

**(i) Monografie**

- [1] J. Lukeš, J. Malý, L. Zajíček, Fine Topology Methods in Real Analysis and Potential Theory, 472 pp., Lecture Notes in Math. 1189, Springer–Verlag, Berlin, New York, 1986.

**(ii) Původní vědecké články (Research articles)**

- [2] L. Zajíček, O Baireových třídách, Časopis Pěst. Mat. 95(1970), 240–241.
- [3] L. Zajíček, Poznámka k teorii integrálu, Časopis Pěst. Mat. 95(1970), 242–247.
- [4] L. Zajíček, On the intersection of the sets of the right and left internal approximate derivatives, Czechoslovak Math. J. 23(98), (1973), 629–634.
- [5] I. Netuka, L. Zajíček, Functions continuous in the fine topology for the heat equation, Časopis Pěst. Mat. 99(1974), 300–306.
- [6] L. Zajíček, On cluster sets of arbitrary functions, Fund. Math. 83(1974), 197–217.
- [7] J. Lukeš, L. Zajíček, Fine topologies as examples of non–Blumberg Baire spaces, Comment. Math. Univ. Carolinae 17(1976), 683–688.
- [8] L. Zajíček, Sets of  $\sigma$ –porosity and sets of  $\sigma$ –porosity (q), Časopis Pěst. Mat. 101(1976), 350–359.
- [9] J. Lukeš, L. Zajíček, Connectivity properties of fine topologies, Rev. Roumaine Math. Pures Appl. 22( 1977), 679–684.
- [10] J. Lukeš, L. Zajíček, The insertion of  $G_\delta$  sets and fine topologies, Comment. Math. Univ. Carolinae 18(1977), 101–104.
- [11] J. Lukeš, L. Zajíček, When finely continuous functions are of the first class of Baire, Comment. Math. Univ. Carolinae 18(1977), 647–657.
- [12] L. Zajíček, On the points of multiplicity of monotone operators, Comment. Math. Univ. Carolinae 19(1978), 179–189.
- [13] L. Zajíček, On the points of multivaluedness of metric projections in separable Banach spaces, Comment. Math. Univ. Carolinae 19(1978), 513–523.
- [14] L. Zajíček, An elementary proof of the one–dimensional density theorem, Amer. Math. Monthly 86(1979), 297–298.
- [15] L. Zajíček, On the differentiation of convex functions in finite and infinite dimensional spaces, Czechoslovak Math.J. 29(104),(1979), 340–348.
- [16] L. Zajíček, A note on norm–attaining functionals, Časopis Pěst. Mat. 106(1981), 168–169. ■
- [17] L. Zajíček, On the symmetry of Dini derivatees of arbitrary functions, Comment. Math. Univ. Carolinae 22(1981), 195–209.
- [18] L. Zajíček, On approximate Dini derivatees and one–sided approximate derivatees of arbitrary functions, Comment. Math. Univ. Carolinae 22(1981), 549–560.
- [19] L. Zajíček, On Dini derivatives of continuous and monotone functions, Real Anal. Exchange 7(1981/82), 233–238.
- [20] L. Zajíček, On preponderant maxima, Colloq. Math. 46(1982), 289–291.

