

1. (with R.W. Christy) Color Centers in TlCl , *Physical Review* 141 (1966), 806-814.
2. Estimates, Renormalized Currents, and Field Equations in the Yukawa₂ Field Theory, *Annals of Physics* 72 (1972), 177-242.
3. Spectrum of Local Hamiltonians in the Yukawa₂ Field Theory, *Journal of Mathematical Physics* 13 (1972), 477-481.
4. Perturbation Expansion for the $P(\phi)_2$ Schwinger Functions, in *Lecture Notes in Physics, Vol. 25: Constructive Quantum Field Theory*, G. Velo and A.S. Wightman, eds., Springer-Verlag, Berlin (1973), 317-320.
5. (with J. Glimm) Measures on Schwartz Distribution Space and Applications to $P(\phi)_2$ Field Theories, *Advances in Mathematics* 12 (1974), 58-83.
6. Asymptotic Perturbation Expansion in the $P(\phi)_2$ Quantum Field Theory, *Communications in Mathematical Physics* 35 (1974), 347-356.
7. The $P(\phi)_2$ Greens Functions: Smoothness in the Coupling Constant, *Journal of Functional Analysis* 121 (1976), 340-368.
8. The $P(\phi)_2$ Greens Functions: Asymptotic Perturbation Expansion, *Helvetica Physica Acta* 49 (1976), 199-216.
9. The Structure of (Real Time) $P(\phi)_2$ Greens Function, in *Quantum Dynamics: Models and Mathematics*, L. Streit, ed. Springer-Verlag (1976).
10. (with J.-P. Eckmann) On the Bound State Scattering for Weakly Coupled $(\phi^6 - \phi^4)_2$, *Communications in Mathematical Physics* 51 (1976), 41-54.
11. (with J.-P. Eckmann) Spectral Properties and Bound State Scattering for Weakly Coupled $\lambda P(\phi)_2$ Models, *Annals of Physics* 103 (1977), 289-314.

12. The Non-relativistic Limit of $P(\phi)_2$ Quantum Field Theories: Two Particle Phenomena, *Communications in Mathematical Physics* 57 (1977), 51-66.
13. Scalar Quantum Field in an External Gauge Field, *Journal of Mathematical Physics* 20 (1979), 1791-96.
14. Scalar Quantum Field in an External Gravitational Field, *Journal of Mathematical Physics* 20 (1979), 2549-2555.
15. Algebras of Local Observables on a Manifold, *Communications in Mathematical Physics* 77 (1980), 219-228.
16. Dirac Quantum Fields on a Manifold, *Transactions of the American Mathematical Society* 269 (1982), 133-147.
17. (with B. Kay) Classical Wave Operators and Asymptotic Quantum Field Operators in Curved Space-time, *Annales de l'Institut Henri Poincaré A*. 37 (1982), 93-114.
18. $P(\phi)_2$ Models with Variable Coefficients, *Annals of Physics* 154 (1984), 283-307.
19. Scattering for the Wave Equation on the Schwarzschild Metric, *General Relativity and Gravitation* 17 (1985), 353-369.
20. $(\text{QED})_2$ in the Coulomb Gauge, *Annales de l'Institut Henri Poincaré A*, 43 (1985), 167-179.
21. (with B. Kay) Scattering for Scalar Field on Coulomb Potentials and Schwarzschild Metrics, *Classical and Quantum Gravity* 3 (1986), 71-80.
22. (with B. Kay) Classical and Quantum Scattering for Linear Scalar Fields on the Schwarzschild Metric II, *Journal of Mathematical Physics* 27 (1986), 2520-2525.
23. (with B. Kay) Classical and Quantum Scattering for Linear Scalar Fields on the Schwarzschild Metric I, *Annals of Physics* 175 (1987), 366-426.

24. Infrared Asymptotic Freedom for the Pseudoscalar Yukawa Model at the Critical Point, *Communications in Mathematical Physics* 109 (1987), 379-395.
25. Infrared Problems for $(\text{QED})_4$ and $(\text{Yukawa})_4$ on a Lattice, in *Mathematical Quantum Field Theory and Related Topics*, J. Feldman, L. Rosen, Eds., American Mathematical Society, providence, (1988), 153-159.
26. QED on a lattice: Infrared asymptotic freedom for bounded fields, *Annales de l'Institut Henri Poincaré* 48 (1988), 355-386.
27. A Cluster Expansion for Stochastic Lattice Fields, *Journal of Statistical Physics* 58 (1990), 1181-1207.
28. The Kosterlitz-Thouless Phase in a Hierarchical Model, *Journal of Physics A*, 23 (1990), 1207-1215.
29. (with T. Hurd) A renormalization group analysis of the Kosterlitz-Thouless phase, *Communications in Mathematical Physics* 137 (1991), 263-287.
30. (with T. Hurd) A renormalization group analysis of infrared QED, *Journal of Mathematical Physics* 33 (1992), 814-821.
31. (with T. Hurd) A renormalization group analysis of correlation functions for the dipole gas, *Journal of Statistical Physics* 66 (1992), 1277-1318.
32. Quantized electromagnetic field on a manifold, *Reviews in Mathematical Physics* 4 (1992) 223-233.
33. (with T. Hurd) Construction of the two-dimensional sine-Gordon model for $\beta < 8\pi$, *Communications in Mathematical Physics* 156 (1993), 547-580.
34. (with D. Brydges, T. Hurd) Weak perturbations of Gaussian measures, *Mathematical Quantum Theory I*, J. Feldman, R. Froese, L. Rosen, ed., American Mathematical Society, Providence (1994), 1-28.

