

LIST OF PUBLICATIONS

MICHAEL JOSWIG

JOURNAL PUBLICATIONS

- [1] **1993** (with Richard Bödi). “Tables for an effective enumeration of real representations of quasi-simple Lie groups”. *Sem. Sophus Lie* 3.2, pp. 239–253.
- [2] **1994** (with Theo Grundhöfer, and Markus Stroppel). “Slanted symplectic quadrangles”. *Geom. Dedicata* 49.2, pp. 143–154. DOI: 10.1007/BF01610617.
- [3] **1995**. “Generalized polygons with highly transitive collineation groups”. *Geom. Dedicata* 58.1, pp. 91–100. DOI: 10.1007/BF01263479.
- [4] **1995** (with and Hendrik Van Maldeghem). “An essay on the Ree octagons”. *J. Algebraic Combin.* 4.2, pp. 145–164. DOI: 10.1023/A:1022481514132.
- [5] **1996**. “Translation generalized quadrangles”. *Arch. Math. (Basel)* 67.3, pp. 253–264.
- [6] **1998**. “Isotopy of polygonal domains for generalized polygons”. *European J. Combin.* 19.2, pp. 151–158. DOI: 10.1006/eujc.1997.0171.
- [7] **1998** (with and Bernd Straub). “On the numerical range map”. *J. Austral. Math. Soc. Ser. A* 65.2, pp. 267–283. DOI: 10.1017/S1446788700034996.
- [8] **1999**. “Pseudo-ovals, elation Laguerre planes, and translation generalized quadrangles”. *Beiträge Algebra Geom.* 40.1, pp. 141–152.
- [9] **2000**. “Compact connected translation generalized quadrangles”. *Results Math.* 38.1-2, pp. 72–87. DOI: 10.1007/BF03322432.
- [10] **2000** (with and Günter M. Ziegler). “Neighborly cubical polytopes”. *Discrete Comput. Geom.* 24.2-3. The Branko Grünbaum birthday issue, pp. 325–344. DOI: 10.1007/s004540010039.
- [11] **2001**. “Group of projectivities and coloring of facets of a simple polytope”. *Uspekhi Mat. Nauk* 56.3(339), pp. 171–172. Extended abstract of [13].
- [12] **2001** (with, Volker Kaibel, and Marc E. Pfetsch, and Günter M. Ziegler). “Vertex-facet incidences of unbounded polyhedra”. *Adv. Geom.* 1.1, pp. 23–36. DOI: 10.1515/advgeom.2001.002.
- [13] **2002**. “Projectivities in simplicial complexes and colorings of simple polytopes”. *Math. Z.* 240.2, pp. 243–259. DOI: 10.1007/s002090100381.
- [14] **2002** (with, and Volker Kaibel, and Friederike Körner). “On the k -systems of a simple polytope”. *Israel J. Math.* 129, pp. 109–117. DOI: 10.1007/BF02773157.
- [15] **2003** (with Ivan Izestiev). “Branched coverings, triangulations, and 3-manifolds”. *Adv. Geom.* 3.2, pp. 191–225. DOI: 10.1515/advgeom.2003.013.
- [16] **2004** (with and Günter M. Ziegler). “Convex hulls, oracles, and homology”. *J. Symbolic Comput.* 38.4, pp. 1247–1259. DOI: 10.1016/j.jsc.2003.08.006.
- [17] **2005** (with Manoj K. Chari). “Complexes of discrete Morse functions”. *Discrete Math.* 302.1-3, pp. 39–51. DOI: 10.1016/j.disc.2004.07.027.
- [18] **2005** (with and Frank H. Lutz). “One-point suspensions and wreath products of polytopes and spheres”. *J. Combin. Theory Ser. A* 110.2, pp. 193–216. DOI: 10.1016/j.jcta.2004.09.009.
- [19] **2006** (with and Marc E. Pfetsch). “Computing optimal Morse matchings”. *SIAM J. Discrete Math.* 20.1, 11–25 (electronic). DOI: 10.1137/S0895480104445885.
- [20] **2007** (with Sven Herrmann). “Bounds on the f -vectors of tight spans”. *Contrib. Discrete Math.* 2.2, 161–184 (electronic).

Date: November 13, 2018.

