LIST OF PUBLICATIONS

Jürg Fröhlich

1. On the Infrared Problem in a Model of Scalar Electrons and Massless Scalar Bosons, Ph.D. Thesis, ETH 1972, published in Annales de l'Inst. Henri Poincaré, *19*, 1-103 (1974).

2. Existence of Dressed One-Electron States in a Class of Persistent Models, ETH 1972, published in Fortschritte der Physik, *22*, 159-198 (1974).

3. with *J.-P. Eckmann*: Unitary Equivalence of Local Algebras in the Quasi-Free Representation, Annales de l'Inst. Henri Poincaré *20*, 201-209 (1974).

4. Schwinger Functions and Their Generating Functionals, I, Helv. Phys. Acta, *47*, 265-306 (1974).

5. Schwinger Functions and Their Generating Functionals, II, Adv. of Math. *23*, 119-180 (1977).

6. Verification of Axioms for Euclidean and Relativistic Fields and Haag's Theorem in a Class of $P(\phi)_2$ Models, Ann. Inst. H. Poincaré *21*, 271-317 (1974).

7. with *K. Osterwalder*: Is there a Euclidean field theory for Fermions? Helv. Phys. Acta *47*, 781 (1974).

8. The Reconstruction of Quantum Fields from Euclidean Green's Functions at Arbitrary Temperatures, Helv. Phys. Acta *48*, 355-369 (1975); (more details are contained in an unpublished paper, Princeton, Dec. 1974).

9. The Pure Phases, the Irreducible Quantum Fields and Dynamical Symmetry Breaking in Symanzik-Nelson Positive Quantum Field Theories, Annals of Physics *97*, 1-54 (1975).

10. Quantized "Sine-Gordon" Equation with a Non-Vanishing Mass Term in Two Space-Time Dimensions, Phys. Rev. Letters *34*, 833-836 (1975).

11. Classical and Quantum Statistical Mechanics in One and Two Dimensions: Two-Component Yukawa and Coulomb Systems, Commun. Math. Phys. *47*, 233-268 (1976).

12. New Super-Selection Sectors ("Soliton-States") in Two-Dimensional Bose Quantum Field Models, Commun. Math. Phys. *47*, 269-310 (1976).

13. Poetic Phenomena in (Two-Dimensional) Quantum Field Theory: Non-Uniqueness of the Vacuum, the Solitons and All That; in "Les Méthodes Mathématiques de la Théorie Quantique des Champs", F. Guerra, D.W. Robinson, R. Stora (eds.), Editions du C.N.R.S., Paris 1976; p. 111-130.

14. Quantum Sine-Gordon Equation and Quantum Solitons in Two Space-Time Dimensions; in "Renormalization Theory", G. Velo and A.S. Wightman (eds.), Reidel, Dordrecht-Boston 1976, Series C - Math. and Phys. Sciences, Vol. 23, p. 371-414.

15. with *J.-P. Eckmann* and *H. Epstein*: Asymptotic Perturbation Expansion for the S-Matrix and the Definition of Time-Ordered Functions in Relativistic Quantum Field Models, Ann. Inst. H. Poincaré *25*, 1-34 (1976).

16. with *E. Seiler*: The Massive Thirring-Schwinger Model (QED_2): Convergence of Perturbation Theory and Particle Structure, Helv. Phys. Acta *49*, 889-924 (1976).

17. with *B. Simon*: Pure States for General $P(\phi)_2$ Theories: Construction, Regularity and Variational Equality, Ann. Math. *105*, 493-526 (1977).

18. with *B. Simon* and *T. Spencer*; Phase Transitions and Continuous Symmetry Breaking, Phys. Rev. Lett. *36*, 804-806 (1976).

19. with *B. Simon* and *T. Spencer*: Infrared Bounds, Phase Transitions and Continuous Symmetry Breaking, Commun. Math. Phys. *50*, 79-95 (1976).

20. Phase Transitions, Goldstone Bosons and Topological Superselection Rules; Schladming Lectures, 1976, P. Urban (ed.), Acta Physica Austriaca, Suppl. *15*, 133-269, (1976).

20.a Phase Transitions in Two Dimensional Quantum Field Models; ZiF, University of Bielefeld; preprint 1976.

21. with *Y.M. Park*: Remarks on Exponential Interactions and the Quantum Sine-Gordon Equation in Two Space-Time Dimensions, Helv. Phys. Acta *50*, 315-329 (1977).

22. with *W. Driessler*: The Reconstruction of Local Observable Algebras from the Euclidean Green's Functions of a Relativistic Quantum Field Theory, Ann. Inst. H. Poincaré, Section A, *27*, 221-236 (1977).

23. An Introduction to some Topics in Constructive Quantum Field Theory; in "Many Degrees of Freedom in Field Theory", L. Streit (ed.) Plenum Press, New York-London (1978).

24. Application of Commutator Theorems to the Integration of Representations of Lie Algebras and Commutation Relations, Commun. Math. Phys. *54*, 135-150 (1977).

25. with *T. Spencer*: Phase Transitions in Quantum Field Theory and Statistical Mechanics; in "New Developments in Quantum Field Theory and Statistical Mechanics"; M. Lévy and P. Mitter (eds.), Plenum, New York-London (1977).

26. with *E.H. Lieb*: Existence of Phase Transitions for Anisotropic Heisenberg Models, Phys. Rev. Lett. *38*, 440, (1977).

27. with *J. Bellissard* and *B. Gidas*: Soliton Mass and Surface Tension in the $\lambda \mid \vec{\phi} \mid_2^4$ Quantum Field Theory, Phys. Rev. Lett. *38*, 619, (1977).

28. Mathematical Physics of Phase Transitions and Symmetry Breaking; Bulletin of the American Mathematical Society, *84*, 165-193 (1978).

29. with *Y.M. Park:* Correlation Inequalities and the Thermodynamic Limit for Classical and Quantum Continuous Systems, Commun. Math. Phys. *59*, 235-266 (1978).

30. with *J. Bellissard* and *B. Gidas:* Soliton Mass and Surface Tension in the $(\lambda \mid \vec{\phi} \mid^4)_2$ Quantum Field Model, Commun. Math. Phys. *60*, 37-72 (1978).

31. with *E.H. Lieb:* Phase Transitions in Anisotropic Lattice Spin Systems; Commun. Math. Phys. *60*, 233-267 (1978).

32. The Quantum Theory of Non-Linear Invariant Wave (Field) Equations, or: Super Selection Sectors in Constructive Quantum Field Theory; in "Invariant Wave Equations", G. Velo and A.S. Wightman (eds.), Springer Lecture Notes in Physics, *73*, 339-413, Springer-Verlag, Berlin-Heidelberg-New York (1978).

33. Some Frontiers in Constructive Quantum Field Theory and Equilibrium Statistical Mechanics, in "Mathematical Problems in Theoretical Physics"; Proceedings, Rome 1977, G.F. Dell'Antonio, S. Doplicher and G. Jona-Lasinio (eds.), Springer Lecture Notes in Physics *80*, 37-58 (1978), Springer-Verlag, Berlin-Heidelberg-New York (1978).

34. Statistical Mechanics of N-Vector Models and Gauge Theories; Acta Universitatis Wratislavensis, No. *519*, 84-113 (1980). (Karpacz XV, 1978).

35. with *R. Israel, E.H. Lieb* and *B. Simon:* Phase Transitions and Reflection Positivity I. General Theory and Long Range Lattice Models; Commun. Math. Phys. *62*, 1-34, (1978).

