

LIST OF PUBLICATIONS OF E. MAKAI, JR.  
(95 PUBLICATIONS)

- (1) E. Makai, Notes on real closed fields. *Annales Univ. Sci. Budapest* 13 (1970) 35–55.
- (2) E. Makai, The space of bounded maps into a Banach space. *Publ. Math. Debrecen* 19(1972) 177–179.
- (3) E. Makai, Compactifications and a dual of compact spaces. *Stud. Sci. Math. Hung.* 7(1972) 199–200.
- (4) E. Makai, On centrosymmetric convex domains with a packing density independent of the direction. *Stud. Sci. Math. Hung.* 7 (1972) 423–424.
- (5) E. Makai, The space of bounded maps into a Banach space. *General Topology and its Relations to Modern Analysis and Algebra III.*, Proc. III. Prague Top. Symp. 1971, 289.
- (6) E. Makai, A goniometric inequality. *Publ. Elektrotehn. Fak. Univ. Beograd*, No. 381 - No. 409 (1972) No. 408, 139–142.
- (7) E. Makai, Síkbeli halmazok kisebb részekre osztása. (Subdivision of planar sets to smaller parts, Hungarian) *Mat. Lapok* 23 (1-2) (1972) 129–133.
- (8) E. Makai, On the geodesic diameter of convex surfaces. *Period. Math. Hung.* 4 (2-3), (1973) 157–161.
- (9) L. Fejes Tóth, E. Makai, On the thinnest non-separable lattice of convex plates *Studia Sci. Math. Hung.* 9 (1974), 191–193.
- (10) E. Makai, Problem 11. *Periodica Math. Hung.* 5 (4) (1974) 353–354.
- (11) E. Makai, T. Tarnai, On some geometrical problems of single-layered spherical grids with triangular network. II. *International Conf. on Space Structures*, Univ. Surrey, Guilford, 1975, preprint volume (replacing conference proceedings), 675–682.
- (12) E. Makai, T. Tarnai, Morphology of spherical grids — Gömbrácsok morfológiája *Műszaki Tudomány* 51 (1-2), (1976), 123–156. – *Acta Techn. Acad. Sci. Hung.* 83 (3-4) (1976) 247–283. (same in English and Hungarian)
- (13) E. Makai, Problem 20. *Periodica Math. Hung.* 7 (3-4) (1976) 319–320.
- (14) E. Makai, The isomorphisms of the categories of uniform spaces and related categories. *Acta Math. Acad. Sci. Hung.* 32 (1-2) (1978) 121–128.
- (15) E. Makai, On the thinnest non-separable lattice of convex bodies. *Studia Sci. Math. Hung.* 13 (1978) 19–27.
- (16) H. Andréka, E. Makai, L. Márki, I. Németi, Reduced products in categories. *Contributions to general algebra*, Proc. Klagenfurt Conference 1978 (Eds. H. Kautschitsch, W. B. Müller, W. Nöbauer), Heyn Verl., Klagenfurt, 1979,

25–45.