35. (with D. Brydges, T. Hurd) Applications of the renormalization group, *Mathematical Quantum Theory I*, J. Feldman, R. Froese, L. Rosen, ed., American Mathematical Society, Providence (1994), 171-189.
36. (with D. Brydges, T. Hurd) The short distance behavior of ϕ_3^4 , *Communications in Mathematical Physics* 172 (1995), 143-186.
37. Canonical Quantization of Yang Mills on a circle, *Reviews in Mathematical Physics* 8 (1996), 85-102.
38. A non-Gaussian fixed point for the renormalization group, *Perspectives in Quantization*, L. Coburn, M. Rieffel, Eds., American Mathematical Society, Providence (1998), 39-46.
39. (with D. Brydges, T. Hurd), Estimates on renormalization group transformations, *Canadian Journal of Mathematics* 50 (1998), 756-793.
40. (with D. Brydges, T. Hurd), A non-Gaussian fixed point for ϕ^4 in $4-\epsilon$ dimensions, *Communications in Mathematical Physics* 198 (1998), 111-156.
41. Bosonization of massive fermions, *Communications in Mathematical Physics* 198 (1998), 247-281.
42. Locality in free string field theory, *Journal of Mathematical Physics* 41 (2000), 40-61.
43. (with T. Hurd), Sine-Gordon revisited, *Annales Henri Poincaré*, 1 (2000), 491-541.
44. The sine- Gordon model at $\beta = 4\pi$, in *Nonlinear Dynamics and Renormalization Group*, I. M. Sigal, C. Sulem, eds., American mathematical Society, Providence, (2001).
45. Notes on $(\text{QED})_3$, in *XIII International Congress on Mathematical Physics*, A. Grigoryan, A. Fokas, T. Kibble, B. Zegarlinski, eds., International Press, Boston, (2001).
46. Locality in free string field theory-II, *Annales Henri Poincaré*, 3 (2002), 613-634.

47. Markov quantum fields on a manifold, *Reviews in Mathematical Physics* 16 (2004) 243-255.
48. (with S.G. Rajeev) Multiparticle Schrödinger operators with point interactions in the plane, *Journal of Physics A*, 37 (2004), 9157-9173.
49. Local string field theory, *Proceedings of XIV International Congress on Mathematical Physics*, J.-C. Zambrini, ed. World Scientific, (2006).
50. Transition amplitudes and sewing properties for bosons on the Riemann sphere, *Journal of Mathematical Physics* 48, 052308, (2007), 1-31.
51. More transition amplitudes on the Riemann sphere, *Journal of Mathematical Physics* 49, 062302, (2008), 1-20.
52. Infinite volume limit for the dipole gas, *Journal of Statistical Physics* 35, (2009), 393-427.
53. The Dirac sea, *Letters in Mathematical Physics* 98, (2011), 157-166.
54. The renormalization group according to Balaban - I. small fields, *Reviews in Mathematical Physics* 25, 1330010 (2013), 1-64.
55. The renormalization group according to Balaban - II. large fields, *Journal of Mathematical Physics* 54, 092301 (2013), 1-85
56. The renormalization group according to Balaban - III. convergence, *Annales Henri Poincaré* 15, (2014), 2133-2175.
57. Covariant axial gauge, *Letters in Mathematical Physics* 105, (2015), 959-987.
58. Nonperturbative renormalization of scalar QED in $d=3$, *J. Math. Phys.* 56, 102304, 1-78, (2015).
59. Ultraviolet regularity for QED in $d=3$, *J. Math. Phys.* 59, 012301, 1-76, (2018).

BOOKS:

1. Quantum Mechanics and Quantum Field Theory: A Mathematical Primer, Cambridge University Press, (2011).

OTHER WORK:

1. Quantum electrodynamics on the 3-torus I, ArXiv: math-ph/0210020
2. Quantum electrodynamics on the 3-torus II, ArXiv: math-ph/0407063