

# List of Publications

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## Books

- I) Holomorphiegebiete, pseudokonvexe Gebiete und das Levi-Problem (210 pages); Springer Lecture Notes 432 (1975).
- II) Invariant Distances and Metrics in Complex Analysis (joint book with M. Jarnicki (Poland), 408 pages); de Gruyter Expositions in Mathematics, Volume 9 (1993).
- III) Extension of Holomorphic Functions (joint book with M. Jarnicki (Poland), 487 pages); de Gruyter Expositions in Mathematics, Volume 34 (2000).
- IV) Invariant Distances and Metrics in Complex Analysis–revisited (joint booklet with M. Jarnicki (Poland), 192 pages); Dissertationes Math. 430, 1 – 192 (2005).
- V) First Steps in Several Complex Variables: Reinhardt Domains (joint book with M. Jarnicki (Poland), 367 pages); EMS Textbooks in Mathematics (2008).
- VI) Separately analytic functions (joint book with M. Jarnicki (Poland), 306 pages); EMS Tracts in Mathematics 16 (2011).
- VII) Invariant Distances and Metrics in Complex Analysis – second extended edition (joint book with M. Jarnicki (Poland), 861 pages); de Gruyter Expositions in Mathematics, Volume 9 (2013).
- VIII) Continuous Nowhere Differentiable Functions - The Monsters of Analysis (joint book with M. Jarnicki (Poland), 299 pages), Springer Monographs in Mathematics (2015).

## Master thesis and doctor thesis

- 1) Über das Edge-of-the-Wedge Theorem und über die Konstruktion von Holomorphiehüllen zu speziellen Gebieten; Diplomarbeit Göttingen (1968).
- 2) Eigenschaften der Fortsetzungen von in speziellen Gebieten holomorphen Funktionen in die Holomorphiehülle; Dissertation Göttingen (1972).

## Articles in Mathematical Journals

- 1) Über polynomiale Funktionen auf Holomorphiegebieten; Math. Zeitschrift 139, 133 – 139 (1974).
- 2) Quadratintegrale holomorphe Funktionen und die Serre–Vermutung; Math. Annalen 216, 285 – 288 (1975).
- 3) Glatte Holomorphiegebiete mit plurisubharmonischer innerer Randfunktion sind Banach–Stein; Arkiv for Mathematik 14, 55 – 58 (1976).
- 4) Polynomiale Funktionen auf Steinschen Gebieten in Steinschen Mannigfaltigkeiten; Archiv der Mathematik 28, 169 – 172 (1977).
- 5) Bestimmungsflächen für das Randwachstum holomorpher Funktionen auf analytischen Polyedern; Studia mathematica 62, 39 – 46 (1978).
- 6) Functions of polynomial growth and domains of holomorphy; Seminar Norquet III, Springer Lecture Notes 670, 224 – 232 (1978).
- 7) Ein  $C^\infty$ –glattes streng pseudokonvexes Gebiet im  $\mathbb{C}^3$  mit nicht holomorphkonvexer Projektion; Abhandlungen des math. Seminars Hamburg 47, 92 – 94 (1978).
- 8) a) Holomorphic functions of polynomial growth and applications; b) Silov boundaries of smooth pseudoconvex domains; Publications of the Ramanujan Institute Nr. 4, 141 – 162 and 189 – 193 (1979).
- 9) Ein Fortsetzungssatz für plurisubharmonische Funktionen über reell–2–kdimensionale Flächen; Archiv der Mathematik 33, 559 – 563 (1979).
- 10) Necessary conditions for hypoellipticity of the  $\bar{\partial}$ –problem (joint paper with K. Diederich); Recent developments in several complex variables: Ann. of Math. Study, Princeton Univ. Press Nr. 100, 151 – 154 (1981).
- 11) Eine Bemerkung über die Konstruktion von Holomorphiehüllen; Zeszyty Nauk Univ. Jag. 23, 21 – 22 (1982).
- 12) Über Gebiete mit vollständiger Kählermetrik (joint paper with K. Diederich); Math. Annalen 257, 191 – 198 (1981).
- 13) Various applications of the existence of well growing holomorphic functions; Functional Analysis, Holomorphy and Approximation Theory (1980); North–Holland: Notas de Matematica 71, 391 – 412 (1982).
- 14) About Carathéodory completeness of all Reinhardt domains; Functional Analysis, Holomorphy and Approximation Theory II (1981); North–Holland Mathematical Studies 86, 331 – 337 (1984).
- 15) Applications of the existence of well growing holomorphic functions; Analytic functions/Blazejewko (1982) Proceedings; Springer Lecture Notes 1039, 376 – 388 (1984).
- 16) The invariant distance related to the Bergman function (joint paper with T. Mazur and M. Skwarczynski (Poland)); Proc. Am. Math. Soc. 94, 72 – 76 (1985).
- 17) On domains with a complete Kähler metric; Proceedings of the International Conference on Complex Analysis and its Applications, Varna (1983), 170 – 176 (1985).
- 18) Non–extendable holomorphic functions; Matematicki Vesnik 37, 94 – 104