36. with *R. Israel, E.H. Lieb* and *B. Simon:* Phase Transitions and Reflection Positivity II. Short Range Lattice Models and Coulomb Systems; J. Stat. Phys. *22*, 297-347 (1980).

37. On the Mathematics of Phase Transitions and Critical Phenomena; Proceedings of the International Congress of Mathematicians, Helsinki 1978, O. Lehto (ed.), Vol. 2, p. 895-904, Academia Scientiarum Fennica, Helsinki (1980).

38. with *D. Brydges* and *E. Seiler:* On the Construction of Quantized Gauge Fields I. General Results; Ann. Phys. (N.Y.) *121*, 227-284 (1979).

39. with *G. Morchio* and *F. Strocchi:* Charged Sectors and Scattering States in Quantum Electrodynamics (QED); Ann. Phys. (N.Y.) *119*, 241-284 (1979).

40. The Charged Sectors of Quantum Electrodynamics in a Framework of Local Observables; Commun. Math. Phys. *66*, 223, (1979).

41. A New Look at Generalized, Non-Linear σ-Models and Yang-Mills Theory, in: "Quantum Fields, Algebras, Processes", L. Streit (ed.), Springer-Verlag, Wien-New York (1980).

42. Confinement in $\mathbb{Z}_n$ Lattice Gauge Theories Implies Confinement in $SU(n)$ Lattice Higgs Theories; Physics Letters *83* B, 195 (1979).

43. with *D. Brydges* and *E. Seiler:* Diamagnetic and Critical Properties of Higgs Lattice Gauge Theories; Nuclear Physics B *152*, 521 (1979).

44. with *D. Brydges* and *E. Seiler:* On the Construction of Quantized Gauge Fields II, Convergence of the Lattice Approximation; Commun. Math. Phys., *71*, 159-205, (1980).

45. with *B. Durhuus:* A Connection Between ν-Dimensional Yang-Mills Theory and $(\nu-1)$-Dimensional, Non-Linear σ-Models; Commun. Math. Phys. *75*, 103-151, (1980).

46. with *T. Spencer:* On the Statistical Mechanics of Coulomb and Dipole Gases; J. Stat. Phys. *24*, 617-701, (1981).

47. with *Y.M. Park:* Correlation Inequalities and the Thermodynamic Limit for Classical and Quantum Continuous Systems II; J. Stat. Phys. *23*, 701-753 (1980).

48. with *G. Morchio* and *F. Strocchi:* Infrared Problem and Spontaneous Breaking of the Lorentz Group in QED; Physics Letters *89* B, 61-64 (1979).

49. *Lectures* on Yang-Mills Theory:

    (a) Random Geometry and Yang Mills Theory; Proceedings of the "Colloquium on Random Fields", Esztergom, Hungary, June 24-30, 1979, Coll. Math. Soc. János Bolyai 27.

    (b) Some Results and Comments on Quantized Gauge Fields; Proceedings of the Cargèse summer school, Cargèse, August 27 - Sept. 7, 1979, "Recent Developments in Gauge Theories", G. 't Hooft et al. (eds.), New York and London: Plenum (1980).

    (c) On the Construction of Quantized Gauge Fields; Proceedings of the Kaiserslautern summer school, Kaiserslautern, August 13-24, 1979, W. Rühl et al. (eds.).

50. with *D. Brydges* and *E. Seiler:* On the Construction of Quantized Gauge Fields III, the Two-Dimensional Higgs Model Without Cutoffs; Commun. Math. Phys. *79*, 353-399, (1981).

51. Unbounded, Symmetric Semigroups on a Separable Hilbert Space are Essentially Selfadjoint; Adv. Appl. Math. *1* , 237-256 (1980).

52. Some Comments on the Crossover Between Strong and Weak Coupling in $SU(2)$ Pure Yang-Mills Theory; Physics Reports *67*, 137-149 (1980).

53. with *M. Aizenman:* States of One-Dimensional Coulomb Systems as Simple Examples of θ-Vacua and Confinement; J. Stat. Phys., *26*, 347-364 (1981).

54. with *G. Morchio* and *F. Strocchi:* Higgs Phenomenon without a Symmetry Breaking Order Parameter; Physics Letters *97* B, 249-252 (1980).

55. with *T. Spencer:* The Kosterlitz-Thouless Transition in the Two-Dimensional Plane Rotator and Coulomb Gas; Phys. Rev. Letters *46*, 1006-1009 (1981).

56. with *T. Spencer:* Phase Diagrams and Critical Properties of (Classical) Coulomb Systems, in "Rigorous Atomic and Molecular Physics", G. Velo and A.S. Wightman (eds.), New York and London: Plenum (1981).

57. with *G. Morchio* and *F. Strocchi:* Higgs Phenomenon without a Symmetry Breaking Order Parameter; Nucl. Physics B *190* [FS 3] 553-582 (1981).

58. Regge Calculus and Discretized, Gravitational Functional Integrals (I.H.É.S preprint 1981), in: "Non-Perturbative Quantum Field Theory", Selected Papers of Jürg Fröhlich, Singapore: World Scientific 1992.

59. with *T. Spencer:* The Kosterlitz-Thouless-Transition in Two-Dimensional Abelian Spin Systems and the Coulomb Gas; Commun. Math. Phys. *81*, 527-602, (1981).

60. with *T. Spencer:* Massless Phases and Symmetry Restoration in Abelian Gauge Theories and Spin Systems; Commun. Math. Phys. *83*, 411-454 (1982).

61. with *T. Spencer:* The Phase Transition in the One-Dimensional Ising Model with Ferromagnetic $1/R^2$-interaction; Commun. Math. Phys. *84*, 87-101 (1982).

62. with *Ch. Pfister:* On the Absence of Spontaneous Symmetry Breaking and of Crystalline Ordering in Two-Dimensional Systems; Commun. Math. Phys. *81*, 277-298, (1981).

63. with *D. Brydges* and *T. Spencer:* The Random Walk Representation of Classical Spin Systems and Correlation Inequalities; Commun. Math. Phys. *83*, 123-150 (1982).

64. On the Triviality of $\lambda\phi_d^4$ Theories and the Approach to the Critical Point in $d \geq 4$-Dimensions; Nucl. Phys. B *200* [FS 4], 281-296 (1982).

65. Constructive and Euclidean Field Theory and Connections to Statistical Mechanics; Physica Scripta *24*, 879-880 (1981).

66. *Lecture Notes*:

    (a) Spontaneously Broken and Dynamically Enhanced Global and Local Symmetries, in: Springer Lecture Notes in Physics, Vol. 160, 117 - 136 (1982).

    (b) Continuum (Scaling) Limits of Lattice Field Theories (Triviality of $\lambda\phi^4$ in d ($\geq$) 4-Dimensions); Proceedings of the Freiburg Meeting, Sept. 1981.

    (c) Results and Problems Near the Interface Between Statistical Mechanics and Quantum Field Theory, in: Springer Lecture Notes in Physics *153*, 64-74 (1982).

    (d) with *T. Spencer:* The Kosterlitz-Thouless Transition, in: Springer Lecture Notes in Physics 153, 15-20 (1982).

67. with *T. Spencer:* Some Recent Rigorous Results in the Theory of Phase Transitions and Critical Phenomena; Séminaire Bourbaki, 34e anné, 1981/82, n° 586, Astérisque *92-93* , 159-200 (1982).