- [21] M. Fabián, L. Zajíček, V. Zizler, On residuality of the set of rotund norms on a Banach spaces, *Math. Ann.* 258(1982), 349–351.
- [22] D. Preiss, L. Zajíček, On the symmetry of approximate Dini derivate of arbitrary functions, *Comment. Math. Univ. Carolinae* 23(1982), 691–697.
- [23] L. Zajíček, A note on partial derivatives of convex functions, *Comment. Math. Univ. Carolinae* 24(1983), 89–91.
- [24] L. Zajíček, Differentiability of the distance functions and points of multi-valuedness of metric projection in Banach space, *Czechoslovak Math.J.* 33(108),(1983), 292–308.
- [25] L. Zajíček, On differentiation of metric projections in finite dimensional Banach spaces, *Czechoslovak Math.J.* 33(108),(1983), 325–336.
- [26] L. Zajíček, A generalization of an Ekeland–Lebourg theorem and the differentiability of distance functions, *Rend. Circ. Mat. Palermo* (2), Suppl. No. 3, (1984), 403–410.
- [27] D. Preiss, L. Zajíček, Fréchet differentiation of convex functions in Banach space with a separable dual, *Proc. Amer. Math. Soc.* 91(1984), 202–204.
- [28] L. Zajíček, On the Fréchet differentiability of distance functions, *Rend. Circ. Mat. Palermo* (2), Suppl. No. 5, (1984), 161–165.
- [29] D. Preiss, L. Zajíček, Stronger estimates of smallness of sets of Fréchet non-differentiability of convex functions, *Rend. Circ. Mat. Palermo* (2), Suppl. no. 3, (1984), 219–223.
- [30] L. Zajíček, Porosity, I-density topology and abstract density topologies, *Real Anal. Exchange* 12(1986/87), 313–326.
- [31] L. Zajíček, Alternative definitions of J-density topology, *Acta Univ. Carolinae—Math. et Phys.* 28(1987), 57–61.
- [32] L. Zajíček, Strict differentiability via differentiability, *Acta Univ. Carolinae—Math. et. Phys.* 28(1987), 157–159.
- [33] L. Zajíček, Metričeskaja projekcija i metričeskaja funkcija v prostranstvach Banacha, v sborniku: Teorija približenij funkcijs - Trudy mežd. konf. po teoriji pribl. funkcijs, Kijev 1983, 179–182, Moskva 1987.
- [34] A. Nekvinda, L. Zajíček, A simple proof of the Rademacher theorem, *Časopis Pěst. Mat.* 113(1988), 337–341.
- [35] J. Malý J., D. Preiss , L. Zajíček, An unusual monotonicity theorem with applications, *Proc. Amer. Math. Soc.* 102(1988), 925–932.
- [36] L. Veselý L., L. Zajíček, Delta–convex mappings between Banach spaces and applications, *Dissertationes Math. (Rozprawy Mat.)* 289(1989), 1–48.
- [37] L. Zajíček, On  $\sigma$ –porous sets and Borel sets, *Topology and its Applications* 33(1989), 99–103.
- [38] L. Zajíček, Porosity, derived numbers and knot points of typical continuous functions, *Czechoslovak Math. J.* 39(114), (1989), 45–52.
- [39] L. Zajíček, Unpublished results of K. Pekár and H. Zlonická on preponderant derivatives and  $M_4$  sets, *Real Anal. Exchange* 15(1989/90), 413–418.

- [40] J. Malý, L. Zajíček, Approximate differentiation: Jarník's points, *Fund. Math.* 140(1991), 87–97.
- [41] L. Zajíček, Fréchet differentiability, strict differentiability and subdifferentiability, *Czechoslovak Math. J.* 41(116), (1991), 471–489.
- [42] L. Zajíček, Smallness of sets of nondifferentiability of convex functions in non-separable Banach spaces, *Czechoslovak Math. J.* 41(116), (1991), 288–296.
- [43] J. Tišer, L. Zajíček, Typical measurable function in the topology of close approximation, *Acta Math. Univ. Comenianae LX*(1991), 23–29.
- [44] L. Zajíček, An elementary proof of the one-dimensional Rademacher theorem, *Math. Bohemica* 117(1992), 133 – 136.
- [45] L. Zajíček, A note on singular points of convex functions in Banach spaces, *Acta Univ. Carolinae-Math. et Phys.* 34(1993), 179–185.
- [46] L. Zajíček, A note on the symmetric and ordinary derivative, *Atti Sem. Mat. Fis. Univ. Modena XLI*(1993), 263–267.
- [47] L. Zajíček, On essential derived numbers of typical continuous functions, *Tatra Mountains Math. Publ.* 2(1993), 1–3.
- [48] J. R. Najáres J. R., L. Zajíček, A  $\sigma$ -porous set need not be  $\sigma$ -bilaterally porous, *Comment. Math. Univ. Carolinae* 35(1994), 697–703.
- [49] L. Zajíček, A note on the O'Malley density property, *Real Anal. Exchange* 19(1993/94), 575–578.
- [50] L. Zajíček, A theorem concerning  $n$ -dimensional Maximoff theorem, *Atti Sem. Mat. Fis. Univ. Modena XLII*(1994), 255–263.
- [51] P. Holický, J. Malý, C. E. Weil, L. Zajíček, A note on the gradient problem, *Real Anal. Exchange* 22(1996/97), 225–235.
- [52] L. Zajíček, On preponderant differentiability of typical continuous functions, *Proc. Amer. Math. Soc.* 124(1996), 789–798.
- [53] L. Zajíček, Products of non- $\sigma$ -porous sets and Foran systems, *Atti Sem. Mat. Fis. Univ. Modena XLIV*(1996), 497–505.
- [54] L. Zajíček, On differentiability properties of Lipschitz functions on a Banach space with a Lipschitz uniformly Gâteaux differentiable bump function, *Comment. Math. Univ. Carolinae* 38(1997), 329–336.
- [55] L. Zajíček, Supergeneric results and Gâteaux differentiability of convex and Lipschitz functions on small sets, *Acta Univ. Carolinae-Math. et Phys.* 38(1997), 19–37.
- [56] L. Zajíček, Ordinary derivative via symmetric derivative and Lipschitz condition via symmetric Lipschitz condition, *Real Anal. Exchange* 23(1997–98), 653–670.
- [57] L. Zajíček, Small non-sigma-porous sets in topologically complete metric spaces, *Colloq. Math.* 77(1998), 293–304.
- [58] E. Matoušková, L. Zajíček, Second order differentiability and Lipschitz smooth points of convex functionals, *Czechoslovak Math. J.* 48(123) (1998), 617–640.
- [59] P. Holický, M. Šmídek, L. Zajíček, Convex functions with nonmeasurable set of Gâteaux differentiability points, *Comment. Math. Univ. Carolinae* 39(1998), 469–482.

