Publications by Helge Holden

(i) Theses


   Dr. Philos. Dissertation, University of Oslo 1985

(ii) Books

[1] Solvable Models in Quantum Mechanics
    Texts and Monographs in Physics
    (with S. Albeverio, F. Gesztesy, R. Høegh-Krohn)
    Translation into the Russian, Mir, Moscow 1991
    (Translated by Yu. A. Kuperin, K. A. Makarov, V. A. Geiler)
    Second edition with an Appendix by P. Exner
    AMS Chelsea Publishing, volume 350
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    (with J. Ubøe, B. Øksendal, T. Zhang)

    Second edition, 2001

    Applied Mathematical Sciences, volume 152
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    Softcover and eBook, 2011
    (with N. H. Risebro)

    Volume I: (1 + 1)-Dimensional Continuous Models

1Updated August 14, 2016
Soliton Equations and Their Algebro-Geometric Solutions
Volume II: (1 + 1)-Dimensional Discrete Models
Cambridge Studies in Advanced Mathematics, volume 114
(with F. Gesztesy, J. Michor, and G. Teschl)

Operator Splitting for Nonlinear Partial Differential Equations with Rough Solutions
Analysis and Matlab Programs
(with K. H. Karlsen, K.-A. Lie, N. H. Risebro)

(iii) Publications in international, refereed journals

[1] The spectrum of defect periodic point interactions
Letters in Mathematical Physics 7 (1983) 221–228
(with R. Høegh-Krohn, F. Martinelli)

[2] The short range expansion
(with R. Høegh-Krohn, S. Johannesen)

[3] On absence of diffusion near the bottom of the spectrum
for a random Schrödinger operator on $L^2(\mathbb{R}^n)$
Communications in Mathematical Physics 93 (1984) 197–217
(with F. Martinelli)

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(with R. Høegh-Krohn, S. Johannesen)

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Journal of Mathematical Physics 26 (1985) 145–151
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[6] The Fermi surface for point interactions
Journal of Mathematical Physics 27 (1986) 385–405
(with R. Høegh-Krohn, S. Johannesen, T. Wentzel-Larsen)

[7] On coupling constant thresholds in two dimensions

[8] A unified approach to eigenvalues and resonances of Schrödinger operators
using Fredholm determinants
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(with F. Gesztesy)

[9] Point interactions in two dimensions. Basic properties, approximations and
applications to solid state physics
(with S. Albeverio, F. Gesztesy, R. Høegh-Krohn)

[10] Stochastic multiplicative measures, generalized Markov semigroups and group
valued stochastic processes and fields
(with S. Albeverio, R. Haegh-Krohn)

(with F. Gesztesy, W. Kirsch)

[12] On the Riemann problem for a prototype of mixed type conservation law

[13] A new class of analytically solvable models in quantum mechanics on the line
(with F. Gesztesy)

[14] A numerical method for first order nonlinear scalar hyperbolic conservation
laws in one dimension
(with L. Holden, R. Høegh-Krohn)

[15] A law of large numbers and a central limit theorem for the Schrödinger
operator with zero range potentials
(with R. Figari, A. Teta)

[16] Representation and construction of multiplicative noise
(with S. Albeverio, R. Haegh-Krohn, T. Kolsrud)

[17] Trapping and cascading of eigenvalues in the large coupling limit
Communications in Mathematical Physics 118 (1988) 597–634
(with F. Gesztesy, D. Gurarie, M. Klaus, L. Sadun, B. Simon, P. Vogl)

[18] Construction of quantized Higgs-like fields in two dimensions
(with S. Albeverio, R. Haegh-Krohn, T. Kolsrud)

SPE Reservoir Engineering 7 (1992) 107–116
(with F. Bratvedt, K. Bratvedt, C. Buchholz, L. Holden, N. H. Risebro)

[20] Explicit construction of solutions of the modified Kadomtsev–Petviashvili equation
(with F. Gesztesy, E. Saab, B. Simon)
[21] On the stochastic Buckley–Leverett equation
(with N. H. Risebro)

[22] On the Toda and Kac–van Moerbeke systems
(with F. Gesztesy, B. Simon, Z. Zhao)

[23] A method of fractional steps for scalar conservation laws without the CFL condition
(with N. H. Risebro)

(with T. Lindstrøm, B. Øksendal, J. Ubøe, T.-S. Zhang)

[25] Discrete Wick calculus and stochastics functional equations
(with T. Lindstrøm, B. Øksendal, J. Ubøe)

[26] Frontline and Frontsim; Two full scale, two-phase, black oil reservoir simulators based on front tracking
Surveys on Mathematics in Industry 3 (1993) 185–215

[27] Comment on a recent note on the Schrödinger equation with a δ'-interaction
(with S. Albeverio, F. Gesztesy)

[28] The Burgers equation with a noisy force
(with T. Lindstrøm, B. Øksendal, J. Ubøe, T.-S. Zhang)

[29] Trace formulae and inverse scattering for Schrödinger operators
(with F. Gesztesy, B. Simon, Z. Zhao)

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(with T. Lindstrøm, B. Øksendal, J. Ubøe, T.-S. Zhang)

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[41] An unconditionally stable method for the Euler equations
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[70] Well-posedness of higher-order Camassa–Holm equations
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[71] Optimal rebalancing of portfolios with transaction costs
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(iv) **Publications in proceedings of conferences**

[1] On absence of diffusion for low energy for a random Schrödinger operator on $L^2(\mathbb{R}^n)$

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