68. with *C.E. Pfister* and *T. Spencer:* On the Statistical Mechanics of Surfaces; Springer Lecture Notes in Physics *173*, 169-199 (1982).

69. with *A. Mardin* and *V. Rivasseau:* Borel Summability of the $^1/N$-Expansion for the N-Vector [0(N) Non-Linear σ]-Models; Commun. Math. Phys. *86*, 87-110 (1982).

70. with *C. Aragão de Carvalho* and *S. Caracciolo*: Polymers and $g \mid \vec{\phi} \mid^4$-Theory in Four Dimensions; Nucl. Phys. B *215* [FS7] 209-148 (1983).

71. with *D. Brydges* and *A. Sokal*: The Random-Walk Representation of Classical Spin System and Correlation Inequalities. II. The Skeleton Inequalities; Commun. Math. Phys. *91*, 117-139 (1983).

72. with *D. Brydges* and *A. Sokal*: A New Proof of the Existence and Non-Triviality of the Continuum ϕ_2^4 and ϕ_3^4 Quantum Field Theories; Commun. Math. Phys. *91*, 141-186 (1983).

73. with *D. Ruelle*: Statistical Mechanics of Vortices in an Inviscid Two-Dimensional Fluid; Commun. Math. Phys. *87*, 1-36 (1982).

74. with *K. Osterwalder* and *E. Seiler*: On Virtual Representations of Symmetric Spaces and Their Analytic Continuation; Ann. Math. *118*, 461-489 (1983).

75. with *T. Spencer*: Absence of Diffusion in the Anderson Tight Binding Model for Large Disorder or Low Energy; Commun. Math. Phys. *88*, 151-184 (1983).

76. with *C. Constantinescu* and *T. Spencer*: Analyticity of the Density of States and Replica Method for Random Schrödinger Operators on a Lattice; J. Stat. Phys. *34*, 571-596 (1984).

77. with *J. Bricmont*: An Order Parameter Distinguishing Between Different Phases of Lattice Gauge Theories with Matter Fields; Phys. Lett. *122* B, 73-77 (1983).

78. with *T. Spencer*: The Berezinskii-Kosterlitz-Thouless Transition, in "Scaling and Self-Similarity in Physics", J. Fröhlich (ed.), Progress in Physics; Basel and Boston: Birkhäuser, 1983.

79. with *C.E. Pfister*: Spin Waves, Vortices and the Structure of Equilibrium States in the Classical XY Model; Comm. Math. Phys. *89*, 303-327 (1983).

80. with *T. Spencer*: A Rigorous Approach to Anderson Localization; Physics Reports *103*, 9-25 (1984).

80.a with *T. Spencer*; Existence of localized states for random Schrödinger operators on $\mathbb{Z}^d$; preprint 1985 (handwritten notes).

81. with *M. Aizenman, J.T. Chayes, L. Chayes* and *L. Russo*: On a sharp Transition from Area Law to Perimeter Law in a System of Random Surfaces; Comm. Math. Phys. *92*, 19-69 (1983).

82. with *M. Aizenman*: Topological Anomalies in the n-Dependence of the n-States Potts Lattice Gauge Theory; Nucl. Phys. B *235* [FS 11] 1-18 (1984).

83. with *B. Durhuus* and *T. Jónsson*: Self-Avoiding and Planar Random Surfaces on the Lattice; Nucl. Phys. B *225* [FS 9] 185-203 (1983).

84. with *A. Bovier* and *G. Felder*: On the Critical Properties of the Edwards- and the Self-Avoiding Walk Model of Polymer Chains; Nucl. Phys. B *230* [FS 10] 119-147 (1984).

85. with *J. Bricmont*: Defect Free Energies in Lattice Gauge Theories with Matter Fields; Nucl. Phys. B *230* [FS 10] 407-434 (1984).

86. with *D.S. Fisher* and *T. Spencer*: The Ising Model in a Random Magnetic Field; J. Stat. Phys. *34*, 863-870 (1984).

87. with *T. Spencer*: Mathematical Theory of Anderson Localisation; Proceedings of the I.A.M.P. conference at Boulder, August 1983; Physica *124* A, 303-310 (1984).

88. Quantum Field Theory in Terms of Random Walks and Random Surfaces; Proceedings of the Summer School in Theoretical Physics at Gargèse, September 1983, "Progress in Gauge Field Theory", G. 't Hooft et al. (eds.), New York - London: Plenum Press 1984.

89. with *B. Durhuus* and *T. Jónsson*: Critical Properties of a Model of Planar Random Surfaces; Phys. Lett. *137* B, 93-97 (1984).

90. with *B. Durhuus* and *T. Jónsson*: Critical Behaviour in a Model of Planar Random Surfaces; Nucl. Phys. B *240* [FS 12] 453-480 (1984).

91. with *G. Felder*: Intersection Properties of Simple Random Walks: A Renormalization Group Approach; Commun. Math. Phys. *97*, 111-124 (1985).

92. with *J. Imbrie*: Improved Perturbation Expansion for Disordered Systems: Beating Griffiths Singularities; Commun. Math. Phys. *96*, 145-180 (1984).

93. with *J. Bricmont*: Statistical Mechanical Methods in Particle Structure Analysis of Lattice Field Theories, Part I; Nucl. Phys. B *251* [FS 13] 517-552 (1985).

94. with *J. Bricmont*: Statistical Mechanical Methods in Particle Structure Analysis of Lattice Field Theories, Part II; Commun. Math. Phys. *98*, 553-578 (1985).

95. The Statistical Mechanics of Surfaces, in: Springer Lecture Notes in Physics, vol. *216*, 31-57 (1985); L. Garrido (ed.); Proceedings Sitges Conference, June 1984.

95.a Statistical Mechanics of Random Surfaces, Lecture given at the XXIII. International Universitätswochen für Kernphysik, Schladming, Austria, Feb. 20 – Mar. 1, 1984; Acta Physica Austriaca, Suppl. XXVI, 255–257 (1984).

96. with *Dale A. Huckaby*: Percolation in Hard-Core Lattice Gases and a Model Ferrofluid; J. Stat. Phys. *38*, 809-821 (1985).

97. with *J.T. Chayes* and *L. Chayes*: The Low Temperature Behaviour of Disordered Magnets; Commun. Math. Phys. *100*, 399-437 (1985).

98. with *J. Ambjørn* and *B. Durhuus*: Diseases of Triangulated Random Surface Models, and Possible Cures; Nucl. Phys. B *257* [FS 14] 433-449 (1985).

99. with *A.C.D. van Enter*: Absence of Symmetry Breaking for N-Vector Spin Glass Models in Two Dimensions; Commun. Math. Phys. *98*, 425-432 (1985).

100. Mathematical Aspects of the Physics of Disordered Systems; Lectures presented at the Les Houches summer school, Aug./Sept. 1984; K. Osterwalder and R. Stora (eds.), Elsevier Science Publ. B. V., 1986.

101. with *F. Martinelli, E. Scoppola* and *T. Spencer*: Constructive Proof of Localization in the Anderson Tight Binding Model; Commun. Math. Phys. *100*, 21-46 (1985).

102. with *B. Durhuus* and *T. Jónsson*: Reflection Positivity and Tree Inequalities in a Theory of Planar Random Surfaces; Nucl. Phys. B *257* [FS 14] 779-798 (1985).

