

## Publication List

Karim Adiprasito

October 31, 2023

- [1] Karim Adiprasito, Joel Hakavuori, and Minas Margarithis. *Subadditivity of shifts, Eilenberg-Zilber shuffle products and cohomology of lattices*. preprint available at [math.huji.ac.il/~adiprasito/subadditivity.pdf](http://math.huji.ac.il/~adiprasito/subadditivity.pdf). 2023.
- [2] Karim Alexander Adiprasito, Stavros Argyrios Papadakis, Vasiliki Petrotou, and Johanna Kristina Steinmeyer. *Beyond positivity in Ehrhart Theory*. 2022. eprint: [arXiv:2210.10734](https://arxiv.org/abs/2210.10734).
- [3] Karim Adiprasito, Stavros Argyrios Papadakis, and Vasiliki Petrotou. *Anisotropy, biased pairings, and the Lefschetz property for pseudomanifolds and cycles*. 2021. eprint: [arXiv:2101.07245](https://arxiv.org/abs/2101.07245).
- [4] Karim Adiprasito, Sergey Avvakumov, and Roman Karasev. *A subexponential size  $\mathbb{R}P^n$* . *Combinatorica*, to appear. 2020. eprint: [arXiv:2009.02703](https://arxiv.org/abs/2009.02703).
- [5] Karim Adiprasito and Bruno Benedetti. *Sparse handlebody decompositions and non-finiteness of  $g_3 = 0$* . 2020. eprint: [arXiv:2011.08312](https://arxiv.org/abs/2011.08312).
- [6] Karim Adiprasito and Gaku Liu. *Normal crossing immersions, cobordisms and flips*. 2020. eprint: [arXiv:2001.01108](https://arxiv.org/abs/2001.01108).
- [7] Karim Adiprasito and Geva Yashfe. *The Partition Complex: an invitation to combinatorial commutative algebra*. *Surveys in Combinatorics*, British Combinatorial Committee, [arXiv:2008.01044](https://arxiv.org/abs/2008.01044). 2020. eprint: [arXiv:2008.01044](https://arxiv.org/abs/2008.01044).
- [8] Karim Adiprasito. *FAQ on the  $g$ -theorem and the hard Lefschetz theorem for face rings*. to appear in *Rendiconti di Matematica e delle sue Applicazioni*, arXiv:1906.05859. 2019.
- [9] Karim Adiprasito. *Unstable blueprints can be shared*. 2019. eprint: [arXiv:1909.10794](https://arxiv.org/abs/1909.10794).
- [10] Karim Adiprasito and Farhad Babae. “Convexity of complements of tropical varieties, and approximations of currents.” English. In: *Math. Ann.* 373.1-2 (2019), pp. 237–251. issn: 0025-5831; 1432-1807/e.
- [11] Karim Adiprasito, Daniel Kalmanovich, and Eran Nevo. *On the realization space of the cube*. arXiv:1912.09554. 2019.
- [12] Karim A. Adiprasito, Philip Brinkmann, Arnau Padrol, Pavel Paták, Zuzana Patáková, and Raman Sanyal. “Colorful simplicial depth, Minkowski sums, and generalized Gale transforms.” English. In: *Int. Math. Res. Not.* 2019.6 (2019), pp. 1894–1919. issn: 1073-7928; 1687-0247/e.
- [13] Karim Adiprasito. *Combinatorial Lefschetz theorems beyond positivity*. 2018. eprint: [arXiv:1812.10454](https://arxiv.org/abs/1812.10454).
- [14] Karim Adiprasito, June Huh, and Eric Katz. “Hodge theory for combinatorial geometries.” English. In: *Ann. Math. (2)* 188.2 (2018), pp. 381–452. issn: 0003-486X; 1939-8980/e.
- [15] Karim Adiprasito, Gaku Liu, Igor Pak, and Michael Temkin. *Log smoothness and polystability over valuation rings*. 2018. eprint: [arXiv:1806.09168](https://arxiv.org/abs/1806.09168).
- [16] Karim Adiprasito, Gaku Liu, and Michael Temkin. *Semistable reduction in characteristic 0*. 2018. eprint: [arXiv:1810.03131](https://arxiv.org/abs/1810.03131).
- [17] Karim Adiprasito and Eran Nevo. *Rigidity with few locations*. to appear in *Israel Journal of Mathematics*, arXiv:1806.03322. 2018.
- [18] Karim Adiprasito and Imre Bárány and Nabil H. Mustafa and Tamás Terpai. *Theorems of Carathéodory, Helly, and Tverberg without dimension*. to appear in *Discrete & Computational Geometry*, arXiv:1806.08725. 2018.
- [19] Karim Adiprasito. “A note on the simplex-cosimplex problem.” English. In: *Eur. J. Comb.* 66 (2017), pp. 5–12. issn: 0195-6698.
- [20] Karim Adiprasito. “Toric chordality.” English. In: *J. Math. Pures Appl. (9)* 108.5 (2017), pp. 783–807. issn: 0021-7824.
- [21] Karim Adiprasito and Bruno Benedetti. *A Cheeger-type exponential bound for the number of triangulated manifolds*. to appear in *Annales Henri Poincaré (A Journal of Theoretical and Mathematical Physics)*, arXiv:1710.00130. 2017.
- [22] Karim Adiprasito and Bruno Benedetti. *Barycentric subdivisions of convex complexes are collapsible*. to appear in *DCG, Ricky Pollack memorial issue*. 2017.
- [23] Karim Adiprasito, June Huh, and Eric Katz. “Hodge theory of matroids.” English. In: *Notices Am. Math. Soc.* 64.1 (2017), pp. 26–30. issn: 0002-9920; 1088-9477/e.
- [24] Karim A. Adiprasito and Bruno Benedetti. “Subdivisions, Shellability, and collapsibility of products.” English. In: *Combinatorica* 37.1 (2017), pp. 1–30. issn: 0209-9683; 1439-6912/e.

