

RECORD OF PUBLICATIONS
PETER WAGNER, UNIVERSITY OF INNSBRUCK

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I. Books.

1. *Distribution-Valued Analytic Functions – Theory and Applications* (joint work with N. Ortner), tredition, Hamburg 2013, ISBN: 978-3-8491-1968-3, ix + 133 pp.; MR 3468846.
2. *Fundamental Solutions of Linear Partial Differential Operators. Theory and Practice* (joint work with N. Ortner), Springer 2015, ISBN: 978-3-319-20139-9, xii + 398 pp.; MR 3379898. (doi: 10.1007/978-3-319-20140-5)

II. Articles in journals.

1. *Die Durchbiegung der gelenkig gelagerten Viertelkreisplatte* (joint work with R. Naderer), Zeitschrift für angewandte Mathematik und Mechanik (ZAMM) **62** (1982) 710–712. (doi: 10.1002/zamm.19820621215)
2. *Sur quelques propriétés des espaces \mathcal{D}'_{L^p} de Laurent Schwartz* (joint work with N. Ortner), Bolletino dell'Unione Matematica Italiana (6) **2-B** (1983) 353–375; MR **84j**: 46068.
3. *Parameterintegration zur Berechnung von Fundamentallösungen*, Dissertationes Mathematicae **230** (1984) 1–50; MR **85j**: 35041.
4. *Die Singularitätenfunktionen der gespannten Platte und der Kreiszyinderschale*, Journal of Applied Mathematics and Physics (ZAMP) **35** (1984) 723–727; MR **86e**: 73038. (doi: 10.1007/BF00952118)
5. *Analytic continuation and convolution of hypersingular higher Hilbert–Riesz kernels* (joint work with J. Horváth and N. Ortner), Journal of Mathematical Analysis and Applications **123** (1987) 429–447; MR **88c**: 46048. (doi: 10.1016/0022-247X(87)90321-0)
6. *Zur Faltung von Distributionen*, Mathematische Annalen **276** (1987) 467–485; MR **88f**: 46086. (doi: 10.1007/BF01450842)
7. *Bernstein-Sato-Polynome und Faltungsgruppen zu Differentialoperatoren*, Zeitschrift für Analysis und ihre Anwendungen **8** (1989) 407–423; MR **91c**: 58129.
8. *Applications of weighted \mathcal{D}'_{L^p} -spaces to the convolution of distributions* (joint work with N. Ortner), Bulletin of the Polish Academy of Sciences, Mathematics, **37** (1989) 579–595; MR **92b**: 46058.
9. *The Green's functions of clamped semi-infinite vibrating beams and plates* (joint work with N. Ortner), International Journal of Solids and Structures **26** (1990) 237–249. (doi: 10.1016/0020-7683(90)90054-Y)
10. *Some new fundamental solutions* (joint work with N. Ortner), Mathematical Meth-