- (17) E. Makai, Continuous fields of Banach spaces. *Colloquia Math. Soc. J. Bolyai* 23, Topology, Budapest 1978, 815–825.
- (18) E. Makai, On a dual of Tarski's plank problem. *Berichtsband Diskr. Geom.* 2. *Kolloq. Inst. Math. Univ. Salzburg* 1980 (1980) 127–132.
- (19) E. Makai, Correction to my paper "The space of bounded maps into a Banach space". *Publ. Math. Debrecen* 28 (1-2) (1981) 189.
- (20) E. Makai, The full embeddings of the category of proximity spaces into itself. *Gen. Top. and its Rel. to Modern Anal. Alg. V., Proc. V. Prague Top. Symp.* 1981, 474.
- (21) E. Makai, J. Zemánek, Geometrical means of eigenvalues *J. Operator Th.* 7 (1982) 173–178.
- (22) I. Fáry, E. Makai, Isoperimetry in variable metrics. *Studia Sci. Math. Hung.* 17 (1-4) (1982) 143–158.
- (23) E. Makai, J. Zemánek), The surjectivity radius, packing numbers and boundedness below of linear operators. *Integral Equations and Operator Theory* 6 (1983) 372–384.
- (24) Trần Trong Huê, E. Makai, F. Szász, A topology on the class of unequivocal rings. *Math. Nachr.* 108 (1982) 307–311.
- (25) I. Fáry, E. Makai, Problem 31. *Periodica Math. Hung.* 14 (1) (1983) 111–113.
- (26) E. Makai, J. Pach, Controlling function classes and covering Euclidean space. *Studia Sci. Math. Hung.* 18 (1983) 435–459.
- (27) E. Makai, Uniformities uniquely determined by their uniformly continuous self-maps. *Studia Sci. Math. Hung.* 19 (1984) 1–12.
- (28) E. Makai,  $k$ -compactness and ordered spaces. (*Proc. Eger, Top. Coll.* 1983), *Coll. Math. Soc. J. Bolyai* 41, Topology, Theory and Appl. Eger 1985, 393–405.
- (29) I. Böröczky, Bárány, E. Makai, J. Pach, Maximal volume enclosed by plates and proof of the chessboard conjecture. *Discrete Math.* 60, (1986) 101–120.
- (30) E. Makai, T. Tarnai, A movable pair of tetrahedra. *Proc. Royal Society London A*, 423 (1989) 419–442.
- (31) E. Makai, Five-neighbour packing of convex plates. (*Proc. Conf. Intuitive Geom. Siófok*, 1985), *Coll. Math. Soc. J. Bolyai*, 48, Intuitive Geometry, Siófok, 1985, 373–381.
- (32) E. Makai,  $k$ -compactness and ordered spaces. *Gen. Top. Rel. Modern Anal. Alg. VI., Proc. VIth Prague Top. Symp.* 1986 (1988), Abstracts submitted at the Symposium, 702–703.
- (33) E. Makai, On polyhedra with approximately equal edges. Spherical grid

- structures. Geometric essays on geodesic domes, Hungarian Inst. for Building Science, Budapest, 1987, 210–232.
- (34) E. Makai, T. Tarnai, Uniformity of networks of geodesic domes. Spherical grid structures, Geometric essays on geodesic domes, Hungarian Institute for Building Science, Budapest 1987, 169–209.
- (35) E. Makai, H. Martini, A lower bound on the number of sharp shadow-boundaries of convex polytopes. *Periodica Math. Hung.* 20 (1989) 249–260.
- (36) E. Makai, H. Martini, Zur Anzahl scharfer Schattengrenzen konvexer Polytope. *Berichtsband 3. Koll. Geom. Kombinatorik, TU Karl-Marx-Stadt 1987* (1988) 35–36.
- (37) E. Makai, The full embeddings of the categories of uniform spaces, proximity spaces and related categories into themselves and each other II, *Studia Sci. Math. Hung.* 27 (1992) 1–24.
- (38) E. Makai, T. Tarnai, Physically inadmissible motions of a movable pair of tetrahedra. *Proc. III. International Conf. on Engineering Graphics and Descriptive Geom., Vienna, 1988, Vol. 2*, 264–271.
- (39) A. Bezdek, K. Bezdek, E. Makai, P. McMullen, Facets with fewest vertices. *Monatshefte für Math.*, 109 (1990) 89–96.
- (40) B. Carl, E. Makai, New covering numbers and spectral properties of operators in Banach spaces. *Anal. Math.*, 17 (1991) 183–209.
- (41) E. Makai, J. Zemánek, On polynomial connections between projections. *Linear Alg. Appl.* 126 (1989) 91–94.
- (42) E. Makai, The full embeddings of the categories of uniform spaces, proximity spaces and related categories into themselves and each other I. *Studia Sci. Math. Hung.* 25 (1990), 199–208.
- (43) E. Makai, H. Martini, T. Tarnai, Ein bewegliches Tetraederpaar Alpha, *Math. Schülerzeitschrift*, 24 (1990) 33–34.
- (44) E. Makai, T. Tarnai, Kinematical indeterminacy of a pair of tetrahedral frames. *Acta Techn. Acad. Sci. Hung.* 102 (1989) 123–145.
- (45) A. Bezdek, W. Kuperberg, E. Makai, Maximum density space packing with parallel strings of spheres. *Discr. and Comput. Geom.* 6 (1991) 277–283.
- (46) E. Makai, H. Martini, A new characterization of convex plates of constant width. *Geom. Ded.* 34 (1990) 199–209.
- (47) E. Makai, H. Martini, On the number of antipodal, or strictly antipodal pairs of points in finite subsets of  $R^d$ . *Appl. Geom. and Discr. Math.*, The V. Klee Festschrift, DIMACS Series in Discr. Math. and Theor. Comp. Sci. Vol. 4 (Eds. P. Gritzmann, B. Sturmfels), Providence, RI, Amer. Math. Soc., and Baltimore, Maryland, Ass. Comput. Mach. (1991), 457–470.
- (48) P. Erdős, E. Makai, J. Pach, J. Spencer, Gaps in difference sets, and the