- [60] D. Preiss L., Zajíček, Sigma-porous sets in products of metric spaces and sigma-directionally porous sets in Banach spaces, *Real Anal. Exchange* 24 (1998-99), 295–313.
- [61] P.Holický, S.P.Ponomarev, L.Zajíček, M.Zelený, Structure of the set of continuous functions with the Luzin property (N) , *Real Analysis Exchange* 24 (1998/9), 635–656.
- [62] L. Zajíček, A note on intermediate differentiability of Lipschitz functions, *Comment. Math. Univ. Carolinae* 40(1999), 795–799.
- [63] P.Holický a L.Zajíček: Nondifferentiable functions, Haar null sets and Wiener measure, *Acta Univ. Carolinae* 41(2000), 7–11.
- [64] D. Preiss, L. Zajíček, On Dini and approximate Dini derivates of typical continuous functions, *Real Analysis Exchange* 26 (2000/2001), 401–412.
- [65] D. Preiss, L. Zajíček, Directional derivatives of Lipschitz functions, *Israel J. Math.* 125(2001), 1–27.
- [66] L. Veselý, L. Zajíček: On d.c. mappings and differences of convex operators, *Acta Math. Univ. Carolinae* 42 (2001), 89–97.
- [67] L. Zajíček: An unpublished result of P. Šlecht: sets of type  $H^{(s)}$  are  $\sigma$ -bilaterally porous, *Real. Analysis Exchange* 27 (2001/2002), 363–372.
- [68] A. Nekvinda, L. Zajíček: Gâteaux differentiability of Lipschitz functions via directional derivatives, *Real Anal. Exchange* 28 (2002/03), 287-320.
- [69] M.E. Mera, M. Morán, D. Preiss, L. Zajíček:, Porosity, sigma-porosity and measures, *Nonlinearity* 16 (2003), 247-255.
- [70] A. Nekvinda, L. Zajíček: Extensions of real and vector functions of one variable which preserve differentiability. *Real Anal. Exchange* 30 (2004/05), 435-450.
- [71] L. Zajíček:, M. Zelený: On the complexity of some sigma-ideals of sigma-P-porous sets, *Comment. Math. Univ. Carolin.* 44 (2003), 531-554.
- [72] J. Duda, L. Veselý, L. Zajíček: On d.c. functions and mappings, *Atti Sem. Mat. Fis. Univ. Modena* 51 (2003), 111-138.
- [73] J. Duda, L. Zajíček: The Banach-Zarecki theorem for functions with values in metric spaces, *Proc. Amer. Math. Soc.* 133 (2005), 3631-3633.
- [74] L. Zajíček:, M. Zelený, Inscribing closed non-sigma-lower porous sets into Suslin non-sigma-lower porous sets, *Abstract and Applied Analysis* 2005(2005), 221-228.
- [75] P. Holický, L. Zajíček, M. Zelený: A remark on a theorem of Solecki, *Comment. Math. Univ. Carolinae* 46 (2005), 43-54.
- [76] M. Zelený, L. Zajíček: Inscribing compact non-sigma-porous sets into analytic non-sigma-porous sets, *Fund. Math.* 185 (2005), 19-39.
- [77] L. Zajíček: On differentiability properties of typical continuous functions and Haar null sets, *Proc. Amer. Math. Soc.* 134 (2006), 1143-1151.
- [78] D. Pavlica, L. Zajíček: Morse-Sard theorem for d.c. functions and mappings on  $R^2$ , *Indiana Univ. Math. J.* 55 (2006), 1195-1207.
- [79] L. Veselý, L. Zajíček: On connections between delta-convex mappings and convex operators, *Proc. Edinburgh Math. Soc.* 49 (2006), 739-751.