- [25] Karim A. Adiprasito, Bruno Benedetti, and Frank H. Lutz. “Extremal examples of collapsible complexes and random discrete Morse theory.” English. In: *Discrete Comput. Geom.* 57.4 (2017), pp. 824–853. ISSN: 0179-5376; 1432-0444/e.
- [26] Karim A. Adiprasito, Anders Björner, and Afshin Goodarzi. “Face numbers of sequentially Cohen-Macaulay complexes and Betti numbers of componentwise linear ideals.” English. In: *J. Eur. Math. Soc. (JEMS)* 19.12 (2017), pp. 3851–3865. ISSN: 1435-9855; 1435-9863/e.
- [27] Karim A. Adiprasito and Arnau Padrol. “The universality theorem for neighborly polytopes.” English. In: *Combinatorica* 37.2 (2017), pp. 129–136. ISSN: 0209-9683; 1439-6912/e.
- [28] Karim Adiprasito, Imre Bárány, and Costin Vîlcu, eds. *Convexity and discrete geometry including graph theory. Mulhouse, France, September 1–11, 2014*. English. Vol. 148. Cham: Springer, 2016, pp. x + 280. ISBN: 978-3-319-28184-1/hbk; 978-3-319-28186-5/ebook.
- [29] Karim Adiprasito, Eran Nevo, and José Alejandro Samper. “A geometric lower bound theorem.” English. In: *Geom. Funct. Anal.* 26.2 (2016), pp. 359–378. ISSN: 1016-443X; 1420-8970/e.
- [30] Karim A. Adiprasito, Eran Nevo, and Jose A. Samper. “Higher chordality: from graphs to complexes.” English. In: *Proc. Am. Math. Soc.* 144.8 (2016), pp. 3317–3329. ISSN: 0002-9939; 1088-6826/e.
- [31] Karim A. Adiprasito and Arnau Padrol. “A universality theorem for projectively unique polytopes and a conjecture of Shephard.” English. In: *Isr. J. Math.* 211 (2016), pp. 239–255. ISSN: 0021-2172; 1565-8511/e.
- [32] Karim A. Adiprasito and Raman Sanyal. “Relative Stanley-Reisner theory and upper bound theorems for Minkowski sums.” English. In: *Publ. Math., Inst. Hautes Étud. Sci.* 124 (2016), pp. 99–163. ISSN: 0073-8301; 1618-1913/e.
- [33] Karim Adiprasito and Bruno Benedetti. “Tight complexes in 3-space admit perfect discrete Morse functions.” English. In: *Eur. J. Comb.* 45 (2015), pp. 71–84. ISSN: 0195-6698.
- [34] Karim Adiprasito and Tudor Zamfirescu. “Few Alexandrov surfaces are Riemann.” English. In: *J. Nonlinear Convex Anal.* 16.6 (2015), pp. 1147–1153. ISSN: 1345-4773; 1880-5221/e.
- [35] Karim A. Adiprasito. *A note on boundary manifolds of arrangements*. 2015. eprint: [arXiv:1503.05871](https://arxiv.org/abs/1503.05871).
- [36] Karim A. Adiprasito. “Combinatorial stratifications and minimality of two-arrangements.” English. In: *Combinatorial methods in topology and algebra. Based on the presentations at the INdAM conference, CoMeTa 2013, Cortona, Italy, September 2013*. Cham: Springer, 2015, pp. 11–14. ISBN: 978-3-319-20154-2/hbk; 978-3-319-20155-9/ebook.