- (1985).
- 19) Non-extendable holomorphic functions of bounded growth in Reinhardt domains (joint paper with M. Jarnicki (Poland)); *Ann. Polon. Math.* 46, 129 – 140 (1985).
  - 20) Existence domains of holomorphic functions of restricted growth (joint paper with M. Jarnicki (Poland)); *Trans. Amer. Math. Soc.* 305, 385 – 404 (1987).
  - 21) Three remarks about the Carathéodory distance (joint paper with M. Jarnicki (Poland)); *Deformations of Mathematical Structures*, ed. by J. Lawrynowicz, Reidel Publishing Company, 161 – 170 (1988).
  - 22) Remarks on boundary behaviour of functions holomorphic on Cartesian products (joint paper with J. Siciak (Poland)); *Archiv der Mathematik* 49, 521 – 524 (1987).
  - 23) Functions of restricted growth and invariant distances in Complex Analysis; *Proc. Korea Institute of Technology; Mathematics Workshop: Analysis and Geometry 1987*, 148 – 174 (1987).
  - 24) On a minimal complex norm that extends the real euclidean norm (joint paper with K. T. Hahn (USA)); *Monatshefte für Mathematik* 105, 107 – 112 (1988).
  - 25) On the Kobayashi and Bergman metrics on generalized Thullen domains (joint paper with K. T. Hahn (USA)); *Proc. Am. Math. Soc.* 104, 207 – 214 (1988).
  - 26) Effective formulas for the Carathéodory distance (joint paper with M. Jarnicki (Poland)); *manuscripta mathematica* 62, 1 – 20 (1988).
  - 27) Bergman-completeness of complete circular domains (joint paper with M. Jarnicki (Poland)); *Ann. Polon. Math.* 50, 219 – 222 (1989).
  - 28) The Carathéodory pseudodistance has the product property (joint paper with M. Jarnicki (Poland)); *Math. Annalen* 285, 161 – 164 (1989).
  - 29) Invariant distances on special domains; *Complex Analysis and Applications 1987*, Sofia, 406 – 411 (1989).
  - 30) The simplest example for the non-innerness of the Carathéodory distance (joint paper with M. Jarnicki (Poland)); *Results in Mathematics* 18, 57 – 59 (1990).
  - 31) A counterexample for Kobayashi completeness of balanced domains (joint paper with M. Jarnicki (Poland)); *Proc. Am. Math. Soc.* 112, 973 – 978 (1991).
  - 32) Some remarks on the product property for invariant pseudometrics (joint paper with M. Jarnicki (Poland)); *Proceedings of Symposia in Pure Mathematics* 52, Part 2, 263 – 272 (1991).
  - 33) Invariant pseudodistances and pseudometrics — completeness and product property (joint paper with M. Jarnicki (Poland)); *Ann. Polon. Math.* 55, 169 – 189 (1991).
  - 34) The Carathéodory distance does not define the topology – the case of domains (joint paper with M. Jarnicki (Poland) and J.-P. Vigué (France)); *C. R. A. Sc., Paris*, 312, 77 – 79 (1991).

