping Class Groups*,”
(with S. Lentner, S. Mierach and Y. Sommerhäuser)
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