103. Survey of Random Surface Theory, in: "Recent Developments in Quantum Field Theory"; J. Ambjørn, B.J. Durhuus and J.L. Petersen (eds.), Elsevier Science Publishers P.V., 1985.

104. with *T. Spencer* and *C.E. Wayne*: Localization in Disordered, Non-Linear Dynamical Systems; J. Stat. Phys. *42*, 247-274 (1986).

105. with *T. Spencer* and *C.E. Wayne*: An Invariant Torus for Nearly Integrable Hamiltonian Systems with Infinitely Many Degrees of Freedom; Proceedings of the International Conference on "Stochastic Processes in Classical and Quantum Systems", Ascona 1985; S. Albeverio and D. Merlini (eds.), Springer Lecture Notes in Physics, vol. 262. p. 256.

106. with *E.H. Lieb* and *M. Loss*: Stability of Coulomb Systems with Magnetic Fields: I. The One-Electron Atom; Commun. Math. Phys. *104*, 251-270 (1986).

107. with *J. Bricmont* and *A. El Mellouki*: Random Surfaces in Statistical Mechanics: Roughening, Rounding, Wetting ...; J. Stat. Phys. *42*, 743-798 (1986).

108. with *D. Brydges, B. Durhuus* and *C. Giffen*: Surface Representations of Wilson Loop Expectations in Lattice Gauge Theory; Nucl. Phys. B *275* [FS 17] 459-487 (1986).

109. with *A. Bovier*: A Heuristic Theory of the Spin Glass Phase; J. Stat. Phys. *44*, 347-391 (1986).

110. with *C.-E. Pfister*: Absence of Crystalline Ordering in Two Dimensions; Commun. Math. Phys. *104*, 697-700 (1986).

111. with *C.-E. Pfister*: Classical Spin Systems in the Presence of a Wall: Multicomponent Spins; Commun. Math. Phys. *107*, 337-356 (1986).

112. with *J. Ambjørn, B. Durhuus* and *P. Orland*: The Appearance of Critical Dimensions in Regulated String Theories; Nucl. Phys. B *270* [FS 16] (1986).

113. with *J. Bricmont*: Statistical Mechanical Methods in Particle Structure Analysis of Lattice Field Theories: III. Confinement and Bound States in Gauge Theories; Nucl. Phys. B *280* [FS 18] 385-444 (1987).

114. with *B. Zegarlinski*: The Disordered Phase of Long-Range Ising Spin Glasses; Europhysics Letters *2*, 53-60 (1986).

115. with *B. Zegarlinski*: The High-Temperature Phase of Long-Range Spin Glasses; Commun. Math. Phys. *110*, 121-155 (1987).

116. with *A. Bovier* and *U. Glaus*: Lines and Domain Walls in Dilute Ferromagnets; Phys. Rev. B *34*, 6409-6414 (1986).

117. with *J. Ambjørn* and *B.Durhuus*: The Appearance of Critial Dimensions in Regulated String Theories II; Nucl. Phys. B *275*, 161-184 (1986).

118. with *P.A. Marchetti*: Magnetic Monopoles and Charged States in Four-Dimensional, Abelian Lattice Gauge Theories; Europhysics Letters *2*, 933-940 (1986).

119. with *C.-E. Pfister*: The Wetting and Layering Transitions in the Half-Infinite Ising Model; Europhysics Letters *3*, 845-852 (1987).

120. with *C.-E. Pfister*: Semi-Infinite Ising Model. I, Thermodynamic Functions and Phase Diagram in Absence of Magnetic Field; Commun. Math. Phys. *109*, 493-523 (1987).

121. with *C.-E. Pfister*: Semi-Infinite Ising Model. II, The Wetting and Layering Transitions; Commun. Math. Phys. *112*, 51-74 (1987).

122. with *P.A. Marchetti*: Soliton Quantization in Lattice Field Theories; Commun. Math. Phys. *112*, 343-383 (1987).

123. with *C. King*: Meson Masses and the $U(1)$ Problem in Lattice QCD; Nucl. Phys. B *290* [FS 20] 157-187 (1987).

124. with *R. Fernandez* and *A. Sokal*: Random Walks Critical Phenomena, and Triviality in Quantum Field Theory, Texts and Monographs in Physics, Berlin-Heidelberg-New York: Springer-Verlag 1991.

125. with *B. Zegarlinski*: Some Comments on the Sherrington-Kirkpatrick Model of Spin Glasses; Commun. Math. Phys. *112*, 553-566 (1987).

126. with *P.A. Marchetti*: Bosonization, Topological Solitons and Fractional Charges in Two-Dimensional Quantum Field Theory; Commun. Math. Phys. *116*, 127-173 (1988).

127. with *C. Albanese*: Periodic Solutions of Some Infinite-Dimensional Hamiltonian Systems Associated with Non-Linear Partial Difference Equations I; Commun. Math. Phys. *116*, 475-502 (1988).

128. Phasenumwandlungen: Statische und Dynamische Aspekte; Wissenschaftskonferenz Berlin 1987, in: ”Phasensprünge und Stetigkeit in der natürlichen und kulturellen Welt”, K. Hierholzer und H.-G. Wittman (Hrsg.); Wissensch. Verlagsges.m.b.H. Stuttgart, 1988.

129. Statistics of Fields, the Yang-Baxter Equation, and the Theory of Knots and Links, in: ”Non-perturbative Quantum Field Theory”, G. ’t Hooft et al. (eds.), New York: Plenum 1988.

130. with *T. Spencer* and *P. Wittwer*: Localization for a Class of One-Dimensional Quasi-Periodic Potentials, Commun. Math. Phys. *132*, 5-25 (1990).

131. with *C. Albanese* and *T. Spencer*: Periodic Solutions of Some Infinite-Dimensional Hamiltonian Systems Associated with Non-Linear Partial Difference Equations, II; Commun. Math. Phys. *119*, 677-699 (1988).

132. with *G.-C. Benettin* and *A. Giorgilli*: A Nekhoroshev-Type Theorem for Hamiltonian Systems with Infinitely Many Degrees of Freedom; Commun. Math. Phys. *119*, 95-108 (1988).

133. with *J. Ambjørn, B. Durhuus* and *T. Jónsson*: Regularized Strings with Extrinsic Curvature; Nucl. Phys. B *290* [FS 20] 480-506 (1987).

134. Statistics and Monodromy in Two- and Three-Dimensional Quantum Field Theory, in: "Differential Geometrical Methods in Theoretical Physics", K. Bleuler and M. Werner (eds.); Kluwer Academic Publ., Dordrecht, 1988.

135. with *P.A. Marchetti*: Quantum Field Theory of Anyons; Letters in Math. Phys. *16*, 347-358 (1988).

136. with *P.A. Marchetti*: Quantum Field Theory of Vortices and Anyons; Commun. Math. Phys. *121*, 177-223 (1989).

137. On the Structure of (Unitary) Rational Conformal Field Theory; Proceedings of the LAPP meeting on Conformal Field Theory, Nucl. Phys. B (Proc. Suppl.) *5* B, 110-118 (1988).

138. with *J. Ambjørn, B. Durhuus* and *T. Jónsson*: A Renormalization Group Analysis of Lattice Models of Two-Dimensional Membranes; J. Stat. Phys. *55*, 29-85 (1988).

139. with *B. Zegarlinski*: Spin Glasses and other Lattice Systems with Long Range Interactions; Commun. Math. Phys. *120*, 665-688 (1989).