- 35) The inner Carathéodory distance for the annulus (joint paper with M. Jarnicki (Poland)); *Math. Annalen* 289, 335 – 339 (1991).
- 36) A remark on Carathéodory balls (joint paper with M. Jarnicki (Poland) and J.-P. Vigué (France)); *Archiv der Mathematik* 58, 595 – 598 (1992).
- 37) An example of a Carathéodory complete but not finitely compact analytic space (joint paper with M. Jarnicki (Poland) and J.-P. Vigué (France)); *Proc. Am. Math. Soc.* 118, 537 – 540 (1993).
- 38) The inner Carathéodory distance for the annulus II (joint paper with M. Jarnicki (Poland)); *Michigan Math. J.* 40, 393 – 398 (1993).
- 39) Geodesics for convex complex ellipsoids (joint paper with M. Jarnicki (Poland) and R. Zeinstra (Germany)); *Ann. Scuola Norm. Sup. Pisa, Serie V*, XX, 535 – 543 (1993).
- 40) Remarks on the Ilieff–Sendov Problem (joint paper with G. Schmieder (Germany)); *Annales Univ. M. Curie–Sklodowska XLVIII*, 98 – 105 (1994).
- 41) Geodesics for convex complex ellipsoids II (joint paper with M. Jarnicki (Poland)); *Archiv der Mathematik* 65, 138 – 140 (1995).
- 42) Remarks on the pluricomplex Green function (joint paper with M. Jarnicki (Poland)); *Indiana Univ. Math. Journal* 44, 535 – 543 (1995).
- 43) The Kobayashi metric for non-convex complex ellipsoids (joint paper with W. Zwonek (Poland)); *Complex Variables* 29, 59 – 71 (1996).
- 44) On the extended tube conjecture (joint paper with M. Jarnicki (Poland)); *manuscripta math.* 89, 461 – 470 (1996).
- 45) On balanced  $L^2$ -domains of holomorphy (joint paper with M. Jarnicki (Poland)); *Ann. Polon. Math.* LXIII, 101 – 102 (1996).
- 46) On  $N$ -circled  $H^\infty$ -domains of holomorphy (joint paper with M. Jarnicki (Poland)); *Ann. Polon. Math.* LXV, 253 – 264 (1997).
- 47) The Bergman kernel of the minimal ball and applications (joint paper with K. Oeljeklaus and H. Youssfi (France)); *Ann. Inst. Fourier* 47, 915 – 928 (1997).
- 48) Effective formulas for invariant functions – case of elementary Reinhardt domains (joint paper with W. Zwonek (Poland)); *Ann. Polon. Math.* 69, 175 – 196 (1998).
- 49) The Lu Qi-keng conjecture fails for strongly convex algebraic domains (joint paper with H. Youssfi (France)); *Archiv der Mathematik*, 240 – 245 (1998).
- 50) Hyperconvexity and Bergman completeness (joint paper with Z. Błocki (Poland)); *Nagoya Math. Journal* 151, 221 – 225 (1998).
- 51) New effective formulas for holomorphically contractible functions (joint paper with M. Jarnicki (Poland)); *Studia mathematica* 135, 219 – 230 (1999).
- 52) A remark on the product property for the Carathéodory pseudodistance (joint paper with M. Jarnicki (Poland)); *Annales Univ. M. Curie–Sklodowska* 53, 89 – 94 (1999).
- 53) Invariant metrics and completeness; *J. Korean Math. Soc.* 37, 269 – 284 (2000).
- 54) On Bergman completeness of non-hyperconvex domains (joint paper with M. Jarnicki and W. Zwonek (Poland)); *Univ. Iag. Acta Math.* 38, 169 –