- [37] Karim A. Adiprasito, Afshin Goodarzi, and Matteo Varbaro. “Connexité des graphes de pseudo-variétés d’un point de vue algébrique.” English. In: *C. R., Math., Acad. Sci. Paris* 353.12 (2015), pp. 1061–1065. ISSN: 1631-073X.
- [38] Karim A. Adiprasito and Ivan Izestiev. “Derived subdivisions make every PL sphere polytopal.” English. In: *Isr. J. Math.* 208 (2015), pp. 443–450. ISSN: 0021-2172; 1565-8511/e.
- [39] Karim A. Adiprasito, Arnau Padrol, and Louis Theran. “Universality theorems for inscribed polytopes and Delaunay triangulations.” English. In: *Discrete Comput. Geom.* 54.2 (2015), pp. 412–431. ISSN: 0179-5376; 1432-0444/e.
- [40] Karim A. Adiprasito and Raman Sanyal. “An Alexander-type duality for valuations.” English. In: *Proc. Am. Math. Soc.* 143.2 (2015), pp. 833–843. ISSN: 0002-9939; 1088-6826/e.
- [41] Karim A. Adiprasito and Günter M. Ziegler. “Many projectively unique polytopes.” English. In: *Invent. Math.* 199.3 (2015), pp. 581–652. ISSN: 0020-9910; 1432-1297/e.
- [42] Karim Adiprasito and José Alejandro Samper. “The lower bound theorem for polytopes that approximate  $C^1$ -convex bodies.” English. In: *Proceedings of the 26th international conference on formal power series and algebraic combinatorics, FPSAC 2014, Chicago, IL, USA, June 29 – July 3, 2014*. Nancy: The Association. Discrete Mathematics & Theoretical Computer Science (DMTCS), 2014, pp. 277–288.
- [43] Karim A. Adiprasito. “Combinatorial stratifications and minimality of 2-arrangements.” English. In: *J. Topol.* 7.4 (2014), pp. 1200–1220. ISSN: 1753-8416; 1753-8424/e.
- [44] Karim A. Adiprasito and Bruno Benedetti. “The Hirsch conjecture holds for normal flag complexes.” English. In: *Math. Oper. Res.* 39.4 (2014), pp. 1340–1348. ISSN: 0364-765X; 1526-5471/e.
- [45] Karim Alexander Adiprasito and Anders Björner. *Filtered geometric lattices and Lefschetz Section Theorems over the tropical semiring*. 2014. eprint: [arXiv:1401.7301](https://arxiv.org/abs/1401.7301).
- [46] Karim Adiprasito. “Characterization of polytopes via tilings with similar pieces.” English. In: *Discrete Comput. Geom.* 47.2 (2012), pp. 424–429. ISSN: 0179-5376; 1432-0444/e.
- [47] Karim Adiprasito. “Infinite curvature on typical convex surfaces.” English. In: *Geom. Dedicata* 159 (2012), pp. 267–275. ISSN: 0046-5755; 1572-9168/e.

- [48] Karim Adiprasito and Tudor Zamfirescu. "Large curvature on typical convex surfaces." English. In: *J. Convex Anal.* 19.2 (2012), pp. 385–391. ISSN: 0944-6532.
- [49] Karim Adiprasito and Bruno Benedetti. *Collapsibility of CAT(0) spaces*. to appear in *Geometriae Dedicata*, arXiv:1107.5789. 2011.