140. New Developments in Quantum Field Theory; Proceedings of the XXIV Intl. Conference on High Energy Physics, Munich 1988; R. Kotthaus, J.H. Kühn (eds.), Berlin, Heidelberg, New York: Springer-Verlag 1989.

141. with *G. Felder* and *G. Keller*: On the Structure of Unitary Conformal Field Theory I: Existence of Conformal Blocks; Commun. Math. Phys. *124*, 417-463 (1989).

142. with *G. Felder* and *G. Keller*: Braid Matrices and Structure Constants for Minimal Conformal Models; Commun. Math. Phys. *124*, 647-664 (1989).

143. with *C. King*: The Chern-Simons Theory and Knot Polynomials; Commun. Math. Phys. *126*, 167-199 (1989).

144. with *C. King*: Two-Dimensional Conformal Field Theory and Three-Dimensional Topology; Proc. of Erice summer school 1988; G. Velo and A.S. Wightman (eds.), J. Mod. Phys. A, Vol. 4, No. 20 (1989) 5321-5399.

145. with *G. Felder* and *G. Keller*: On the Structure of Unitary Conformal Field Theory II: Representation Theoretic Approach; Commun. Math. Phys. *130*, 1-49 (1990).

146. with *F. Gabbiani* and *P.A. Marchetti*: Superselection Structure and Statistics in Three-Dimensional Quantum Field Theory; Proc. 13th John Hopkins Workshop on "Current Problems in High Energy Particle Theory", L. Lusanna (ed.), World Scientific 1989.

147. with *P.A. Marchetti*: Quantum Skyrmions; Nuclear Physics B *335*, 1-22 (1990).

148. with *Ch. Borgs* and *R. Waxler*: The Phase Structure of the Large n Lattice Higgs Model; Nuclear Physics B *328* (1989) 611-638.

149. with *F. Gabbiani* and *P.A. Marchetti*: Braid Statistics in Three-Dimensional Local Quantum Theory, in "Algebraic Theory of Superselection Sectors and Field Theory", D. Kastler (ed.), World Scientific 1990.

150. with *P.A. Marchetti*: Superselection Sectors in Quantum Field Models: Kinks in ϕ_2^4 and Charged States in Lattice (Q.E.D.) D. Kastler (ed.), World Scientific 1990.

151. Quantum Statistics and Locality, proceedings of The Gibbs Symposium, Yale University, May 15-17 1989, AMS Publ. 1990.

152. with *M. Struwe*: Variational Problems on Vector Bundles; Commun. Math. Phys. *131*, 431-464 (1990).

153. with *F. Gabbiani*: Braid Statistics in Local Quantum Theory, Rev. Math. Phys. *2*, 251-353 (1990).

154. with *B. Zegarlinski*: The Phase Transition in the Discrete Gaussian Chain with $1/r^2$-Interaction Energy, J. Stat. Phys. *63*, 455-485 (1991).

155. with *C. Albanese*: Perturbation Theory for Periodic Orbits in a Class of Infinite Dimensional Hamiltonian Systems, Commun. Math. Phys. *138*, 193-205 (1991).

156. with *T. Kerler*: Universality in Quantum Hall Systems, Nucl. Phys. B*354*, 369-417 (1991).

157. with *P.A. Marchetti*: Spin-Statistics Theorem and Scattering in Planar Quantum Field Theories with Braid Statistics, Nucl. Phys. B *356*, 533-573 (1991).

158. with *A. Zee*: Large-Scale Physics of the Quantum Hall Fluids, Nucl. Phys. B *364*, 517-540 (1991).

159. with *T. Kerler* and *P.A. Marchetti*: Non-Abelian Bosonization in Two-Dimensional Condensed Matter Physics, Nucl. Phys. B *374*, 511-542 (1992).

160. with *U.M. Studer*: U(1)×SU(2)-Gauge Invariance of Non-Relativistic Quantum Mechanics, and Generalized Hall Effects, Commun. Math. Phys. *148*, 553-600 (1992).

161. with *U.M. Studer*: Gauge-Invariance in Non-Relativistic Many-Body Theory, Proc. of I.A.M.P. congress, Leipzig 1991, in: Mathematical Phycics X, K. Schmüdgen (ed.), Berlin-Heidelberg-New York: Springer-Verlag, 1992; also published in: Intl. J. Modern Physics B *6*, 2201-2208 (1992).

162. with *A.H. Chamseddine*: Two-Dimensional Lorentz-Weyl Anomaly and Gravitational Chern-Simons Theory, Commun. Math. Phys. *147*, 549-562 (1992).

163. with *U.M. Studer*: Incompressible Quantum Fluids, Gauge Invariance, and Current Algebra, in: New Symmetry Principles in Quantum Field Theory, J. Fröhlich et al. (eds.), New York: Plenum Press 1992.

164. with *P.A. Marchetti*: Slave Fermions, Slave Bosons and Semions from Bosonization of the Two-Dimensional *t*-*J* Model, Phys. Rev. B *46*, N° 10, 6535-6552 (1992).

165. with *F. Gabbiani*: Operator Algebras and Conformal Field Theory, Commun. Math. Phys. *155*, 569-640 (1993).

166. with *T. Kerler*: Quantum Groups, Quantum Categories and Quantum Field Theory, Lecture Notes in Mathematics, vol. 1542, Berlin-Heidelberg-New York: Springer-Verlag 1993.

167. with *G. Felder* and *A.H. Chamseddine*: Gravity in Non-Commutative Geometry, Commun. Math. Phys. *155*, 205-217 (1993).

168. with *G. Felder* and *A.H. Chamseddine*: Unified Gauge Theories in Non-Commutative Geometry, Phys. Lett. B *296*, 109-116 (1992).

169. with *G. Felder* and *A.H. Chamseddine*: Grand Unification in Non-Commutative Geometry, Nucl. Phys. B *395*, 672-698 (1993).

170. with *A.H. Chamseddine*: Particle Physics Models, Grand Unification and Gravity in Non-Commutative Geometry, World Scientific Series in 20th Century Physics - Vol. 4, p. 523–539 (A. Ali, J. Ellis, S. Randjbar-Daemi (eds)), Salamfestschrift ICTP, Trieste, Italy 8–12 March 1993.

171. Mathematical Aspects of the Quantum Hall Effect, Proceedings of ECM, Paris, July 6-10, 1992, Birkhäuser Verlag.

172. with *U.M. Studer*: Gauge Invariance and Universality in Incompressible Quantum Hall Fluids, Proceedings of the CTS workshop No. 2 (Prague, June 1-5, 1992).

173. with *U.M. Studer*: Gauge Invariance and Current Algebra in Non-Relativistic Many-Body Theory, Rev. Mod. Phys. *65*, 733-802 (1993).

174. with *A.H. Chamseddine*: Constraints on the Higgs and top quark masses from effective potential and non-commutative geometry, Phys. Lett. B *314*, 308-314 (1993).

175. with *A.H. Chamseddine*: SO(10) Unification in Non-Commutative Geometry, Phys. Rev. D *59*, 2893-2907 (1994).

176. with *J.-M. Richard, G.-M. Graf* and *M. Seifert*: Proof of Stability of the Hydrogen Molecule, Phys. Rev. Lett. *171*, 1332-1334 (1993).

