

List of Publications

1. **The Fuzzy Supersphere and its body**
together with G. Reiter
Proceedings of the Conference: New Insights in Quantum Mechanics,
Goslar, ed. H.-D. Doebner (2000)
2. **Duals for non-abelian lattice gauge theories by categorical methods**
together with K. G. Schlesinger
ESI preprint 561, Proc. of 38. Int. Univ.wochen, Schladming, Lecture
notes in Physics Vol 543, Springer-Berlin, Eds. H. Gausterer et al.,
(2000) p. 387
3. **Generalized functions for quadratic fields obeying quadratic exchange relations**
together with M. Oberguggenberger and I. Todorov
ESI preprint 653, Proc. to commemorate the 90th anniversary of
N.N. Bogoliubov, 2000, published by Steklov Math. Inst., eds. D.S.
Vladimirov and A.A. Slavnov
4. **Noncommutative Supersymmetry od Graded Matrix Physics**
together with G. Reiter
Proc. of 38. Int. Univ.wochen, Schladming, Lecture Notes in Physics
Vol 543, Springer-Berlin, Eds. H. Gausterer et al., (2000), p. 386
5. **Fields on Noncommutative Manifolds**
together with M. Pavsic, M. Chaichian, A. Demichev and P. Presnajder
Proc. of 38. Univ.wochen, Schladming, Lecture Notes in Physics Vol
543, Springer-Berlin, Eds. H. Gausterer et al., (2000), p. 396
6. **On second quantization of quantum groups**
together with K.G. Schlesinger
Jour. Math. Phys. **41** (2000) 7043

7. **On a trialgebraic deformation of the Manin plane**
together with K.G. Schlesinger
Lett. Math. Phys. **52** (2000) 263
8. **Chiral Schwinger Models without gauge anomalies**
together with E. Langmann
Nucl. Phys. **B587** (2000) 568
9. **Fuzzy Projective Spaces**
together with G. Reiter
in Quantum Theory and Symmetries, ed. H.-D. Doebner et al,
World Scientific, 2000, p 535.
10. **Noncommutative Supergeometry of Graded Matrix Algebras**
together with G. Reiter
Proceedings of the International Schladming School, Springer 2000
11. **Simple Fuzzy Superspaces**
together with G. Reiter
Proc. of Euroconference, Torino on NCG and Hopf Algebras in Field
Theory and Particle Physics, World Schientific 2000
12. **The Superfield formalism applied to the Wess-Zumino model**
together with A.A. Bichl, J.M. Grimstrup, L. Popp, M. Schweda, R.
Wulkenhaar,
JHEP **10** (2000) 046
13. **Field Theory on the q-deformed Fuzzy sphere I**
together with J. Madore and H. Steinacker
Journ. Geom. Phys **38** (2001) 308-342
14. **Renormalization of noncommutative Yang-Mills theory: a simple example**
together with T. Krajewski and R. Wulkenhaar
hep-th/0001182
15. **The Energy-Momentum Tensor on noncommutative spaces**
together with A. Gerhold, J. Grimstrup, L. Popp, M. Schweda and R.
Wulkenhaar
hep-th/0012112

16. **Fuzzy Line Bundles, the Chern Character and Topological Charges over the Fuzzy Sphere**
together with C. Rupp and A. Strohmaier
Journal of Geometry and Physics **42** (2002)54
17. **Field Theory on the q-deformed Fuzzy Sphere II**
together with J. Madore and H. Steinacker
Journal of Geometry and Physics **800** (2002) 1-36
18. **A suggestion for an integrability notion for two-dimensional spin-systems**
together with K.G. Schlesinger
Lett. Math. Phys. **55** (2001) 161
19. **Anomalous C-violating three photon decay of the neutral pion in noncommutative Quatum Electrodynamics**
together with Yi Liao
Phys. Lett. B **520** (2001) 63-68
20. **Pair production of neutral Higgs bosons through noncommutative QED interactions at linear colliders**
together with Yi Liao
Phys. Rev. **D64** (2001) 115007
21. **Strong Connections and Chern-Connes Pairing in the Hopf-Galois Theory**
together with L. Dabrowski and P. Hajak
Comm. Math. Phys. **230** (2001) 301
22. **Renormalization of the noncommutative photon self-energy to all orders via Seiberg-Witten map**
together with A. Bichl, J. Grimstrup, L. Popp, M. Schweda and R. Wulkenhaar,
JHEP **0106** (2001) 013
23. **Regularization and Renormalization of QFT from Noncommutative Geometry**
New Developments in Fundamental Interaction Theories, 37 th Karpacz

Winter School, AIP Conference Proceedings, Volume 589, p. 232, 2001,
Editors: J. Lukierski, J. Rembielinski

24. **Noncommutative Spin-1/2 representations**
together with J. Grimstrup, E. Kraus, L. Popp, M. Schweda and R. Wulkenhaar
Eur. Jour. Phys. bf C24 (2002)485
25. **Fuzzy Instantons**
together with M. Maceda, J. Madore and H. Steinacker
Int. Jour. of Mod. Phys **A17no15** (2002)2095
26. **Deformation of conformal field theory to models with non-commutative world sheets**
together with K.G. Schlesinger
ESI 931, (2001)
27. **Noncommutative Lorentz Symmetry and the Origin of the Seiberg-Witten Map**
together with A. Bichl, J. Grimstrup, E. Kraus, L. Popp, M. Schweda and R. Wulkenhaar
Eur. Phys. J. **C24** (2002)165
28. **On a noncommutative deformation of the Connes-Kreimer algebra**
together with K.G. Schlesinger
math.QA/0107105,
29. **Spinfoam models for M-theory**
together with K.G. Schlesinger
Phys. Lett. **B528**, (2002)106
30. **IR-singularities in Noncommutative Perturbative Dynamics**
together with J. Grimstrup, L. Popp, V. Putz, M. Schweda, M. Winckenhäuser and R. Wulkenhaar,
hep-th/ 0202093 Europhys. Lett. **67** (2004) 186
31. **Noncommutative U(1) Super-Yang-Mills Theory: Self-Energy Corrections**