- [80] P. Holický, O. Kalenda, L. Veselý, L. Zajíček: Quotients of continuous convex functions on nonreflexive Banach spaces, Bull. Pol. Acad. Sci. Math. 55 (2007), 211–217.
- [81] L. Zajíček: On sets of non-differentiability of Lipschitz and convex functions, Math. Bohem. 132 (2007), 75–85.
- [82] D. Pavlica, L. Zajíček: On the directions of segments and  $r$ -dimensional balls on a convex surface, J. Convex Anal. 14 (2007), 149–167.
- [83] L. Zajíček: A  $C^1$  function which is nowhere strongly paraconvex and nowhere semiconcave, Control Cyber. 36 (2007), 803–810.
- [84] P. Holický, C. Weil and L. Zajíček: A note on the Darboux property of Fréchet derivatives, Real Anal. Exchange 32 (2007), 489–494.
- [85] J. Duda, L. Zajíček: Curves in Banach spaces - differentiability via homeomorphisms, Rocky Mountain J. Math. 37 (2007), 1493–1525.
- [86] L. Zajíček, Differentiability of approximately convex, semiconcave and strongly paraconvex functions, J. Convex Anal. 15 (2008), 1–15.
- [87] L. Zajíček, On Lipschitz and d.c. surfaces of finite codimension in a Banach space, Czechoslovak Math. J. 58(133) (2008), 849–864.
- [88] L. Veselý, L. Zajíček, On vector functions of bounded convexity, Math. Bohem. 133 (2008), 321–335.
- [89] M. Csörnyei, J. Kališ, L. Zajíček, Whitney arcs and 1-critical arcs, Fund. Math. 199 (2008), 119–130.
- [90] J. Duda, L. Zajíček, Semiconvex functions: representations as suprema of smooth functions and extensions, J. Convex Anal. 16 (2009), 239–260.
- [91] L. Veselý, L. Zajíček, On compositions of D.C. functions and mappings, J. Convex Anal. 16 (2009), 423–439.
- [92] J. Duda, L. Zajíček, On vector-valued curves that allow a  $C^{1,\alpha}$  parametrization, Acta Math. Hungar. 127 (2010), 85–111.
- [93] L. Zajíček, A note on propagation of semiconcave functions of two variables, Comment. Math. Univ. Carolin. 51 (2010), 453–458.
- [94] M. Koc, L. Zajíček, On Kantorovich’s result on the symmetry of Dini derivatives, Comment. Math. Univ. Carolin. 51 (2010), 619–629.
- [95] L. Veselý, L. Zajíček, On extensions of d.c. functions and convex functions, J. Convex Anal. 17 (2010), 427–440.
- [96] J. Rataj, L. Zajíček, Properties of distance functions on convex surfaces and applications, Czechoslovak Math. J. 61 (136) (2011), 247–269.
- [97] J. Duda, L. Zajíček, Curves in Banach spaces which allow a  $C^2$ -parameterization, J. Lond. Math. Soc. 83 (2011), 733–754.
- [98] L. Zajíček, Generic Fréchet differentiability on Asplund spaces via a.e. strict differentiability on many lines, J. Convex Anal. 19 (2012), 23–48.
- [99] J. Rataj, L. Zajíček, Critical values and level sets of distance functions in Riemannian, Alexandrov and Minkowski spaces, Houston J. Math. 38 (2012), 445–467.
- [100] L. Zajíček, Singular points of order  $k$  of Clarke regular and arbitrary functions, Comment. Math. Univ. Carolin. 53 (2012), 51–63.