177. with *E. Thiran*: "Integral Quadratic Forms, Kac-Moody Algebras, and Fractional Quantum Hall Effect. An $ADE - \mathcal{O}$ Classification", J. Stat. Phys. *76*, 209–283 (1994).

178. with *C. Albanese*: Dynamic Binding of Holes in Doped Antiferromagnets, unpublished.

179. with *A.H. Chamseddine*: The Chern-Simons Action in Non-commutative Geometry, J. Math. Phys. *35*, 5195–5218 (1994).

180. with *U.M. Studer* and *E. Thiran*, An ADE-$\mathcal{O}$ Classification of Minimal Incompressible Qauntum Hall Fluids, in: On Three Levels, M. Fannes et al. (eds.), Plenum Press, New York 1994.

181. with *K. Gawȩdzki*, Conformal Field Theory and Geometry of Strings, in: Proceedings of the Conference on Mathematical Quantum Theory (Vancouver B.C. 1993), J. Feldman, R. Froese and L. Rosen (eds.), Centre de Recherches Mathématiques – Proceedings and Lecture Notes, vol. 7, 57–97 (1994).

182. with *A.H. Chamseddine*, Some Elements of Connes' Non-Commutative Geometry, and Space-Time Geometry, in: Chen Ning Yang, a Great Physicist of the Twentieth Century, C.S. Liu and S.-T. Yau (eds.), pp 10–34, International Press, Boston 1995.

183. with *R. Götschmann* and *P.-A. Marchetti*, Bosonization of Fermi Systems in Arbitrary Dimension in Terms of Gauge Forms, J. Phys. A *28*, 1169–1203 (1995).

184. with *R. Götschmann* and *P.-A. Marchetti*, The Effective Gauge Field Action of a System of Non-Relativistic Electrons, Commun. Math. Phys. *173*, 417-452 (1995).

185. The Non-Commutative Geometry of Two-Dimensional Supersymmetric Conformal Field Theory, in: PASCOS (Proc. of the Fourth Intl. Symp. on Particles, Strings and Cosmology), K.C. Wali (ed.), pp. 443–452, World Scientific Publ. Co., Singapore 1995.

186. with *V. Bach* and *I.M. Sigal*, Mathematical Theory of Nonrelativistic Matter and Radiation, Lett. Math. Phys. *34*, 183–201 (1995).

187. with *A.H. Chamseddine* and *O. Grandjean*, The Gravitational Sector in the Connes-Lott Formulation of the Standard Model, J. Math. Phys. *36*, 6255-6275 (1995).

188. with *P. Pfeifer*, Generalized Time-Energy Uncertainty Relations and Bounds on Life Times of Resonances, Rev. Mod. Phys. Vol. *67*, No. 4, 759–779 (1995).

189. with *T. Kerler, U.M. Studer* and *E. Thiran*, Structuring the Set of Incompressible Quantum Hall Fluids, Nucl. Phys. B *453* [FS], 670-704 (1995).

190. with *U.M. Studer* and *E. Thiran*, A Classification of Quantum Hall Fluids, J. Stat. Phys. *86*, 821–897 (1997).

191. with *M. Leupp* and *U.M. Studer*, A Variational Problem for a System of Magnetic Monopoles Joined by Abrikosov Vortices, Commun. Math. Phys. *181*, 447–483 (1996).

192. with *N. Datta* and *R. Fernandez*, Low-temperature Phase Diagrams of Quantum Lattice Systems. I. Stability for Quantum Perturbations of Classical Systems with Finitely Many Ground States, in J. Stat. Phys., Vol. *84*, Nos. 3+4, 455–534 (1996).

193. with *U.M. Studer* and *E. Thiran*, Quantum Theory of Large Systems of Non-Relativistic Matter, proceedings of Les Houches 62: Fluctuating Geometries in Statistical Mechanics and Field Theory, F. David, P. Ginsparg and J. Zinn-Justin (eds.), Elsevier Science, Amsterdam 1995.

194. with *T. Chen* and *M. Seifert*, Renormalization Group Methods: Landau-Fermi Liquid and BCS Superconductor, proceedings of Les Houches 62: Fluctuating Geometries in Statistical Mechanics and Field Theory, F. David, P. Ginsparg and J. Zinn-Justin (eds.), Elsevier Science, Amsterdam 1995.

195. The Fractional Quantum Hall Effect, Chern-Simons Theory, and Integral Lattices, in: Proc. of ICM'94, S.D. Chatterji (ed.), Basel, Boston, Berlin: Birkhäuser Verlag 1995.

196. with *A.S. Cattaneo, P. Cotta-Ramusino* and *M. Martellini*, Topological BF Theories in Three and Four Dimensions, J. Math. Phys. *36* (11), 6137–60 (1995).

197. with *Luca Bugliaro Goggia* and *Gian Michele Graf*, Stability of Quantum Electrodynamics with Non-relativistic Matter, Phys. Rev. Letters, *77*, 3494–3497 (1996).

198. with *A.Yu. Alekseev, L D. Faddeev* and *V. Schomerus*, Representation Theory of Lattice Current Algebras; Commun. Math. Phys. *191*, 31–60 (1998).

199. with *Nilanjana Datta, Roberto Fernandez* and *Luc Rey-Bellet*, Low-Temperature Phase Diagrams of Quantum Lattice Systems. II. Convergent Perturbation Expansions and Stability in Systems with Infinite Degeneracy, Helv. Physica Acta *69*, 752–820 (1996).

200. with *Luc Rey-Bellet*, Low-Temperature Phase Diagrams of Quantum Lattice Systems. III. Examples, Helv. Physica Acta *69*, 821–849 (1996).

201. with *Roland Götschmann*, Bosonization of Fermi Liquids, Phys. Rev. B *55*, 6788–6815 (1997).

202. with *Volker Bach* and *Israel M. Sigal*, Quantum Electrodynamics of Confined Non-Relativistic Particles, Adv. Math. *137*, 299 - 395 (1998).

203. with *Volker Bach* and *Israel M. Sigal*, Renormalization Group Analysis of Spectral Problems in Quantum Field Theory, Adv. Math. *137*, 205 - 298 (1998).

204. with *Volker Bach, Israel M. Sigal* and *Avy Soffer*, Positive Commutators and Spectrum of Pauli-Fierz Hamiltonian of Atoms and Molecules; Commun. Math. Phys. *207*, 557–587 (1999).

205. with *V. Bach* and *I.M. Sigal*, Mathematical Theory of Radiation; Foundations of Physics, Vol. 27, No. 2 (p. 227–237) 1997.

206. with *C. Fefferman* and *G.M. Graf*, Stability of Ultraviolet Cutoff Quantum Electrodynamics with Non-Relativistic Matter, Commun. Math. Phys.*190*, 309–330 (1997).

207. with *L. Bugliaro, C. Fefferman, G.M. Graf* and *J. Stubbe*, A Lieb-Thirring Bound for a Magnetic Pauli Hamiltonian; Commun. Math. Phys. *187*, 567-582 (1997).

208. with *A. Alekseev* and *V. Cheianov*, Comparing Conductance Quantization in Quantum Wires and Quantum Hall Systems, Phys. Rev. B *54*, R17320–R17322 (1997).

209. with *O. Grandjean* and *A. Recknagel*, Supersymmetric Quantum Theory and Differential Geometry, Commun. Math.Phys. *193*, 527–594 (1998).