- together with A. Bichl, M. Ertl, A. Gerhold, J. Grimstrup, L. Popp, V. Putz, M. Schweda and R. Wulkenhaar,
 hep-th/ 0203141 Int.J.Mod.Phys. **A19** (2004) 4231
32. **Space/time noncommutative field theories and causality**
 together with H. Bozkaya, P. Fischer, M. Pitschmann, V. Putz, M. Schweda, R. Wulkenhaar
 hep-th/0209253 Eur. Phys. J. **C29** (2003) 133
 33. **The Landau-Problem on the Theta-Deformed Torus**
 together with M. Kornexl
 hep-th/0210042 Lett. Math. Phys. **63** (2003) 73
 34. **Power counting theorem for nonlocal matrix models and renormalization**
 together with R. Wulkenhaar
 hep-th/0305066, Comm. Math. Physics **254** (2005) 91
 35. **Renormalization of Φ^4 theory on noncommutative \mathbb{R}^2 in the matrix base**
 together with R. Wulkenhaar
 hep-th/0307017, JHEP 0312:019,2003
 36. **Exact solution of a one D many body system with momentum dependent interactions**
 together with E. Langmann
 math.ph/0401003, J. Phys.**A37**:4579,2004
 37. **Renormalisation of Noncommutative Quantum Field Theories**
 together with R. Wulkenhaar
 Czech.J.Phys. **54** (2004) 1305
 38. **Regularization and Renormalization of Quantum Field Theories on Noncommutative Spaces**
 together with R. Wulkenhaar
 J.Nonlin.Math.Phys. **11S1** (2004) 9
 39. **The eigenfunctions of the q-deformed Harmonic Operator on the Quantum Line**

together with S. Schraml
math qa/0410389

40. **The Universal Envelope of the topological closed string BRST-complex**
together with K.-G. Schlesinger
hep-th/0412161
41. **Renormalization of Φ^4 theory on noncommutative \mathbb{R}^4 in the matrix base**
together with R. Wulkenhaar
hep-th/0401128, Comm. Math. Phys. **256** (2005) 305
42. **The Beta function in duality covariant noncommutative Φ^4 theory**
together with R. Wulkenhaar
hep-th/0402093, Eur.Phys.J.C35:277-282,2004
43. **Renormalization of Φ^4 theory on noncommutative \mathbb{R}^4 to all orders**
together with R. Wulkenhaar
hep-th/0403232, Lett. Math. Phys. **71** (2005) 13
44. **Finite Gauge theory on Fuzzy CP^2**
together with H. Steinacker
hep-th/0407089 Nucl. Phys **B707** (2005) 145
45. **A remark on the motivic Galois group and the coadjoint action**
together with K.-G. Schlesinger
Eur.Phys.J. C46 (2006) 269-275
46. **Renormalisation of scalar quantum field theory on noncommutative \mathbb{R}^4**
together with R. Wulkenhaar
Fortsch. Phys. **53** (2005) 634
47. **On kappa deformation and UV/IR mixing**
together with M. Wohlgenannt
Nucl.Phys. B748 (2006) 473-484

48. **On deformation theory of Quantum Vertex Algebras**
together with K.-G. Schlesinger
hep-th/0508225
49. **Noncommutative QFT and renormalization**
together with R. Wulkenhaar
Fortsch.Phys.54:116-123,2006
50. **Renormalization of the noncommutative ϕ^3 model through the Kontsevich model**
together with H. Steinacker
Nucl.Phys. B746 (2006) 202-226
51. **A nontrivial solvable noncommutative ϕ^3 model in 4 dimensions**
together with H. Steinacker
JHEP 0608 (2006) 008
52. **Noncommutative QFT and Renormalization**
together with M. Wohlgenannt
Proceedings of the Workshop "Noncommutative Geometry in Field and String Theory", Corfu, 2005 (Greece)
hep-th/0607208
53. **Exact renormalization of a noncommutative ϕ^3 model in 6 dimensions**
together with H. Steinacker
hep-th/0607235
54. **Induced Gauge Theory on a Noncommutative Space**
together with M. Wohlgenannt
hep-th/0703169

55. **Non-Commutative U(1) Gauge Theory on \mathbb{R}^{**4} with Oscillator Term and BRST Symmetry**
together with D. Blaschke, Manfred Schweda
arXiv:0705.4205
56. **Renormalization and Induced Gauge Action on a Noncommutative Space**
together with M. Wohlgenannt
to appear in the proceedings of the 21st Nishinomiya-Yukawa Memorial Symposium Noncommutative geometry and quantum spacetime in physics, Nishinomiya and Kyoto (Japan), 2006
arXiv:0705.4205
57. **Wedge-Local Quantum Fields and Noncommutative Minkowski Space**
together with G. Lechner
Journal-ref: JHEP 11 (2007) 012
arXiv:0705.2167
58. **8D-spectral triple on 4D-Moyal space and the vacuum of non-commutative gauge theory**
together with R. Wulkenhaar
arXiv:0709.0095
59. **Emergent Gravity, Matrix Models and UV/IR Mixing**
together with H. Steinacker and M. Wohlgenannt
arXiv:0802.0973
60. **Minimalist translation-invariant non-commutative scalar field theory**
together with F. Vignes-Tourneret
arXiv:0803.1035