

Publications of Michael Langenbruch

- 77) *P. Domański and M. Langenbruch*, Surjectivity of Euler type differential operators on spaces of smooth functions, *Trans. Amer. Math. Soc.*, pp. 68, to appear.
- 76) *J. Bonet, M. Langenbruch, L. Skrzypczak (eds.)*, Special Volume dedicated to the memory of Paweł Domański, *Funct. Approx. Comment. Math.* **59** (2018).
- 75) *J. Bonet, M. Langenbruch*, The mathematical work of Paweł Domański, *Funct. Approx. Comment. Math.* **59**(1) (2018), 7–39 .
- 74) *P. Domański and M. Langenbruch*, Surjectivity of Hadamard type operators on spaces of smooth functions, *Rev. R. Acad. Cienc. Exactas Fis. Nat. Ser. A, Mat. RACSAM* **113**(2) (2018), 1625–1676.
- 73) *P. Domański and M. Langenbruch*, Multiplier projections on spaces of real analytic functions in several variables, *Complex Var. Elliptic Equ.* **62**(2) (2017), 241–2687.
- 72) *P. Domański and M. Langenbruch*, Euler type partial differential operators on real analytic functions, *J. Math. Anal. Appl.* **443** (2016), 652–674.
- 71) *M. Langenbruch*, On the diametral dimension of weighted spaces of analytic germs, *Studia Math.* **233**(1) (2016), 85–100.
- 70) *P. Domański and M. Langenbruch*, Interpolation of holomorphic functions and surjectivity of Taylor coefficient multipliers, *Adv. Math.* **293** (2016), 782–855.
- 69) *P. Domański, M. Langenbruch and D. Vogt*, Hadamard type operators on spaces of real analytic functions in several variables, *J. Funct. Anal.* **269**(12) (2015), 3868–3913.
- 68) *P. Domański and M. Langenbruch*, Hadamard multipliers of spaces of real analytic functions, *Adv. Math.* **240** (2013), 575–612.
- 67) *M. Langenbruch*, Convolution operators on spaces of real analytic functions, *Math. Nachr.* **286**, Issue 8-9, (2013), 908–920.
- 66) *M. Langenbruch*, Bases in spaces of analytic germs, *Ann. Polon. Math.* **106** (2012), 223–243.

- 65) *P. Domański and M. Langenbruch*, Algebra of multipliers on the space of real analytic functions of one variable, *Studia Math.* **212**, No. 2, (2012) 155–171.
- 64) *P. Domański and M. Langenbruch*, Representation of multipliers on spaces of real analytic functions, *Analysis* **32** (2012), 137–162.
- 63) *P. Domański and M. Langenbruch*, On the abstract Cauchy problem for operators in locally convex spaces, *Rev. R. Acad. Cien. Serie A.Mat.* **106**, No. 2, (2012), 247–273.
- 62) *P. Domański, M. Golinski and M. Langenbruch*, A note on composition operators on spaces of real analytic functions, *Ann. Pol. Math.* **103**, No. 2, (2012), 209–216.
- 61) *M. Langenbruch*, Asymptotic Fourier and Laplace transformation for hyperfunctions, *Stud. Math.* **205**, No. 1, (2011), 41–69.
- 60) *M. Langenbruch*, Continuous linear decomposition of analytic functions, *Bull. Belg. Math. Soc. - Simon Stevin* **18**, No. 3, (2011), 543–555.
- 59) *M. Langenbruch*, Extension of Sato’s hyperfunctions, *Funct. Approx. Comment. Math.* **44**, No. 1, (2011), 33–44.
- 58) *P. Domański and M. Langenbruch*, On the Laplace transform for vector valued hyperfunctions, *Funct. Approx. Comment. Math.*, **43**, No. 2, (2010), 129–159.
- 57) *M. Langenbruch*, Characterization of surjective convolution operators on Sato’ hyperfunctions, *Banach Center Publ.* **88** (2010), 185–193.
- 56) *M. Langenbruch*, Right inverses for differential operators on Fourier ultra-hyperfunctions and the property (DN), *Contemp. Math.* **481** (2009), 81–104.
- 55) *P. Domański and M. Langenbruch*, Vector valued hyperfunctions and boundary values of vector valued harmonic and holomorphic functions, *Publ. Res. Inst. Math. Sci.* **44(4)** (2008), 1097–1142.
- 54) *M. Langenbruch*, Right inverses for partial differential operators on Fourier hyperfunctions, *Studia Math.* **183(3)** (2007), 273–299.
- 53) *M. Langenbruch*, Generalized Fourier expansion in kernels of convolution operators on Fourier hyperfunctions, *Analysis München* **27(2-3)** (2007), 227–249.
- 52) *M. Langenbruch*, Division problems for Fourier ultra-hyperfunctions, *Bull. Belg. Math. Soc.-Simon Stevin* **14(3)** (2007), 521–530.
- 51) *P. Domanski and M. Langenbruch*, Composition operators with closed image on

spaces of real analytic functions, Bull. London Math. Soc. **38(4)** (2006), 636–646.