- 184 (2000).
- 55)  $L_h^2$ -domains of holomorphy and the Bergman kernel (joint paper with W. Zwonek (Poland)); *Studia mathematica* 151, 99 – 108 (2002) (Preprint (2000)<sup>1</sup>).
  - 56) Cross theorem (joint paper with M. Jarnicki (Poland)); *Ann. Polon. Math.* 77, 295 – 302 (2001) (IMUJ Preprint 2001/08).
  - 57) An extension theorem for separately holomorphic functions with singularities (joint paper with M. Jarnicki (Poland)); IMUJ Preprint 2001/27 (2001).
  - 58) An extension theorem for separately holomorphic functions with analytic singularities (joint paper with M. Jarnicki (Poland)); *Ann. Polon. Math.* 80, 143 – 161 (2003) (Preprint (2001)).
  - 59) An extension theorem for separately holomorphic functions with pluripolar singularities (joint paper with M. Jarnicki (Poland)); *Trans. Amer. Math. Soc.* 355, 1251 – 1267 (2003) (Preprint (2002)).
  - 60) Logarithmic capacity and Bergman functions (joint paper with W. Zwonek (Poland)); *Archiv der Mathematik* 80, 536 – 552 (2003) (Preprint (2001)).
  - 61) Behavior of the Bergman kernel and metric near convex boundary points (joint paper with N. Nikolov (Bulgaria)); *Proc. Amer. Math. Soc.* 131, 2097 – 2102 (2003) (Preprint (2002)).
  - 62) Behavior of the Bergman kernel near smooth convex boundary points (joint paper with N. Nikolov (Bulgaria)); *Monatshefte für Mathematik* 139, 227 – 233 (2003) (Preprint (2002)).
  - 63) Extension of separately holomorphic functions – a survey 1899–2001; *Ann. Polon. Math.* 80, 21 – 36 (2003) (Preprint (2002)).
  - 64) Estimates for the Bergman kernel and metric of convex domains in  $\mathbb{C}^n$  (joint paper with N. Nikolov (Bulgaria)); *Ann. Polon. Math.* 81, 73 – 78 (2003) (Preprint (2002)).
  - 65) An extension theorem for separately meromorphic functions with pluripolar singularities (joint paper with M. Jarnicki (Poland)); *Kyushu Journal of Math.* 57, 291 – 302 (2003) (Preprint (2002)).
  - 66) On extremal holomorphically contractible families (joint paper with M. Jarnicki and W. Jarnicki (Poland)); *Ann. Polon. Math.* 81, 183 – 195 (2003) (Preprint (2002)).
  - 67) Extension theorems of Sakai type for separately holomorphic and meromorphic functions (joint paper with Việt Anh Nguyễn (France)); *Ann. Polon. Math.* 82, 171 – 187 (2003) (Preprint (2003)).
  - 68) The Serre problem with Reinhardt fibers (joint paper with W. Zwonek (Poland)); *Ann. Inst. Fourier* 54, 129 – 147 (2004) (Preprint (2002)).
  - 69) Entire curves avoiding given sets in  $\mathbb{C}^n$  (joint paper with N. Nikolov (Bulgaria)); *Arkiv för matematik* 42, 325 – 334 (2004) (Preprint (2003)).
  - 70) A boundary cross theorem for separately holomorphic functions (joint paper with Việt Anh Nguyễn (France)); *Ann. Polon. Math.* 84, 237 – 271 (2004)

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<sup>1</sup>To show how long the procedure of submitting a paper to a journal can be we add, from now on, the year when the paper was finished and submitted.

