

Publication list
for
Arne Jensen

Research papers

1. Local distortion technique, resonances, and poles of the S-matrix. *J. Math. Anal. Appl.* **59**(1977), 505–513.
2. Some remarks on eigenfunction expansions for Schrödinger operators with non-local potentials. *Math. Scand.* **41**(1977), 347–357.
3. Local decay in time of solutions to Schrödinger’s equation with a dilation-analytic potential. *Manuscripta Math.* **25**(1978), 61–77.
4. (with T. Kato) Asymptotic behavior of the scattering phase for exterior domains. *Comm. P.D.E.* **3**(1978), 1165–1195.
5. (with T. Kato) Spectral properties of Schrödinger operators and time-decay of the wave functions. *Duke Math. J.* **46**(1979), 583–611.
6. Spectral properties of Schrödinger operators and time-decay of the wave functions. Results in $L^2(\mathbf{R}^m)$, $m \geq 5$. *Duke Math. J.* **47**(1980), 57–80.
7. Resonances in an abstract analytic scattering theory. *Ann. Inst. H. Poincaré, Sect. A*, **33**(1980), 209–223.
8. The scattering cross section and its Born approximation at high energies. *Helv. Phys. Acta* **53**(1980), 398–403.
9. Schrödinger operators in the low energy limit. Some recent results in $L^2(\mathbf{R}^4)$. In: *Spectral theory of differential operators. Proceedings Conf. Birmingham, Alabama, USA, 1981. North-Holland Math. Studies* **55**, pp. 243–246.
10. Time-delay in potential scattering theory. Some “geometric” results. *Commun. Math. Phys.* **82**(1981), 435–456.
11. A stationary proof of Lavine’s formula for time-delay. *Lett. Math. Phys.* **7**(1983), 137–143.
12. Spectral properties of Schrödinger operators and time-decay of the wave functions. Results in $L^2(\mathbf{R}^4)$. *J. Math. Anal. Appl.* **101**(1984), 491–513.
13. On Lavine’s formula for time-delay. *Math. Scand.* **54**(1984), 253–261.

14. (with E. Mourre, P. Perry) Multiple commutator estimates and resolvent smoothness in quantum scattering theory. *Ann. Inst. H. Poincaré, Sect. A*, **45**(1984), 207–225.
15. (with W. Krüger) On the infrared singularity of the resolvent of some Yang-Mills type operators. *J. Math. Phys.* **26**(1985), 1152–1157.
16. (with P. Perry) Commutator methods and Besov space estimates for Schrödinger operators. *J. Operator Theory* **14**(1985), 181–188.
17. Propagation estimates for Schrödinger-type operators. *Trans. Amer. Math. Soc.* **291**(1985), 129–144.
18. Commutator methods and a smoothing property of the Schrödinger evolution group. *Math. Z.* **191**(1986), 53–59.
19. Asymptotic completeness for a new class of Stark effect Hamiltonians. *Commun. Math. Phys.* **107**(1986), 21–28.
20. Commutator methods and asymptotic completeness for one-dimensional Stark effect Hamiltonians. In: *Schrödinger Operators, Aarhus 1985*, (ed. E. Balslev) Springer Lecture Notes in Mathematics, vol. 1218 (1986), pp. 151–166.
21. Commutator methods and asymptotic completeness for a new class of Stark effect Hamiltonians. *Proc. Int. Conf. on Diff. Eq. and Math. Phys.*, Birmingham, Alabama, March 1986. (Ed. I. Knowles, Y. Saitō). Springer Lecture Notes in Mathematics, vol. 1285, 1987, p. 215–221.
22. Scattering theory for Hamiltonians with Stark effect. *Ann. Inst. H. Poincaré, Phys. Théor.*, **46**(1987), 383–395.
23. Some recent results on Stark effect Hamiltonians. *Proc. XXVI. Internationale Universitätswochen für Kernphysik. Schladming, Steiermark, Austria* (Ed. H. Mitter, L. Pittner), Springer Verlag, 1987.
24. Bounds on resonances for Stark-Wannier and related Hamiltonians. *J. Operator Theory*, **19** (1988), 69–80.
25. (with H. Kitada) Fundamental solutions and eigenfunction expansions for Schrödinger operators. II. Eigenfunction expansions. *Math. Z.*, **199** (1988), 1–13.
26. Perturbation results for Stark effect resonances. *J. Reine Angew. Math.*, **394** (1989), 168–179.