50) *M. Langenbruch*, Hermite functions and weighted spaces of generalized functions, Manuscripta Math. **119** (2006) 269–285.

49) *M. Langenbruch*, Surjective partial differential operators on real analytic functions defined on a half space, Note Mat. **25(2)** (2005/2006) 39–56.

48) *P. Domanski and M. Langenbruch*, Coherent analytics sets and composition of real analytic functions, J. Reine Angew. Math. **282** (2005) 41–59.

47) *M. Langenbruch*, Inheritance of surjectivity for partial differential operators on spaces of real analytic functions, J. Math. Anal. Appl. **297** (2004) 696–719.

46) *M. Langenbruch*, Characterization of surjective partial differential operators on spaces of real analytic functions, Studia Math. **162(1)** (2004) 53–96.

45) *P. Domanski and M. Langenbruch*, Composition operators on spaces of real analytic functions, Math. Nachr. **254-255** (2003) 68–86.

44) *M. Langenbruch*, A general approximation theorem of Whitney type, Rev. R. Acad. Cien. Serie A. Mat **97(2)** (2003) 287–303.

43) *M. Langenbruch*, Laurent series expansion for solutions of hypoelliptic equations, Ann. Polon. Math. **78.3** (2002) 277–289.

42) *M. Langenbruch and J. Voigt*, On Banach spaces invariant under differentiation, Bull. Soc. Roy. Sci. Liege **69** (2000) 383–393.

41) *M. Langenbruch*, Solvability of systems of partial differential equations for functions defined on nonconvex sets, Arch. Math. **75** (2000) 358–369.

40) *M. Langenbruch*, Surjective partial differential operators on real analytic functions defined on open convex sets, Manuscripta Math. **103** (2000) 241–263.

39) *M. Langenbruch*, Localization of partial differential operators and surjectivity on real analytic functions, Studia Math. **140(1)** (2000) 15–40.

38) *M. Langenbruch*, Analytic extension of smooth functions, Result. Math. **36** (1999) 281–296.

37) *M. Langenbruch*, Surjectivity of partial differential operators on Gevrey classes and extension of regularity, Math. Nachr. **196** (1998) 103–140.

- 36) *M. Langenbruch*, Extension of analyticity for solutions of partial differential operators, Note Math. **17** (1997) 29–59.
- 35) *M. Langenbruch*, Surjectivity of partial differential operators on Gevrey classes and their localizations at infinity, Lin. Top. Spaces and Compl. Anal. **3** (1997) 95-111.
- 34) *M. Langenbruch*, Surjective partial differential operators on spaces of ultradifferentiable functions of Roumieu type, Result. Math. **29** (1996) 254-275.
- 33) *M. Langenbruch*, Continuation of Gevrey regularity for solutions of partial differential operators, in "Functional analysis", S. Dierolf et al. (Edn.), 249-280, W. de Gruyter 1996.
- 32) *M. Langenbruch*, Continuous linear right inverses for partial differential operators, Diss. Math. **140** (1995), 163-181.
- 31) *M. Langenbruch*, Hyperfunction fundamental solutions of surjective convolution operators on real analytic functions, J. Functional Anal. **131** (1995) 78–93.
- 30) *M. Langenbruch*, Continuous linear right inverses for convolution operators in spaces of real analytic functions, Studia Math. **110** (1994) 65–82.
- 29) *M. Langenbruch*, Extension of ultradifferentiable functions, Manuscripta Math. **83** (1994) 123-143.
- 28) *M. Langenbruch*, Differentiable functions and the $\bar{\partial}$ -complex, in "Functional analysis", Bierstedt, Pietsch, Ruess, Vogt (Edn.), Lecture Notes in Pure and Applied Math. **150** (1994) 415-434.
- 27) *M. Langenbruch*, The splitting condition for the weighted $\bar{\partial}$ -complex, Result. Math. **22** (1992) 560-597.
- 26) *M. Langenbruch and S. Momm*, Complemented submodules in weighted spaces of analytic functions, Math. Nachr. **157** (1992) 263–276.
- 25) *M. Langenbruch*, Splitting of the $\bar{\partial}$ -complex in weighted spaces of square integrable functions, Rev. Mat. Univ. Complutense **5** (1992), 201-223.
- 24) *M. Langenbruch*, Surjectivity of partial differential operators in classes of ultradifferentiable functions of Roumieu type, Note Mat. **10** Suppl. No. 2 (1990) 369-388.
- 23) *M. Langenbruch*, Real roots of polynomials and right inverses for partial differential operators in the space of tempered distributions, Proc. Roy. Soc. Edinburgh **114A** (1990) 169-179.