- graph of nearly equal distances. *Appl. Geom. and Discr. Math., The V. Klee Festschrift, DIMACS Series in Discr. Math. and Theor. Comp. Sci. Vol. 4* (Eds. P. Gritzmann, B. Sturmfels), Providence, RI, Amer. Math. Soc., and Baltimore, Maryland, Ass. Comput. Mach. (1991), 265–273.
- (49) A. Bezdek, K. Bezdek, E. Makai, Interior points of the convex hull of few points in  $E^d$ . *Monatsh. f. Math.* 111 (1991) 181–186.
- (50) K. Böröczky, G. Kertész, E. Makai, The minimum area of simple polygons with given side lengths Abstract of lecture, *Berichtsband 6. Österreichisch-Ungarische Geometrie-Tagung, Szombathely, 1990*, 49-50.
- (51) E. Makai, Automorphisms and full embeddings of categories in algebra and topology. *Category Theory at Work, Proc. Bremen Conf. on Cat. Th.*, 1990 (Eds. H. Herrlich, H.-E. Porst), Heldermann, Berlin, (1991), 217–260.
- (52) E. Makai, H. Martini, On the number of antipodal or strictly antipodal pairs of points in finite subsets of  $R^d$ , II. *Periodica Math. Hung.* 27 (1993), 185-198.
- (53) E. Makai, V. Soltan, Lower bounds on the numbers of shadow boundaries and illuminated regions of a convex body, *Coll. Math. Soc. J. Bolyai 63, Intuitive Geom. Szeged (Hungary) 1991*, 249-268.
- (54) P. Erdős, E. Makai, J. Pach, Nearly equal distances in the plane, *Combinatorics, Probability and Computing*, 2 (1993), 401-408; also in *Combinatorics, geometry and probability, Tribute to P. Erdős, Proc. Conf. ded. to P. Erdős on the occ. of his 80-th birthday, Cambridge, UK, 26 March 1993*, Cambridge, Cambr. Univ. Press, 1997, 283-290
- (55) E. Makai, H. Martini, The cross-section body, plane sections of convex bodies, and approximation of convex bodies, I., *Geom. Ded.*, 63 (1996), 267-296.
- (56) E. Makai, H. Martini, The cross-section body, plane sections of convex bodies, and approximation of convex bodies, II. *Geom. Ded.* 70 (1998), 283-303
- (57) E. Makai, H. Martini, On bodies associated with a given convex body, *Canad. Math. Bull.*, 39 (1996), 448-459.
- (58) P. Erdős, E. Makai, J. Pach, Solution of a problem on the M. Schweitzer mathematical student competition, 1993, (in Hungarian) *Mat. Lapok* 3 (1993) (4), 31-33
- (59) B. Aupetit, E. Makai, J. Zemánek, Strict convexity of the singular value sequences, *Acta Sci. Math. Szeged*, 62 (1996), 517-521
- (60) P. Erdős, E. Makai, I. Vincze, On the best approximating ellipse containing a plane convex body, *Stud. Sci. Math. Hungar.* 33 (1997), 111-116
- (61) Á. Császár, E. Makai, Characterization of function classes  $C(Y)|X$ , *Acta Math. Hungar.* 81 (1998), 95-107