- ods in the Applied Sciences **12** (1990) 439–461; MR **91e**: 35067. (doi: 10.1002/mma.1670120508)
11. *On the multiplication and convolution of homogeneous distributions*, Revista Colombiana de Matemáticas **24** (1990) 183–197; MR **92c**: 46049.
 12. *On the quasiasymptotic expansion of the causal fundamental solution of hyperbolic operators and systems*, Zeitschrift für Analysis und ihre Anwendungen **10** (1991) 159–167; MR **93a**: 46076.
 13. *On the fundamental matrix of the system describing linear thermodiffusion in the theory of thermal stresses* (joint work with J. Gawinecki), Bulletin of the Polish Academy of Sciences, Technical Sciences, **39** (1991) 609–615.
 14. *On the fundamental solutions of the operators of S. Timoshenko and R. D. Mindlin* (joint work with N. Ortner), Mathematical Methods in the Applied Sciences **15** (1992) 525–535; MR **93k**: 35006. (doi: 10.1002/mma.1670150802)
 15. *On the fundamental solution of the operator of dynamic linear thermoelasticity* (joint work with N. Ortner), Journal of Mathematical Analysis and Applications **170** (1992) 524–550; MR **93j**: 73010. (doi: 10.1016/0022-247X(92)90035-C)
 16. *On Faddeev–Leverrier’s method for the computation of the characteristic polynomial of a matrix and of eigenvectors* (joint work with G. Helmbert und G. Veltkamp), Linear Algebra and its Applications **185** (1993) 219–233; MR **94f**: 65037. (doi: 10.1016/0024-3795(93)90214-9)
 17. *Fundamental solutions of hyperbolic differential operators and the Poisson summation formula* (joint work with N. Ortner), Integral Transforms and Special Functions **1** (1993) 183–196. (doi: 10.1080/10652469308819020)
 18. *On the fundamental matrix of the system of quasi-static equations of thermodiffusion in a solid body* (joint work with J. Gawinecki und B. Sikorska), Demonstratio Mathematica **26** (1993) 623–632; MR **95a**: 73013.
 19. *Fundamental matrix of the system of dynamic linear thermoelasticity*, Journal of Thermal Stresses **17** (1994) 549–565; MR **95g**: 73012. (doi: 10.1080/01495739408946279)
 20. *Feynman integral formulae and fundamental solutions of decomposable evolution operators* (joint work with N. Ortner), Труды Математического Института им. Б. А. Стеклова **203** (1994) 365–388; English ed.: Proceedings of the Steklov Institute **203** (1995) 305–322; MR **97a**: 35027.
 21. *On the evaluation of one-loop Feynman amplitudes in Euclidean quantum field theory* (joint work with N. Ortner), Annales de l’Institut Henri Poincaré, Physique Théorique, **62** (1995) 81–110; MR **96i**: 81198.
 22. *Series, the convergence of which should be interpreted in the sense of L. Schwartz’s distributions* (joint work with N. Ortner), SIAM Review **37** (1995) 428–435; MR **97i**: 33003. (doi: 10.1137/1037086)

23. *On the fundamental solution of the operator of dynamic linear thermodiffusion* (joint work with J. Gawinecki und N. Ortner), *Zeitschrift für Analysis und ihre Anwendungen* **15** (1996) 149–158; MR **97j**: 35148.
24. *Solution of the initial-boundary value problem for the simply supported semi-infinite Timoshenko beam* (joint work with N. Ortner), *Journal of Elasticity* **42** (1996) 217–241; MR **97g**: 73061. (doi: 10.1007/BF00041791)
25. *A volume formula for asymptotic hyperbolic tetrahedra with an application to quantum field theory*, *Indagationes Mathematicae, N. S.*, **7** (1996) 527–547; MR **99e**: 52010. (doi: 10.1016/S0019-3577(97)89138-0)
26. *Solution to a problem posed by H. S. M. Coxeter*, *Comptes Rendus Mathématiques de l'Académie des Sciences, Canada*, **18** (1996) 273–277; MR **98f**: 51031.
27. *A survey on explicit representation formulae for fundamental solutions of linear partial differential operators* (joint work with N. Ortner), *Acta Applicandae Mathematicae* **47** (1997) 101–124; MR **98h**: 35031. (doi: 10.1023/A:1005784017770)
28. *Manipulating Gibbs' phenomenon for Fourier interpolation* (joint work with G. Helmbert), *Journal of Approximation Theory* **89** (1997) 308–320; MR **99d**: 42003. (doi: 10.1006/jath.1996.3056)
29. *Evaluation of non-relativistic one-loop Feynman integrals by distributional methods*, *Journal of Mathematical Physics* **39** (1998) 2428–2436; MR **99h**: 81145. (doi: 10.1063/1.532296)
30. *Fundamental solutions of real homogeneous cubic operators of principal type in three dimensions*, *Acta Mathematica* **182** (1999) 283–300; MR **2001f**: 35072. (doi: 10.1007/BF02392576)
31. *A fundamental solution of N. Zeilon's operator*, *Mathematica Scandinavica* **86** (2000) 273–287; MR **2001b**: 35057.
32. *On the fundamental solutions of a class of elliptic quartic operators in dimension 3*, *Journal de Mathématiques Pures et Appliquées* **81** (2002) 1191–1206; MR **2003j**: 35004. (doi: 10.1016/S0021-7824(02)01258-8)
33. *Volume preserving mappings in the spirit of the Mazur–Ulam theorem* (joint work with Th. Rassias), *Aequationes Mathematicae* **66** (2003) 85–89. (doi: 10.1007/s00010-003-2669-7)
34. *Deduction of L. Hörmander's extension of Ásgeirsson's mean value theorem* (joint work with N. Ortner), *Bulletin des Sciences Mathématiques* **127** (2003) 835–843; MR **2004j**: 35204. (doi: 10.1016/S0007-4497(03)00045-9)
35. *Fundamental matrices of homogeneous hyperbolic systems. Applications to crystal optics, elastodynamics and piezoelectromagnetism* (joint work with N. Ortner), *Zeitschrift für Angewandte Mathematik und Mechanik (ZAMM)* **84** (2004) 314–346; MR **2005c**: 35181. (doi: 10.1002/zamm.200310130)