- [21] **2007** (with and Thilo Rörig). “Neighborly cubical polytopes and spheres”. *Israel J. Math.* 159, pp. 221–242. DOI: 10.1007/s11856-007-0044-4.
- [22] **2007** (with, and Bernd Sturmfels, and Josephine Yu). “Affine buildings and tropical convexity”. *Albanian J. Math.* 1.4, pp. 187–211.
- [23] **2007** (with and Nikolaus Witte). “Products of foldable triangulations”. *Adv. Math.* 210.2, pp. 769–796. DOI: 10.1016/j.aim.2006.07.016.
- [24] **2008** (with Sven Herrmann). “Splitting polytopes”. *Münster J. Math.* 1, pp. 109–141.
- [25] **2009** (with Sven Herrmann, Anders Jensen, and Bernd Sturmfels). “How to draw tropical planes”. *Electron. J. Combin.* 16.2, Special volume in honor of Anders Björner, Research Paper 6, 26.
- [26] **2010** (with Ewgenij Gawrilow, and Thilo Rörig, and Nikolaus Witte). “Drawing polytopal graphs with `polymake`”. *Comput. Vis. Sci.* 13.2, pp. 99–110. DOI: 10.1007/s00791-009-0127-3.
- [27] **2010** (with Sven Herrmann). “Totally splittable polytopes”. *Discrete Comput. Geom.* 44.1, pp. 149–166. DOI: 10.1007/s00454-009-9217-8.
- [28] **2010** (with and Katja Kulas). “Tropical and Ordinary Convexity Combined”. *Adv. Geometry* 10, pp. 333–352. DOI: 10.1515/advgeom.2010.012.
- [29] **2012** (with Anton Dochtermann, and Raman Sanyal). “Tropical types and associated cellular resolutions”. *J. Algebra* 356, pp. 304–324. DOI: 10.1016/j.jalgebra.2011.12.028.
- [30] **2012** (with and Thilo Rörig). “Polytope mit vielen Splits und ihre Sekundärfächer”. *Math. Semesterber.* 59.2, pp. 145–152. DOI: 10.1007/s00591-012-0102-9.
- [31] **2013** (with Richard Bödi, and Katrin Herr). “Algorithms for highly symmetric linear and integer programs”. *Math. Program.* 137.1-2, Ser. A, pp. 65–90. DOI: 10.1007/s10107-011-0487-6.
- [32] **2013** (with Sven Herrmann, and Marc E. Pfetsch). “Computing the bounded subcomplex of an unbounded polyhedron”. *Comput. Geom.* 46.5, pp. 541–551. DOI: 10.1016/j.comgeo.2011.11.002.
- [33] **2014** (with Xavier Allamigeon, Pascal Benchimol, and Stéphane Gaubert). “Combinatorial simplex algorithms can solve mean payoff games”. *SIAM J. Opt.* 24.4, pp. 2096–2117. DOI: 10.1137/140953800.
- [34] **2014** (with Benjamin Assarf, and Andreas Paffenholz). “Smooth Fano polytopes with many vertices”. *Discrete Comput. Geom.* 52.2, pp. 153–194. DOI: 10.1007/s00454-014-9607-4.
- [35] **2014** (with Sven Herrmann, and David Speyer). “Dressians, tropical Grassmannians, and their rays”. *Forum Math.* 26.6, pp. 1853–1882. DOI: 10.1515/forum-2012-0030.
- [36] **2014** (with and Günter M. Ziegler). “Foldable triangulations of lattice polygons”. *Amer. Math. Monthly* 121.8, pp. 706–710. DOI: 10.4169/amermathmont.121.08.706.
- [37] **2015** (with Xavier Allamigeon, Pascal Benchimol, and Stéphane Gaubert). “Tropicalizing the simplex algorithm”. *SIAM J. Discrete Math.* 29.2, pp. 751–795. DOI: 10.1137/130936464.
- [38] **2015** (with Sarah Brodsky, and Ralph Morrison, and Bernd Sturmfels). “Moduli of tropical plane curves”. *Res. Math. Sci.* 2.4. DOI: 10.1186/s40687-014-0018-1.
- [39] **2016** (with, Joe Kileel, and Bernd Sturmfels, and André Wagner). “Rigid multiview varieties”. *Internat. J. Algebra Comput.* 26.4, pp. 775–788. DOI: 10.1142/S021819671650034X.
- [40] **2016** (with and Georg Loho). “Weighted digraphs and tropical cones”. *Linear Algebra Appl.* 501, pp. 304–343. DOI: 10.1016/j.laa.2016.02.027.
- [41] **2017** (with Benjamin Assarf et al.). “Computing convex hulls and counting integer points with `polymake`”. *Math. Program. Comput.* 9.1, pp. 1–38. DOI: 10.1007/s12532-016-0104-z.
- [42] **2017** (with and Benjamin Schröter). “Matroids from hypersimplex splits”. *J. Combin. Theory Ser. A* 151, pp. 254–284. DOI: 10.1016/j.jcta.2017.05.001.
- [43] **2018** (with Xavier Allamigeon, Pascal Benchimol, and Stéphane Gaubert). “Log-barrier interior point methods are not strongly polynomial”. *SIAM J. Appl. Algebra Geom.* 2.1, pp. 140–178. DOI: 10.1137/17M1142132.
- [44] **2018** (with Benjamin Assarf, and Julian Pfeifle). “Webs of stars or how to triangulate free sums of point configurations”. *J. Combin. Theory Ser. A* 159, pp. 183–214. DOI: 10.1016/j.jcta.2018.05.007.