27. Precise resolvent estimates for Stark effect Hamiltonians. In: Proceedings Int. Symp. Diff. Eq., Holzgau, GDR, April 1988. Ed. B.-W. Schulze, H. Triebel. Teubner Texte zur Mathematik Band 112, Leipzig 1989, pp. 163–167.
28. High energy resolvent estimates for generalized many-body Schrödinger operators. Publ. RIMS, Kyoto Univ., **25** (1989), 155–167.
29. Stark Hamiltonians with periodic potentials. Exposé No. XI in: Acte du Colloque “Equations aux Derivées partielles” Saint Jean de Monts, Juin 1989, Société Mathématique de France, 1989.
30. High energy asymptotics for the total scattering phase in potential scattering theory. In: “Functional-Analytic Methods for Partial Differential Equations.” Springer Lecture Notes in Mathematics, vol. 1450, p. 187–195. Springer Verlag, Heidelberg 1990.
31. High energy resolvent estimates for Schrödinger operators in Besov spaces. J. Analyse Math. **58** (1992), 45–50.
32. (with T. Ozawa) Classical and quantum scattering for Stark Hamiltonians with slowly decaying potentials. Ann. Inst. H. Poincaré, Phys. Théor., **54** (1991), 229–243.
33. (with K. Yajima) On the long range scattering for Stark Hamiltonians. J. reine angew. Math. **420** (1991), 179–193.
34. Commutator methods and Schrödinger operators. In: Rigorous Results in Quantum Dynamics, Liblice, Czechoslovakia, 10–15 June 1990, J. Dittrich, P. Exner (Eds.). World Scientific, Singapore, 1991, p. 3–15.
35. High energy resolvent estimates for Schrödinger operators. In: Ideas and Methods in Quantum and Statistical Mechanics. Vol. 2. S. Albeverio, J. E. Fenstad, H. Holden, T. Lindstrøm (Eds.). Cambridge University Press, Cambridge 1991, p. 447–450.
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42. Results in $L^p(\mathbf{R}^d)$ for the Schrödinger equation with a time-dependent potential. *Math. Ann.* **299** (1994), 117–125.
43. Scattering theory for Stark Hamiltonians. *Proc. Indian Acad. Sci. (Math. Sci.)* **104** (1994), 599–651.
44. (with S. Nakamura) The 2D Schrödinger equation for a neutral pair in a constant magnetic field. *Ann. Inst. H. Poincaré, Phys. théor.*, **67** (1997), 387–410.
45. Space-time scattering for the Schrödinger equation. *Ark. Mat.* **36** (1998), 363-377.
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52. (with K. Yajima) A remark on L^p -boundedness of wave operators for two dimensional Schrödinger operators. Comm. Math. Phys. **225** (2002), 633–637.
53. (with A. Galtbayar and K. Yajima) The Nelson model with less than two photons. Ann. H. Poincaré **4** (2003), 239–273.
54. (with A. Galtbayar and K. Yajima) Local time-decay of solutions to Schrödinger equations with time-periodic potentials. J. Statist. Phys. **116** (2004), 231–282.
55. An animated introduction to the discrete wavelet transform. Preprint Aalborg University 2003, R-2003-24.
56. (with A. Galtbayar and K. Yajima) Some recent results on Schrödinger equations with time-periodic potentials. Spectral and scattering theory and related topics (Kyoto 2003), Sūrikaiseikikenkyūsho Kōkyūroky No. 1364 (2004), 81–88.
57. A Fermi Golden Rule at thresholds. Oberwolfach Reports vol. 1, issue 4, (2004), 2843–2844. European Mathematical Publishing House, 2005.
58. (with H. D. Cornean and V. Moldoveanu) A rigorous proof of the Landauer-Büttiker formula. J. Math. Phys. **46** (2005), 042106.
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60. (with M. Krishna) New criteria to identify spectrum. Proc. Indian Acad. Sci. (Math. Sci.) **115** (2005), 217–226.
61. (with G. Nenciu) The Fermi golden rule and its form at thresholds in odd dimensions, Comm. Math. Phys., **261** (2006), 693–727.
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64. (with G. Nenciu) On the Fermi Golden Rule: Degenerate eigenvalues. In: *Persepctives in Operator Algebras and Mathematical Physics* (Eds. F. Boca, R. Purice, and S. Strătilă), Theta, Bucharest 2008, pp. 91–103.
65. (with K. Yajima) On L^p boundedness of wave operators for four dimensional Schrödinger operators with threshold singularities. *Proc. Lond. Math. Soc. (3)* **96** (2008), 136–162.
66. (with G. Nenciu) Uniqueness results for transient dynamics of quantum systems. *Contemporary Mathematics* **447** (2007), 165–174.
67. (with G. Nenciu) Exponential decay laws in perturbation theory of threshold and embedded eigenvalues, *Proceedings of the IAMP Congress, Rio de Janeiro, 2006*, to appear.
68. (with A. la Cour-Harbo) Wavelets and the lifting scheme, *Encyclopedia of Complexity and Systems Science*, Robert A. Meyers (Editor-in-Chief), Edward Aboufadel (Section Editor), IEEE Computer Society, 2009, 44 pages, to appear.
69. (with V. Dinu and G. Nenciu) Non-exponential decay laws in perturbation theory of near threshold eigenvalues, *J. Math. Phys.* **50** (2009), 013516.

Books

1. (with A. la Cour-Harbo) *Ripples in Mathematics – The Discrete Wavelet Transform*. Springer-Verlag 2001.

Other publications

1. (with H. Cordes, S. T. Kuroda, G. Ponce, B. Simon, M. Taylor) Tosio Kato (1917–1999). *Notices of the AMS*, **47** (2000), 650–667.
2. Book review: *At våga sitt tärningskast - Gösta Mittag-Leffler 1846-1927*. *European Mathematical Society Newsletter* **68** 2008, Zurich, Switzerland: pp. 44–45.

Editor

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2. A. Jensen, E. Skibsted (Eds.): *Report on Workshop on Geometric Scattering*. Miscellanea No. 7, MaPhySto, Aarhus University, December 1998.