- (Preprint (2003)).
- 71) On the upper semicontinuity of the Wu metric (joint paper with M. Jarnicki (Poland)); Proc. Amer. Math Soc. 133, 245 – 255 (2005) (Preprint (2003)).
  - 72) Complex geodesics of the minimal ball in  $\mathbb{C}^n$  (joint paper with H. Youssfi (France)); Ann. Scuola Norm. Sup. Pisa, Serie V, III, 53 – 66 (2004) (Preprint (2003)).
  - 73) Description of all complex geodesics in the symmetrized bidisc (joint paper with W. Zwonek (Poland)); Bull. London Math. Soc. 37, 575 – 584 (2005) (Preprint (2003)).
  - 74) On automorphisms of the symmetrized bidisc (joint paper with M. Jarnicki (Poland)); Archiv der Mathematik 83, 264 – 266 (2004) (Preprint (2003)).
  - 75) Boundary cross theorem in dimension 1 (joint paper with Việt Anh Nguyễn (France)); Ann. Pol. Math. 20, 149 – 192 (2007) (Preprint (2004)).
  - 76) Bergman completeness of unbounded Hartogs domains (joint paper with W. Zwonek (Poland)); Nagoya Math. Journal 180, 121 – 133 (2005) (Preprint (2004)).
  - 77) The multipole Lempert function is monotone under inclusion of pole sets (joint paper with N. Nikolov (Bulgaria)); Michigan Math. J. 54, 111 – 116 (2006) (Preprint (2004)).
  - 78) Simultaneous approximation and interpolation on Arakelian sets (joint paper with N. Nikolov (Bulgaria)); Canad. Bull. Math. 50, 123 – 125 (2007) (Preprint (2004)).
  - 79) Local vs. global hyperconvexity, tautness or  $k$ -completeness for unbounded open sets in  $\mathbb{C}^n$  (joint paper with N. Nikolov (Bulgaria)); Ann. Scuola Norm. Sup. Pisa, Serie V, IV, 601 – 618 (2005) (Preprint (2005)).
  - 80)  $L_h^2$ -domains of holomorphy in the class of unbounded Hartogs domains (joint paper with W. Zwonek (Poland)); Illinois Math. J. 51, 617 – 624 (2007) (Preprint (2005)).
  - 81) A remark on separate holomorphy (joint paper with J. Jarnicki (Poland)); Studia mathematica 174, 309 – 317 (2006) (Preprint (2005)).
  - 82) A general cross theorem with singularities (joint paper with M. Jarnicki (Poland)); Analysis: Intern. Math. J. of Analysis and its Applications, Munich, 27, 181 – 212 (2007) (Preprint (2005)).
  - 83) Generalization of a theorem of Gonchar (joint paper with Việt Anh Nguyễn (Italy/Vietnam)); Arkiv for Matematik 45, 105 – 122 (2007) (Preprint (2005)).
  - 84) The Lempert function of the symmetrized polydisc in higher dimensions is not a distance (joint paper with N. Nikolov (Bulgaria) and W. Zwonek (Poland)); Proc. Amer. Math. Soc. 135, 2921 – 2928 (2007) (Preprint (2006)).
  - 85) On the definition of the Kobayashi-Buseman pseudometric (joint paper with N. Nikolov (Bulgaria)); Intern. J. Math. 17, 1145 – 1149 (2006) (Preprint (2006)).
  - 86) Invariant metrics and distances on general Neil parabolas (joint paper with N. Nikolov (Bulgaria)); Michigan Math. J. 55, 255 – 268 (2007) (Preprint

- (2006)).
- 87) Estimates of the Carathéodory metric on the symmetrized polydisc (joint paper with N. Nikolov (Bulgaria), P.J. Thomas (France) and W. Zwonek (Poland)); *J. Math. Anal. Appl.* 341, 140 – 148 (2008) (Preprint (2006)).
  - 88) An example of a bounded  $\mathbb{C}$ -convex domain which is not biholomorphic to a convex domain (joint paper with N. Nikolov (Bulgaria) and W. Zwonek (Poland)); *Math. Scand.* 102, 149 – 155 (2008) (Preprint (2006)).
  - 89) Envelope of holomorphy for boundary cross sets (joint paper with Việt Anh Nguyễn (Italy/Vietnam)); *Archiv d. Math.* 89, 326 – 338 (2007) (Preprint (2006)).
  - 90) On the derivatives of the Lempert functions (joint paper with N. Nikolov (Bulgaria)); *Ann. Mat. Pura Appl.* 187, 547 – 553 (2008) (Preprint (2006)).
  - 91) Boundary cross theorem in dimension 1 with singularities (joint paper with Việt Anh Nguyễn (Italy/Vietnam)); *Indiana Univ. Math. Journal* 58, 393 – 414 (2009) (Preprint (2007)).
  - 92) Remarks on Lempert functions of balanced domains (joint paper with N. Nikolov (Bulgaria)); *Monatshefte für Mathematik* 156, 159 – 165 (2009) (Preprint (2007)).
  - 93) Lipschitzness of the Lempert and Green functions (joint paper with N. Nikolov (Bulgaria) and P.J. Thomas (France)); *Proc. Amer. Math. Soc.* 137, 2027 – 2036 (2009) (Preprint (2008)).
  - 94) On a local characterization of pseudoconvex domains (joint paper with N. Nikolov (Bulgaria), P.J. Thomas (France), W. Zwonek (Poland)); *Indiana Univ. Math. Journal* 58, 2661 – 2672 (2009) (Preprint (2008)).
  - 95) Upper bound for the Lempert function of smooth domains (joint paper with N. Nikolov (Bulgaria), P.J. Thomas (France)); *Math. Zeitschrift* 266, 425 – 430 (2010) (Preprint (2008)).
  - 96) An elementary proof of the cross theorem in the Reinhardt case (joint paper with M. Jarnicki (Poland)); *Michigan Math. J.* 59, 411 – 417 (2010) (Preprint (2008)).
  - 97) Estimates for invariant metrics on  $\mathbb{C}$ -convex domains (joint paper with N. Nikolov (Bulgaria) and W. Zwonek (Poland)); *Trans. Amer. Math. Soc.* 363, 6245 – 6256 (2011) (Preprint (2008)).
  - 98) Cross theorems with singularities (joint paper with Việt-Anh Nguyễn (Korea/Vietnam)); *Journal Geometric Analysis* 20, 193 – 218 (2010) (Preprint (2009)).
  - 99) Directional regularity vs. joint regularity (joint paper with M. Jarnicki (Poland)); *Notices of the AMS* 58, 896 – 904 (2011) (Preprint (2009)).
  - 100) A remark on the identity principle for analytic sets (joint paper with M. Jarnicki (Poland)); *Colloq. Math.* 123, 21 – 26 (2011) (Preprint (2010)).
  - 101) Boundary behavior of the Kobayashi-Royden metric in smooth pseudoconvex domains (joint paper with W. Zwonek (Poland)); *Michigan Math. J.* 60, 399-407 (2011) (Preprint (2009)).
  - 102) A new cross theorem for separately holomorphic functions (joint paper with M. Jarnicki (Poland)); *Proc. Amer. Math. Soc.* 138, 3923 – 3932 (2010)

