

List of publications

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Publications in Journals

- [1] Karim Adiprasito, June Huh, and Eric Katz, *Hodge theory of matroids*, Notices Amer. Math. Soc. **64** (2017), no. 1, 26–30.
- [2] Karim Adiprasito, Eran Nevo, and José Alejandro Samper, *A geometric lower bound theorem.*, Geom. Funct. Anal. **26** (2016), no. 2, 359–378.
- [3] ———, *Higher chordality: from graphs to complexes.*, Proc. Am. Math. Soc. **144** (2016), no. 8, 3317–3329.
- [4] Karim Adiprasito and Arnau Padrol, *A universality theorem for projectively unique polytopes and a conjecture of Shephard.*, Isr. J. Math. **211** (2016), 239–255.
- [5] Karim Adiprasito and Raman Sanyal, *Relative Stanley-Reisner theory and upper bound theorems for Minkowski sums.*, Publ. Math., Inst. Hautes Étud. Sci. **124** (2016), 99–163.
- [6] Karim Adiprasito, *Toric chordality*, (2015), accepted for publication in Journal de Mathématiques Pures et Appliquées, [arXiv:1503.06640](https://arxiv.org/abs/1503.06640).
- [7] Karim Adiprasito and Anders Björner and Afshin Goodarzi, *Face numbers of sequentially Cohen-Macaulay complexes and Betti numbers of componentwise linear ideals*, (2015), accepted for publication in Journal of the European Mathematical Society, [arXiv:1502.01183](https://arxiv.org/abs/1502.01183).
- [8] Karim Adiprasito and Bruno Benedetti, *Tight complexes in 3-space admit perfect discrete Morse functions*, Eur. J. Comb. **45** (2015), 71–84.
- [9] Karim Adiprasito, Afshin Goodarzi, and Matteo Varbaro, *Connexité des graphes de pseudo-variétés d'un point de vue algébrique.*, C. R., Math., Acad. Sci. Paris **353** (2015), no. 12, 1061–1065.

- [10] Karim Adiprasito and Ivan Izmistiev, *Derived subdivisions make every PL sphere polytopal.*, *Isr. J. Math.* **208** (2015), 443–450.
- [11] Karim Adiprasito and Raman Sanyal, *An Alexander-type duality for valuations*, *Proc. Amer. Math. Soc.* **143** (2015), no. 2, 833–843.
- [12] Karim Adiprasito and Tudor Zamfirescu, *Few Alexandrov surfaces are Riemann.*, *J. Nonlinear Convex Anal.* **16** (2015), no. 6, 1147–1153.
- [13] Karim Adiprasito and Günter Ziegler, *Many projectively unique polytopes*, *Invent. Math.* **199** (2015), no. 3, 581–652.
- [14] Karim Adiprasito and Arnau Padrol and Louis Theran, *Universality theorems for inscribed polytopes and Delaunay triangulations*, *Discrete Comput. Geom.* **54** (2015), no. 2, 412–431.
- [15] Karim Adiprasito, Bruno Benedetti, and F. H. Lutz, *Extremal examples of collapsible complexes and random discrete morse theory*, (2014), accepted for publication in *Discrete and Computational Geometry*, [arXiv:1404.4239](https://arxiv.org/abs/1404.4239).
- [16] Karim Adiprasito and Bruno Benedetti, *Subdivisions, shellability, and collapsibility of products*, *Combinatorica* (2014), to appear.
- [17] ———, *The Hirsch conjecture holds for normal flag complexes*, *Math. Oper. Res.* **39** (2014), no. 4, 1340–1348.
- [18] Karim Adiprasito, *Combinatorial stratifications and minimality of 2-arrangements*, *J. Topol.* **7** (2014), no. 4, 1200–1220.
- [19] Karim Adiprasito and Arnau Padrol, *The universality theorem for neighborly polytopes*, *Combinatorica* (2014), accepted for publication.
- [20] Karim Adiprasito, *Characterization of polytopes via tilings and similar pieces*, *Discrete Comput. Geom.* **47** (2012), no. 2, 424–429.
- [21] ———, *Infinite curvature on typical convex surfaces*, *Geom. Dedicata* **159** (2012), 267–275.
- [22] Karim Adiprasito and Tudor Zamfirescu, *Large curvature on typical convex surfaces*, *J. Conv. Anal.* **19** (2012), no. 2, 385–391.
- [23] Karim Adiprasito, *A note on the simplex-cosimplex problem*, (2011), accepted for publication in *European Journal of Combinatorics*, available on page.mi.fu-berlin.de/adiprasito/.

Publications in conference proceedings

- [1] Karim Adiprasito and Günter M. Ziegler, *Polytopes with low-dimensional realization spaces*, Oberwolfach Rep. **8** (2011), 2522–2525.
- [2] Karim Adiprasito and Bruno Benedetti and Frank Lutz, *Metric geometry and random discrete Morse theory*, Oberwolfach Rep. **24** (2012), 1456–1459.
- [3] Karim Adiprasito and Günter M. Ziegler, *Many 4-polytopes with a low-dimensional realization space*, Oberwolfach Rep. **34** (2012), 2081–2083.
- [4] Karim Adiprasito, *Barycentric subdivisions, shellability and collapsibility*, Oberwolfach Rep. **24** (2012), 1459–1462.
- [5] Karim Adiprasito and José Alejandro Samper, *Polytopes approximating C^1 -convex bodies*, DMTCS Proceedings (2014), (refereed).
- [6] Karim Adiprasito, *Combinatorial stratifications and minimality of two-arrangements.*, 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 (English).

Preprints

- [1] Karim Adiprasito, Philip Brinkmann, Arnau Padrol, Pavel Paták, Zuzana Patáková, and Raman Sanyal, *Colorful simplicial depth, Minkowski sums, and generalized Gale transforms*, (2016), preprint, submitted to Journal of the London Mathematical Society, [arXiv:1607.00347](https://arxiv.org/abs/1607.00347).
- [2] Karim Adiprasito and Eran Nevo and Martin Tancer, *On Betti numbers of flag complexes with forbidden induced subgraphs*, (2016), preprint, submitted to Mathematical Proceedings of the Cambridge Philosophical Society, [arXiv:1602.01761](https://arxiv.org/abs/1602.01761).
- [3] Karim Adiprasito, June Huh, and Eric Katz, *Hodge Theory for combinatorial geometries*, (2015), preprint, submitted to Annals of Mathematics, [1511.02888](https://arxiv.org/abs/1511.02888).
- [4] Karim Adiprasito, *A note on boundary manifolds*, (2015), preprint, [arXiv:1503.05871](https://arxiv.org/abs/1503.05871).
- [5] Karim Adiprasito and Anders Björner, *Filtered geometric lattices and Lefschetz Section Theorems over the tropical semiring*, (2014), preprint, submitted to Journal of the American Mathematical Society, [arXiv:1401.7301](https://arxiv.org/abs/1401.7301).
- [6] Karim Adiprasito and Bruno Benedetti, *Metric geometry, convexity and collapsibility*, (2011), preprint, rewritten in 2013 and submitted to Advances in Mathematics, [arXiv:1107.5789](https://arxiv.org/abs/1107.5789).

Books

- [1] Karim Adiprasito, Imre Bárány and Costin Vîlcu (editors) *Convexity and Discrete Geometry Including Graph Theory*, (2016), Conference in the honor of Tudor Zamfirescu's 70th Birthday, Mulhouse, France, September 2014, Springer Proceedings in Mathematics & Statistics, (2016)