- 22) *M. Langenbruch*, Solution operators for partial differential equations in weighted Gevrey spaces, Michigan Math. J. **37** (1990) 3–24.
- 21) *M. Langenbruch*, Tame right inverses for partial differential equations, in "Advances in the Theory of Frechet-spaces", T. Terzioglu (Ed.), NATO ASI Series (C) **287** (1989) 79-114.
- 20) *M. Langenbruch*, Ultradifferentiable functions on compact intervals, Math. Nachr. **140** (1989) 109-126.
- 19) *M. Langenbruch*, Extension of ultradifferentiable functions of Roumieu type, Arch. Math. **51** (1988) 353-362.
- 18) *M. Langenbruch*, Bases in spaces of ultradifferentiable functions with compact support, Math. Ann. **281** (1988) 31-42.
- 17) *M. Langenbruch*, Complemented kernels of partial differential operators in weighted spaces of (generalized) functions, Studia Math. **89** (1988) 37-63.
- 16) *M. Langenbruch*, Power series spaces and weighted solution spaces of partial differential equations, Math. Z. **194** (1987) 71-88.
- 15) *M. Langenbruch*, Bases in solution sheaves of systems of partial differential equations, J. Reine Angew. Math. **373** (1987) 1-36.
- 14) *M. Langenbruch*, Sequence space representations for weighted solution spaces of hypoelliptic systems of partial differential operators, Rend. Circ. Mat. Palermo **35** (1986) 169-202.
- 13) *M. Langenbruch*, Partial differential equations without solution operators in weighted spaces of (generalized) functions, Manuscripta Math. **56** (1986) 353-374.
- 12) *M. Langenbruch*, Sequence space representations for solution spaces of partial differential equations, Tr. J. Math. **10** (1986) 167-175.
- 11) *M. Langenbruch*, Kolmogorov diameters in solution spaces of systems of partial differential equations, Manuscripta Math. **53** (1985) 35-64.
- 10) *M. Langenbruch*, On the functional dimension of solution spaces of hypoelliptic partial differential operators, Math. Ann. **272** (1985) 217-229.
- 9) *M. Langenbruch*, Isomorphieklassen von Lösungsräumen partieller Differentialgleichungssysteme, Habilitationsschrift, Münster 1984.
- 8) *M. Langenbruch*, Fundamental solutions with partially bounded support, J. Math.

Anal. Appl. **95(2)** (1983) 467-489.

- 7) *M. Langenbruch*, Differentiability and growth of solutions of partial differential equations, Manuscripta Math. **39** (1982) 297-312.
- 6) *M. Langenbruch*, Dualraum und Topologie der (lokal) langsam wachsenden Nulllösungen hypoelliptischer Differentialoperatoren Manuscripta Math. **32** (1980), 29-49.
- 5) *M. Langenbruch*, Darstellung von Distributionen endlicher Ordnung als Randwerte zu hypoelliptischen Differentialoperatoren, Math. Ann. **248** (1980) 1-17.
- 4) *M. Langenbruch*, Fortsetzung von Randwerten zu hypoelliptischen Differentialoperatoren und partielle Differentialgleichungen, J. Reine Angew. Math. **311/312** (1979) 57-79.
- 3) *M. Langenbruch*, P-Funktionale und Randwerte zu hypoelliptischen Differentialoperatoren, Math. Ann. **239** (1979) 55-74.
- 2) *M. Langenbruch*, Randverteilungen von Nulllösungen hypoelliptischer Differentialgleichungen, Manuscripta Math. **26** (1978) 17-35.
- 1) *M. Langenbruch*, Randwerte von Nulllösungen hypoelliptischer Differentialoperatoren, Dissertation, Mainz 1976.

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