36. *On the explicit calculation of fundamental solutions*, Journal of Mathematical Analysis and Applications **297** (2004) 404–418; MR **2005e**: 35029. (doi: 10.1016/j.jmaa.2004.02.014)
37. *On the fundamental solutions of a class of hyperbolic quartic operators in dimension 3*, Annali di Matematica Pura ed Applicata **184** (2005) 139–159; MR **2006e**: 35029. (doi: 10.1007/s10231-004-0105-9)
38. *Convolution groups for quasihyperbolic systems of differential operators* (joint work with N. Ortner), Note di Matematica **25**, n. 2 (2005/2006) 139–157; MR **2007j**: 35017. (doi: 10.1285/i15900932v25n2p139)
39. *A new approach to quantum backflow* (joint work with M. Penz, G. Grübl, and S. Kreidl), Journal of Physics A: Mathematical and General **391** (2006) 423–433; MR **2006k**: 81111. (doi: 10.1088/0305-4470/39/2/012)
40. *The Herglotz formula and fundamental solutions of hyperbolic cubic operators in \mathbb{R}^4* , Integral Transforms and Special Functions **17** (2006) 307–314; MR **2007e**: 35178. (doi: 10.1080/10652460500422031)
41. *Groundwater ingress to tunnels – The exact analytical solution* (joint work with D. Kolymbas), Tunnelling and Underground Space Technology **22** (2007) 23–27. (doi: 10.1016/j.tust.2006.02.001)
42. *A mathematically rigorous formulation of the pseudopotential method* (joint work with F. Stampfer), Journal of Mathematical Analysis and Applications **342** (2008) 202–212; MR **2009k**: 35041. (doi: 10.1016/j.jmaa.2007.12.004)
43. *The fundamental matrix of the system of linear elastodynamics in hexagonal media. Solution to the problem of conical refraction* (joint work with N. Ortner), IMA Journal of Applied Mathematics **73** (2008) 412–447; MR **2009h**: 74042. (doi: 10.1093/imamat/hxn002)
44. *A new constructive proof of the Malgrange–Ehrenpreis theorem*, American Mathematical Monthly **116** (2009) 457–462; MR **2010b**: 35007. (doi: 10.4169/193009709X470362)
45. *On the static term for the electric field in crystal optics* (joint work with N. Ortner), Quarterly Journal of Mechanics and Applied Mathematics **62** (2009) 311–319; MR **2010f**: 78008. (doi: 10.1093/qjmam/hbp011)
46. *On conical refraction in hexagonal and cubic media* (joint work with N. Ortner), SIAM Journal on Applied Mathematics **70** (2009) 1239–1259; MR **2010j**: 35547. (doi: 10.1137/080736636)
47. *A mathematically rigorous formulation of the Fermi pseudopotential for higher-partial-wave scattering in arbitrary dimension* (joint work with F. Stampfer), Physical Review A **81** (2010) 052710. (doi: 10.1103/PhysRevA.81.052710)
48. *Distributions supported by hypersurfaces*, Applicable Analysis **89** (2010) 1183–1199; MR **2011i**: 58004. (doi: 10.1080/00036811003649132)