- (62) E. Makai, On a theorem of I. Juhász on the image weight spectrum, *Periodica Math. Hungar.* 35 (1997), 43-46
- (63) E. Makai, The mathematical works of Ákos Császár (in Hungarian), *Mat. Lapok*, New series 4 (1994) (4), 14-39
- (64) E. Makai, H. Martini, V. Soltan, Unilateral tilings of the plane with squares of three sizes, *Beitr. Alg. Geom.* 39 (1998), 481-495
- (65) T. Hausel, E. Makai, A. Szűcs, Polyhedra inscribed and circumscribed to convex bodies, *General Mathematics (Sibiu)*, 5 (1997), 183-190
- (66) E. Makai, Bodies associated to convex bodies (in Hungarian), *Közgyűlési Előadások 1998*, Magyar Tud. Akad., Budapest, 1999, 127-130
- (67) E. Makai, S. Vrećica, R. Živaljević, Plane sections of convex bodies of maximal volume, *Discr. Comput. Geom.* 25 (2001), 33-49, DOI: 10.1007/s004540010070
- (68) E. Makai, T. Tarnai, Overconstrained sliding mechanisms, *Proc. IU-TAM/IASS Symp. on Deployable Structures: Theory and Appls.* (S. Pellegrino and S. D. Guest, eds.), Kluwer, Dordrecht, 2000, 261-270
- (69) E. Makai, H. Martini, T. Ódor, Maximal sections and centrally symmetric bodies, *Mathematika* 47 (2000), 19-30
- (70) T. Hausel, E. Makai, A. Szűcs, Inscribing cubes and covering by rhombic dodecahedra via equivariant topology, *Mathematika* 47 (2000), 371-397
- (71) K. Böröczky, G. Kertész, E. Makai, The minimum area of a simple polygon with given side lengths, *Periodica Math. Hungar.* 39 (1999), 33-49
- (72) E. Makai, J. Pach, J. Spencer, New results on the distribution of distances determined by separated point sets, *Bolyai Soc. Math. Studies* 11 (Eds. G. Halász, L. Lovász, M. Simonovits, V. T. Sós), Paul Erdős and his Mathematics II, Springer, Berlin etc., J. Bolyai Math. Soc., 2002, 499-511
- (73) E. Makai, H. Martini, T. Ódor, On an integro-differential transform on the sphere, *Stud. Sci. Math. Hungar.* 38 (2001), 299-312
- (74) E. Makai, H. Martini, On maximal  $k$ -sections and related common transversals of convex bodies, *Canad. Math. Bull.* 47 (2004), 246-256
- (75) B. Aupetit, E. Makai, M. Mbekhta, J. Zemánek, The connected components of the idempotents in the Calkin algebra, and their liftings, *Operator Theory and Banach Algebras*, Conf. Proc., Rabat (Morocco) April 1999, Eds. M. Chidami, R. Curto, M. Mbekhta, F.-H. Vasilescu, J. Zemánek, Theta, Bucharest, 2003, 23-30
- (76) E. Makai, H. Martini, Projections of normed linear spaces with closed subspaces of finite codimension as kernels, *Period. Math. Hungar.* 52 (1), (2006), 41-46, DOI: 10.1556/PerMath.52.2006.1.3
- (77) G. Averkov, E. Makai, H. Martini, Characterizations of central symmetry