- [101] M. Koc, L. Zajíček, A joint generalization of Whitney's  $C^1$  extension theorem and Aversa-Laczkovich-Preiss extension theorem, *J. Math. Anal. Appl.* 388 (2012), 1027–1037.
- [102] L. Veselý, L. Zajíček, On differentiability of convex operators, *J. Math. Anal. Appl.* 402 (2013), 12–22.
- [103] J. Duda, L. Zajíček, Smallness of singular sets of semiconvex functions in separable Banach spaces, *J. Convex Anal.* 20 (2013), 573–598.
- [104] L. Zajíček, A Lipschitz function which is  $C^\infty$  on a.e. line need not be generically differentiable, *Colloq. Math.* 131 (2013), 29–39.
- [105] J. Duda, L. Zajíček, Curves in Banach spaces which allow a  $C^{1,BV}$  parametrization or a parametrization with finite convexity, *Czechoslovak Math. J.* 63(138) (2013), 1057–1085.
- [106] L. Zajíček, Remarks on Fréchet differentiability of pointwise Lipschitz, cone-monotone and quasiconvex functions, *Comment. Math. Univ. Carolin.* 55 (2014), 203–213.
- [107] L. Zajíček, Gâteaux and Hadamard differentiability via directional differentiability, *Journal Convex Anal.* 21 (2014), 703–713.
- [108] M. Johanis, L. Zajíček, Smoothness via directional smoothness and Marčaud's theorem in Banach spaces, *J. Math. Anal. Appl.* 423 (2015), 594–607.
- [109] L. Zajíček, Hadamard differentiability via Gâteaux differentiability, *Proc. Amer. Math. Soc.* 143 (2015), 279–288.
- [110] J. Malý, L. Zajíček, On Stepanov type differentiability theorems, *Acta Math. Hungar.* 145 (2015), 174–190.
- [111] L. Zajíček, Properties of Hadamard directional derivatives: Denjoy-Young-Saks theorem for functions on Banach spaces, *J. Convex Anal.* 22 (2015), 161–176.
- [112] V. Kryštof, L. Zajíček, Differences of two semiconvex functions on the real line, *Comment. Math. Univ. Carolin.* 57 (2016), 21–37.
- [113] L. Veselý, L. Zajíček, Spaces of d.c. mappings on arbitrary intervals, *J. Convex Anal.* 23 (2016), 11611183.
- [114] J. Rataj, L. Zajíček, On the structure of sets with positive reach, *Math. Nachr.*, DOI 10.1002/mana.201600237, publikováno online 6.1.2017.
- [115] L. Zajíček, On semiconcavity via the second difference, přijato do *J. Convex Anal.*, vyjde v 25 (2018), No.1.
- [ ]

(v) Přehledy a souborné referáty (Surveys)

[S1] L. Zajíček, Porosity and  $\sigma$ -porosity, *Real Anal. Exchange* 13(1987/88), 314–350.

[S2] L. Zajíček, The differentiability structure of typical functions in  $C(0, 1)$ , *Real Anal. Exchange* 13(1987/88), pp. 119, 103–106, 93.

[S3] L. Zajíček, On sigma-porous sets in abstract spaces, *Abstract and Applied Analysis* 2005 (2005), 509–534.

(vi) Ostatní publikace (Other publications)

- [O1] L. Zajíček, Třináctý Hilbertův problém, Pokroky Mat. Fyz. Astronom. 19(1974), 22–28.
- [O2] J. Bečvář, L. Zajíček, Weyrův spor s Pexiderem, v brožuře: J. Bečvář a kol. : Eduard Weyr 1852–1903, 143–162, Prometheus, Praha 1995.
- [O3] L. Zajíček, On results of Jan Mařík in the theory of derivatives, Math. Bohemica 121(1996), 385–395.
- [O4] L. Zajíček, Obecná teorie derivování funkcí a měr na katedře matematické analýzy MFF UK, Pokroky matematiky, fyziky a astronomie 45(2000), 188–207.

(iii) Učební texty (Textbooks)

- [T1] Vybrané úlohy z matematické analýzy pro 1. a 2. ročník, Matfyzpress 1998, 2000, 2005.
- [T2] Vybrané partie z matematické analýzy pro 2. ročník, Matfyzpress 2003, 2007.