210. with *O. Grandjean* and *A. Recknagel*, Supersymmetric Quantum Theory and Non-Commutative Geometry, Preprint ETH + IHES 1998, Commun. Math. Phys. *203*, 119–184 (1999).

211. with *J. Hoppe*, On Zero-Mass Ground States in Super-Membrane Matrix Models, Commun. Math. Phys. *191*, 613–626 (1998).

212. with *O. Grandjean* and *A. Recknagel*, Supersymmetry, Non-Commutative Geometry and Gravitation, Proceedings of the Les Houches Summer School 1995, A. Connes, K. Gawędzki and J. Zinn-Justin (eds.), Elsevier (1998).

213. with *O. Grandjean* and *A. Recknagel*, Supersymmetry and Non-Commutative Geometry, in "Quantum Fields and Quantum Space Time"; Proceedings of the Cargèse Summer School, 1996, G. Mack et al. (eds.), Reidel, New York (1997).

214. with *Ch. Borgs* and *J. Chayes*, Dobrushin States in Quantum Lattice Systems; Commun. Math. Phys. *189*, 591–619 (1997).

215. with *Ch. Borgs* and *J. Chayes*, Dobrushin States for Classical Spin Systems with Complex Interactions; J. Stat. Phys. *89*, 895–928 (1997).

216. The Geometrization Principle, in: "Deformation Theory and Symplectic Geometry", D. Sternheimer et al. (eds.), pp 67-68, Kluwer, Amsterdam (1997).

217. The Electron is Inexhaustible, Proceedings of the Princeton Symposium (250th anniversary of Princeton University, 1996), AMS Publ. 1999; erscheint auch in 221.

218. with *A.Yu. Alekseev.* and *V.V. Cheianov*, "Universality of Transports Properties in Equilibrium, the Goldstone Theorem, and Chiral Anomaly", Phys. Rev. Letters *81*, 3503–3506 (1998).

219. "Transport in Thermal Equilibrium, Gapless Modes, and Anomalies", in: "Les Relations entre les Mathématiques et la Physique Théorique", L. Michel (ed.), Publ. I.H.É.S., Presses Universitaires de France, Paris 1998.

220. "The Electron is Inexhaustible", proceedings of the Les Houches summer workshops, C. DeWitt-Morette and J.-B. Zuber (eds.), 1999 American Phys. Soc. *17–44* (slightly revised version of 217).

221. with *N. Datta* and *R. Fernandez*, "Effective Hamiltonians and Phase Diagrams for Tight–Binding Models", J. Stat. Phys. Vol. *96*, Nos. 3/4,545–812 (1999).

222. with *P.A. Marchetti*, "Gauge- Invariant Charged-, Monopole- and Dyon Fields in Gauge Theories", Nucl. Phys. B *511*, 770–812 (1999).

223. with *V. Bach* and *I.M. Sigal*, "Spectral Analysis for Systems of Atoms and Molecules Coupled to the Quantized Radiation Field", Commun. Math. Phys. *207*, 249–290 (1999).

224. with *G.M. Graf, D. Hasler, J. Hoppe* and *S.T. Yau*, "Asymptotic Form of Zero Energy Wave Functions in Supersymmetric Matrix Models", Nucl. Phys. B *567*, 231–248 (2000).

225. with *G.M. Graf* and *J. Walcher*, "On the Extended Nature of Edge States of Quantum Hall Hamiltonians", Annales Henri Poincaré *1*, 405–442 (2000).

226. with *G. Felder, J. Fuchs* and *Chr. Schweigert*, "The Geometry of WZW Branes", J. Geom. and Phys. *34*, 169–190 (2000).

227. with *G. Felder, J. Fuchs* and *Chr. Schweigert*, "Conformal Boundary Conditions and Three-Dimensional Topological Field Theory", Phys. Rev. Lett. *84*, 1659–1662 (2000).

228. with *G. Felder, J. Fuchs* and *Chr. Schweigert*, "Correlation Functions and Boundary Conditions in Rational Conformal Field Theory from Three-Dimensional Topology", Compositio Mathematica *131*; 189–237, 2002.

229. with *O. Grandjean, A. Recknagel* and *V. Schomerus*, "Fundamental strings in Dp–Dq brane systems", Nucl. Phys. B 583 (2000) 381–410.

230. with *V. Bach* and *I.M. Sigal*, "Return to Equilibrium", J. Math. Phys. *41*, 3985–4060 (2000).

231. with *T.-P. Tsai* and *H.-T. Yau*, "On a Classical Limit of Quantum Theory and the Non-Linear Hartree Equation", GAFA – Special Volume GAFA 2000, 57–78 (2000), (proceedings of the conferences "Visions in Mathematics", Tel Aviv, 1999,) and "Conférence Moshé Flato" (Dijon, 1999).

232. with *B. Pedrini*, "New Applications of the Chiral Anomaly", in: "Mathematical Physics 2000", A. Fokas, A. Grigoryan, T. Kibble and B. Zegarlinski (eds.), Imperial College Press, London and Singapore, 2000, pp. 9–47.

233. with *B. Pedrini, Chr. Schweigert* and *J. Walcher*, "Universality in Quantum Hall Systems: Coset Construction of Incompressible States", J. Stat. Phys., *103*, 527–567 (2001).

234. with *P.-A. Marchetti*, "Order Parameter Reconciling Abelian and Center Dominance in SU(2) Yang-Mills Theory", Phys. Rev. D *64*, 14505-1–14505-14 (2001).

235. with *T.-P. Tsai* and *H.-T. Yau*, "On the Point-Particle (Newtonian) Limit of the Non-Linear Hartree Equation", Commun. Math. Phys. *225*, 223–274 (2002).

236. with *M. Griesemer* and *B. Schlein*, "Asymptotic Electromagnetic Fields in a Model of Quantum-Mechanical Matter Interacting with the Quantized Radiation Field", Adv. Math. *167*, (2002).

237. with *L. Rey-Bellet* and *D. Ueltschi*, "Quantum Lattice Models at Intermediate Temperature", Commun. Math. Phys. *224*, 33–63 (2001).

238. with *M. Griesemer* and *B. Schlein*, "Asymptotic completeness for Rayleigh scattering", Ann. Henri Poincaré (2001).

239. with *M. Griesemer* and *B. Schlein*, "Asymptotic completeness of Compton Scattering", Commun. Math. Phys. (2003).

240. with *W.H. Aschbacher, G.M. Graf, K. Schnee* and *M. Troyer*, "Symmetry breaking regime in the nonlinear Hartree equation"; J. Math. Phys. *43*, 8 (2002).

241. "Ein Blick zurück, ein Blick nach vorn" (Max-Planck Medaille 2001), Physikalische Blätter *57*, 53–58 (2001).

242. with *P.A. Marchetti*, "Monopole fields from vortex sheets, reconciling abelian and center dominance", proceedings of "Lattice 2001", F. Jegerlehner et al. (eds.)

243. with *Bill Pedrini*, "Axions, quantum mechanical pumping, and primeval magnetic fields", proceedings of "Statistical Field Theory", Como, June 2001, A. Cappelli and G. Mussardo (eds.), New York and Amsterdam: Kluwer 2002.

244. with *A. Cattaneo* and *B. Pedrini*, "Topological field theory interpretation of string topology", Commun. Math. Phys. *240*, 397-421 (2003).

245. with *L. Birke*, "KMS, ETC.", Rev. Math. Phys. *14*, 829/871 (2002).