- in Minkowski spaces, *Stud. Sci. Math. Hungar.* 46 (2009), 493-514, DOI: 10.1556/SScMath.2009.1104
- (78) Á. Császár, E. Makai, Jr., Further remarks on  $\delta$ - and  $\theta$ -modifications, *Acta Math. Hungar.* 123 (2009), 223-228, DOI: 10.1007/s10474-009-8088-z
- (79) E. Makai, Jr., An addendum to our paper “Further remarks on  $\delta$ - and  $\theta$ -modifications”, *Acta Math. Hungar.* 126 (2010), 198, DOI: 10.1007/s10474-0010-9180-8
- (80) K. J. Böröczky, E. Makai, Jr., M. Meyer, S. Reisner, On the volume product of planar polar convex bodies — lower estimates with stability, *Stud. Sci. Math. Hungar.* 50 (2) (2013), 159-198, DOI: 10.1556/SScMath.50.2013.2.1235, <http://arxiv.org/abs/1507.01481>
- (81) E. Makai, Jr., H. Martini, Centrally symmetric convex bodies and sections having maximal quermassintegrals, *Stud. Sci. Math. Hungar.* 49 (2012), 188-199, DOI: 10.1556/SScMath.49.2012.2.1197, <http://arxiv.org/abs/1507.01467>
- (82) E. Makai, Jr., The recent status of the volume product problem, *Études Opératorielles*, Banach Center Publications **112**, Inst. Math., Polish Acad. Sci., Warszawa 2017, 273-280, DOI: 10.4064/bc112-0-14, <http://arxiv.org/abs/1507.01473>
- (83) E. Makai, Jr., The hereditary monoreflective subcategories of Abelian groups and  $R$ -modules, *Periodica Math. Hungar.* 65 (1) (2012), 107-123, DOI: 10.1007/s10998-012-6169-1
- (84) B. Aupetit, E. Makai, Jr., M. Mbekhta, J. Zemánek, Local and global liftings of analytic families of idempotents in Banach algebras, *Acta Sci. Math. Szeged* 80 (2014), 149-174, DOI: 10.14232/actasm-013-765-y, <http://arxiv.org/abs/1411.4788>
- (85) N. V. Abrosimov, E. Makai, Jr., A. D. Mednykh, Yu. G. Nikonorov, G. Rote, The infimum of the volumes of convex polytopes of any given facet areas is 0, *Stud. Sci. Math. Hungar.* 51 (2014) (4), 466-519, DOI: 10.1556/SScMath.51.2014.4.1292, <http://arxiv.org/abs/1304.6579>,
- (86) E. Makai, Jr., H. Martini, T. Ódor, On a theorem of D. Ryabogin and V. Yaskin about detecting symmetry, *Note di Matematica*, 34 (2) (2014), 1-5, DOI: 10.1285/i15900932v34n2p1, <http://arxiv.org/abs/1411.4480>
- (87) E. Makai, Jr., Epireflective subcategories of  $\text{Top}$ ,  $T_2$ -Unif, Unif closed under epimorphic images, or being algebraic, *Periodica Math. Hungar.*, 72 (2) (2016), 112-129, DOI: 10.1007/s10998-016-0110-y, <http://arxiv.org/abs/1407.1210>

- (88) E. Makai, Jr., J. Zemánek, Nice connecting paths in connected components of sets of algebraic elements in Banach algebras, *Czechosl. J. Math.* 66 (3) (2016), 821-828, DOI:10.1007/s10587-016-0294-6, <http://arxiv.org/abs/1601.01505>
- (89) E. Makai, Jr., H. Martini, Unique local determination of convex bodies, *Acta Math. Hungar.* 150 (2016), (1) 176-193, DOI: 10.1007/s10474-016-0640-z, <http://arxiv.org/abs/1602.00959>
- (90) E. Makai, Jr., E. Peyghan, B. Samadi, Weak and strong structures and the  $T_{3.5}$  property for generalized topological spaces, *Acta Math. Hungar.* 150 (1) (2016), 1-35, DOI: 10.1007/s10474-016-0653-7, <http://arxiv.org/abs/1604.02881>
- (91) J. Jerónimo-Castro, E. Makai, Jr., Ball characterizations in spaces of constant curvature, *Stud. Sci. Math. Hungar.* 55 (2018) (4), 421-478, DOI: 10.1556/012.2018.55.4.1406
- (92) E. Makai, Jr., T. Tarnai, A colouring problem for the dodecahedral graph, *Elem. der Math.* 76 (2021) (1), 1-9, 0013-6018/21/010001-9, DOI: 10.4171/EM/422
- (93) E. Makai, Jr., T. Tarnai, Generalized forms of an overconstrained sliding mechanism consisting of two congruent tetrahedra, *Studia Sci. Math. Hungar.* 60 (2023) (1), 43-75, DOI: 10.0556/012.2023.01534
- (94) J. Jerónimo-Castro, E. Makai, Jr., Ball characterizations in planes and spaces of constant curvature, I, *Studia Sci. Math. Hungar.* 61 (2024) (3), 274-310, DOI: <https://doi.org/10.1556/012.2024.04320>
- (95) P. Erdős, E. Makai, Jr., J. Pach, Two nearly equal distances in  $R^d$ , submitted
- (96) K. J. Böröczky, E. Makai, Jr., A strengthening of the Blaschke-Santaló inequality for  $\alpha$ -symmetric planar convex bodies, accepted, *DCCG Proc.*