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- 103) Kobayashi-Royden pseudometric vs. Lempert function (joint paper with N. Nikolov (Bulgaria)); *Ann. Mat. Pura Appl.* 190, 589 – 593 (2011) (Preprint (2010)).
  - 104) On different extremal bases for  $\mathbb{C}$ -convex domains (joint paper with N. Nikolov (Bulgaria) and P.J. Thomas (France)); *Proc. Amer. Math. Soc.* 141, 3223–3230 (2013) (Preprint (2010)).
  - 105) Spectral Nevanlinna-Pick and Carathéodory-Fejér problems (joint paper with N. Nikolov (Bulgaria) and P.J. Thomas (France)); *Indiana Univ. Math. Journal* 60, 883 – 894 (2011) (Preprint (2010)).
  - 106) Exhausting domains of the symmetrized bidisc (joint paper with W. Zwonek (Poland)); *Arkiv for Matematik* 50, 397 – 402 (2012) (Preprint (2010)).
  - 107) Two-dimensional slices of non-pseudoconvex open sets (joint paper with N. Nikolov (Bulgaria)); *Math. Zeitschrift* 272, 381 – 388 (2012) (Preprint (2011)).
  - 108) A note on envelopes of holomorphy (joint paper with M. Jarnicki (Poland)); *J. Geom. Anal.* 25, 1175 – 1184 (2015) (Preprint (2013)).
  - 109) A counterexample to a theorem of Bremermann on Shilov boundaries (joint work with M. Jarnicki (Poland)); *Proc. Amer. Math. Soc.* 143, 1675–1677 (2015) (Preprint (2013)).
  - 110) A counterexample to a theorem of Bremermann on Shilov boundaries – revisited (joint work with M. Jarnicki (Poland)); *Univ. Iagell. Acta Math.* 53, 21–25 (2016) (Preprint (2015)).
  - 111)  $L_h^2$ -functions in unbounded balanced domains (joint work with W. Zwonek (Poland)); *J. Geom. Anal.* DOI 10.1007/s12220-016-9754-3 (to appear) (Preprint (2016)).
  - 112) Regularity of complex geodesics and (non)-Gromov hyperbolicity of convex tube domains (joint work with W. Zwonek (Poland)); *Forum mathematicum* (to appear) (Preprint (2016)).
  - 113) A remark on the product property for the generalized Möbius function (joint work with M. Jarnicki (Poland)); *Proc. Amer. Math. Soc.* (to appear) (Preprint (2017))