246. with *V. Bach, T. Chen* and *I.M. Sigal*, "Smooth Feshbach map and operator-theoretic renormalization group methods", J. Funct. Anal (2003).

247. Mathematical Results on Atomic Spectroscopy, proceedings of the Heisenberg Centennial (Munich, Dec. 2001), 2004.

248. with *Thomas Chen* and *Johannes Walcher*, "The Decay of Unstable Noncommutative Solitons", Commun. Math. Phys. *237*, 243-269 (2003).

249. with *Marco Merkli* and *Daniel Ueltschi*, "Dissipative Transport: Thermal Contacts and Tunnelling Junctions", Ann. H. Poincaré 4, 897-945 (2003).

250. with *Marco Merkli, Simon Schwarz* and *Daniel Ueltschi*, "Statistical Mechanics of Thermodynamic Processes", in: "A Garden of Quanta" (Essays in Honor of Hiroshi Ezawa), J. Arafune et al. (eds.), London, Singapore, Hong Kong: WorldScientific 2003

251. with *Jürgen Fuchs, Ingo Runkel* and *Christoph Schweigert*, "Correspondences of Ribbon Categories", Adv. Math. (2005)

252. with *Jürgen Fuchs, Ingo Runkel* and *Christoph Schweigert*, "Algebras in Tensor Categories and Coset Conformal Field Theories", Proc. of Arenshoop Workshop, 2003

253. with *Jürgen Fuchs, Ingo Runkel* and *Christoph Schweigert*, "Kramers-Wannier duality from conformal defects", Phys. Rev. Letters 93, 2004

254. with *Jürgen Fuchs, Ingo Runkel* and *Christoph Schweigert*, "Picard groups in rational conformal field theory", Contemporary Math, 2005

255. with *Marco Merkli*, "Thermal Ionization", Mathematical Physics, Anlaysis and Geometry *7*, 239-287 (2004)

256. with *Marco Merkli* and *Israel Michael Sigal*, "Ionization of Atoms in a Thermal Field", J. Stat. Phys. *116*, 311-359 (2004).

257. with *Marco Merkli*, "Another Return of 'Return to Equilibrium'", Commun. Math. Phys. *251*, 235-262 (2004)

258. with *Daniel Ueltschi*, "Hund's Rule and Metallic Ferromagnetism", J. Stat. Phys. (2005)

259. with *E. Lenzmann*, "Mean-field Limit of Quantum Bose Gases and nonlinear Hartree Equation", publ. séminaire sur les équations aux derivées partielles, Ecole Polytechnique, Palaiseau, Y. Chemin (ed.), 2004

260. with *Steven Gustafson, B. L. G. Jonsson,* and *Israel Michael Sigal,* "Solitary Wave Dynamics in an External Potential", Commun. Math. Phys. *250*, 613-643 (2004)

261. with *Volker Bach* and *Alessandro Pizzo*, "Infrared-finite Algorithms in QED, I. The Ground-state of an Atom Interacting with the Quantized Radiation Field", Commun. Math. Phys. (2005)

262. with *Carlo Albert, Lucio Ferrari* and *Benjamin Schlein*, "Magnetism and the Weiss Exchange Field - A Theoretical Analysis Motivated by Recent Experiments", J. Stat. Phys. 2006

263. with *Volker Bach, Thomas Chen* and *Israel Michael Sigal*, "The Renormalized Electron Mass in Non-Relativistic Quantum Electrodynamics" to appear.

264. with *Roberto Fernandez* and *Daniel Ueltschi*, "Mott Transition in Lattice Boson Models", submitted for publication.

265. with *Walid K. Abou Salem*, "Adiabatic Theorems and Reversible Isothermal Processes", Lett. Math. Phys.*72*, 153 - 163 (2005).

266. with *Enno Lenzmann*, "Nonlinear Equations describing the Mean-Field Limit of Bose Gases", proceedings of "Mathematical Methods in Quantum Mechanics", Bressanone, February 2005, published electronically.

267. with *S. Gustafsson, B.L.G. Jonsson* and *I.M.Sigal*, "Long Time Motion of NLS Solitary Waves in a Confining Potential", submitted for publication in Ann. H. Poincaré, 2005.

268. with *M. Griesemer* and *B. Schlein*, "Rayleigh Scattering at Atoms with a Dynamical Nucleus", submitted for publication in Commun. Math. Phys., 2005.

269. with *Enno Lenzmann*, "Blow-Up for Nonlinear Wave Equations describing Boson Stars", preprint 2005

In preparation (drafts available):

270. with *B.L.G. Jonsson* and *E. Lenzmann*, "Boson Stars, I"

271. with *Thomas Chen*, "Infrared Representations in Non-Relativistic QED"

272. with *S. Graffi* and *S. Schwarz*, "Mean-Field- and Classical Limit of Many-Body Schrödinger Dynamics for Bosons"

273. with *Walid K. Abou Salem*

274. with *V. Bach* and *A. Pizzo*, "Infrared-Finite Algorithms in QED, II. Expansion of the Groundstate of an Atom Interacting with the Quantized Radiation Field"

275. with *V. Bach* and *A. Pizzo*, "Infrared-Finite Algorithms in QED, III. Rayleigh Scattering"

276. with *M. Griesemer* and *I.M. Sigal*

I. "Mathematische Forschung in Frankreich und in den USA — Ein Erfahrungsbericht", Notizen zu einem Vortrag in der Ringvorlesung "Plurikulturelle Wissenschaftstraditionen an der ETH, in der Schweiz und in der Zukunft", E. Holenstein (Org.), ETH, 11. April 2000

II. "Vintage 1965", "Festschrift 150 Jahre Kantonsschule Schaffhausen".

III. "Réflexions sur Wolfgang Pauli", proceedings of the "Colloque 2000: Pensée et Science" of the Fondation F. Gonseth, Eric Emery (ed.), Rev. Synt. *126*, 443 - 450 (2005)

IV. "Die Botin vom verlorenen Paradies", in: "Dazwischen (Beobachten und Unterscheiden)", A.V. Heiz (ed.), Museum für Gestaltung Zürich, 1999, S. 100-114.

V. "Die Eidgenössischen Technischen Hochschulen als Pfeiler des Schweizerichen Hochschulsystems", Bulletin der VSH/APV, 28. Jahrgang, Nr. 2/3, S 11-23, 2002.

VI. "Intelligenz und Vernunft" Beilage zu den Schaffhauser Nachrichten, 12. April 2003.

VII. "Ethik - Auftrag an Spezialisten oder Verantwortung aller?", Beitrag zur Reihe "Wissenschaft kontrovers - eine Selbstbefragung über Geld, Kultur und Qualität", Sitzung vom Montag, 7. Juni 2004, Collegium Helveticum, G. Folkers (ed.).

VIII. "Gewissen und die Wissenschaft - Wer sagt, was gilt?" 4. Café Conscience der GEF, Science et Cité, 23. Mai 2005 (Notizen von Ursula Renz)

IX. "Einstein and $\hbar$- Advances in Quantum Mechanics", Proc. of a conference organized by the Einstein Forum at the BBAW Berlin, January 19 - 22, 2005 (notes by S.S. Schweber); to appear in 2006.

Books. Publications 78, 124, 166, and a reprint volume: "Non-Perturbative Quantum Field Theory (Mathematical Aspects and Applications)", Advanced Series in Mathematical Physics, vol. 15, World Scientific Publ. (1992).

Zürich, 7.11.05/iu