49. *On the Fourier transform of Lorentz invariant distributions* (joint work with N. Ortner), *Functiones et Approximatio (Commentarii Mathematici)* **44** (2011) 133–151; MR **2012d**: 46100. (doi: 10.7169/facm/1301497750)
50. *M. Riesz' kernels as boundary values of conjugate Poisson kernels* (joint work with M. Guzmán-Partida and N. Ortner), *Bulletin des Sciences Mathématiques* **135** (2011) 291–302; MR **2012c**: 42034. (doi: 10.1016/j.bulsci.2010.11.001)
51. *The singular terms in the fundamental matrix of crystal optics*, *Proceedings of the Royal Society A* **467** (2011) 2663–2689; MR **2012i**: 35386. (doi: 10.1098/rspa.2011.0058)
52. *Cavity expansion in cross anisotropic rock* (joint work with A. Blioumi and D. Kolymbas), *International Journal for Numerical and Analytical Methods in Geomechanics* **36** (2012) 128–139. (doi: 10.1002/nag.998)
53. *Explicit representations of L. Schwartz' spaces \mathcal{D}_{L^p} and \mathcal{D}'_{L^p} by the sequence spaces $s \hat{\otimes} l^p$ and $s' \hat{\otimes} l^p$, respectively, for $1 < p < \infty$* (joint work with N. Ortner), *Journal of Mathematical Analysis and Applications* **404** (2013) 1–10; MR 3061375. (doi: 10.1016/j.jmaa.2013.02.041)
54. *Division problem for spatially periodic distributions* (joint work with A. Sasane), *Journal of Mathematical Analysis and Applications* **408** (2013) 70–75; MR 3079947. (doi: 10.1016/j.jmaa.2013.05.066)
55. *On convolution in weighted \mathcal{D}'_{L^p} -spaces*, *Mathematische Nachrichten* **287** (2014) 472–477; MR 3179674. (doi: 10.1002/mana.201200271)
56. *On the spaces \mathcal{O}_C^m of John Horváth* (joint work with N. Ortner), *Journal of Mathematical Analysis and Applications* **415** (2014) 62–74; MR 3173154. (doi: 10.1016/j.jmaa.2014.01.018)
57. *Fourier transformation of $O(p,q)$ -invariant distributions. Fundamental solutions of ultra-hyperbolic operators* (joint work with N. Ortner), *Journal of Mathematical Analysis and Applications* **450** (2017) 262–292; MR 3606168. (doi: 10.1016/j.jmaa.2016.12.061)
58. *Applications of $O(p,q)$ -invariant distributions* (joint work with N. Ortner), *Mathematische Nachrichten* **290** (2017) 2995–3005. (doi: 10.1002/mana.201700027)
59. *Analytical model for the moisture absorption in capillary active building materials* (joint work with M. Bianchi Janetti), *Building and Environment* **126** (2017) 98–106. (doi: 10.1016/j.buildenv.2017.09.018)
60. *Calculation of the propagator of Schrödinger's equation on $(0, \infty)$ with the potential $kx^{-2} + \omega^2 x^2$ by Laplace's method* (joint work with N. Ortner), *Journal of Mathematical Physics* **59** (2018), 071509. (doi: 10.1063/1.5030787)
61. *On Green's functions in generalized axially symmetric potential theory* (joint work with N. Ortner), *Applicable Analysis*, to appear. (doi: 11.1080/00036811.2018.1523394)

62. *On the Fourier transform of rotationally invariant distributions* (joint work with N. Ortner), *Bolletino dell'Unione Matematica Italiana* **12** (2019) 469–484. (doi: 11.1007/s40574-018-0185-x)
63. *On the Weyl transform for rotationally invariant symbols* (joint work with N. Ortner), *Journal of Pseudo-Differential Operators and Applications*, to appear.

III. Miscellanea.

1. *Sobre algumas propriedades dos espaços \mathcal{D}'_{L^p} de L. Schwartz*, 16° Seminário Brasileiro de Análise, 149–153, Rio de Janeiro, 1982.
2. *Soluções fundamentais de operadores diferenciais parciais com coeficientes constantes*, *Notas de Matemática*, São Carlos, 1983, 114 pp.
3. *Multiplikation und Faltung von homogenen Distributionen*, Tagungsbericht 20/1989 des Mathematischen Forschungsinstitutes Oberwolfach (Generalized Functions and Complex Analysis), p. 19, Oberwolfach, 1989.
4. *On the fundamental matrix of the system of dynamic linear thermoelasticity*, Extended Abstracts, 2nd Int. Conf. on Mathematical and Numerical Aspects of Wave Propagation, 101–102, University of Delaware, 1993.
5. *A short proof of the Malgrange–Ehrenpreis theorem* (joint work with N. Ortner), *Functional Analysis, Proc. of the 1st Int. Workshop*, ed. by S. Dierolf, S. Dineen, P. Domański, 343–352, de Gruyter, Berlin, 1996; MR **97g**: 35021.
6. *Zeilon's operator and lacunae*, *Functional-Analytic and Complex Methods, their Interactions, and Applications to Partial Differential Equations*, Proc. of a Workshop on PDE in Graz 2001, ed. by N. Ortner, W. Tutschke, 33–46, World Scientific, Singapur, 2001; MR **2003b**: 35005.
7. *Some remarks on single conservation laws* (joint work with M. Tsuji), *Advances in Deterministic and Stochastic Analysis*, ed. by N. M. Chuong, P. G. Ciarlet, P. Lax, D. Mumford, D. H. Phong, 91–102, World Scientific, Singapur, 2007; MR **2008m**: 35234.
8. *Distribution-Valued Analytic Functions – Theory and Applications* (joint work with N. Ortner), Max Planck Institute for Mathematics in the Sciences, Lecture note Nr. 37, Leipzig 2008.
9. *Fundamental solutions in classical thermoelasticity* (joint work with N. Ortner), *Encyclopedia of Thermal Stresses*, Vol. 4, 1893–1900, Springer, New York, 2014. (doi: 10.1007/978-94-007-2739-7)
10. *A new constructive proof of the Malgrange–Ehrenpreis theorem*, *Mathematical Advances in Translation (Chinese)* **34** (2015) 89–93.

IV. Problems and solutions.

1. Problem 570, by M. J. Ritter, *Nieuw Archief voor Wiskunde* (3) **27** (1980), p. 118;

- Solution: *Nieuw Archief voor Wiskunde* (3) **28** (1980) 306–307.
2. *A Laplace transform*, Problem 88-13, by M. L. Glasser, *SIAM Review* **30** (1988), p. 503; Solution (joint work with N. Ortner): *SIAM Review* **31** (1989) 497–498. (doi: 10.1137/1031102)
 3. *Reducing a double integral*, Problem 88-14*, by N. Ortner and P. Wagner, *SIAM Review* **30** (1988) 503–504.
 4. *Limit of a definite integral*, Problem 91-4*, by C. A. Oster, *SIAM Review* **33** (1991) 115–116; Solution: *SIAM Review* **34** (1992), p. 123. (doi: 10.1137/1034013)
 5. Problem 858, by W. A. J. Luxemburg, *Nieuw Archief voor Wiskunde* (4) **10** (1992), p. 327; Solution (joint work with N. Ortner): *Nieuw Archief voor Wiskunde* (4) **11** (1993) 293–294.
 6. *A series of Bessel functions*, Problem 95-10, by N. Ortner and P. Wagner, *SIAM Review* **37** (1995) 236–237. (doi: 10.1137/1037051, 10.1137/1038057)
 7. *An integral occurring in coherence theory*, Problem 94-16, by R. C. Wittman and B. K. Alpert, *SIAM Review* **36** (1994), p. 655; Solution (joint work with N. Ortner): *SIAM Review* **37** (1995) 611–615.
 8. Problem 915, by P. J. de Doelder, *Nieuw Archief voor Wiskunde* (4) **12** (1994), p. 210; Solution (joint work with N. Ortner): *Nieuw Archief voor Wiskunde* (4) **14** (1996) 312–315.
 9. Trefethen’s SIAM challenge,
<http://web.comlab.ox.ac.uk/oucl/work/nick.trefethen/hundred.html>.

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