- [45] **2018** (with Charles Jordan, and Lars Kastner). “Parallel enumeration of triangulations”. *Electron. J. Combin.* 25.3, Paper 3.6, 27.
- [46] **2018** (with and Benjamin Schröter). “The degree of a tropical basis”. *Proc. Amer. Math. Soc.* 146.3, pp. 961–970. DOI: 10.1090/proc/13787.
- [47] **2019** (with Simon Hampe, and Benjamin Schröter). “Algorithms for tight spans and tropical linear spaces”. *J. Symbolic Comput.* 91. Proceedings of MEGA 2017. DOI: 10.1016/j.jsc.2018.06.016.
- [48] (With, and Robert Löwe, and Boris Springborn). “Secondary fans and secondary polyhedra of punctured Riemann surfaces”. *Experimental Math.* To appear, Preprint [arXiv:1708.08714](https://arxiv.org/abs/1708.08714).

CONFERENCE PROCEEDINGS (PEER-REVIEWED)

- [49] **1996**. “Towards modelling the topology of homogeneous manifolds by means of symbolic computation”. In: *Artificial intelligence and symbolic mathematical computation (Steyr, 1996)*. Vol. 1138. Lecture Notes in Comput. Sci. Berlin: Springer, pp. 258–273.
- [50] **2000** (with Ewgenij Gawrilow). “polymake: a framework for analyzing convex polytopes”. In: *Polytopes—combinatorics and computation (Oberwolfach, 1997)*. Vol. 29. DMV Sem. Basel: Birkhäuser, pp. 43–73.
- [51] **2000**. “Reconstructing a non-simple polytope from its graph”. In: *Polytopes—combinatorics and computation (Oberwolfach, 1997)*. Vol. 29. DMV Sem. Basel: Birkhäuser, pp. 167–176.
- [52] **2001** (with Ewgenij Gawrilow). “polymake: an approach to modular software design in computational geometry”. In: *Proceedings of the 17th Annual Symposium on Computational Geometry*. June 3-5, 2001, Medford, MA. ACM, pp. 222–231.
- [53] **2002**. “Software integration and computer proofs”. In: *Mathematical software (Beijing, 2002)*. World Sci. Publ., River Edge, NJ, pp. 15–28.
- [54] **2004** (with and Marc E. Pfetsch). “Computing optimal discrete Morse functions”. In: *Workshop on Graphs and Combinatorial Optimization*. Vol. 17. Electron. Notes Discrete Math. Amsterdam: Elsevier, 191–195 (electronic).
- [55] **2005**. “Tropical halfspaces”. In: *Combinatorial and computational geometry*. Vol. 52. Math. Sci. Res. Inst. Publ. Cambridge: Cambridge Univ. Press, pp. 409–431.
- [56] **2006** (with Ewgenij Gawrilow). “Flexible object hierarchies in polymake”. In: *Proceedings of the 2nd International Congress of Mathematical Software*. Ed. by Andrés Iglesias and Nobuki Takayama. 1.–3. September 2006, Castro Urdiales, Spanien, pp. 219–221.
- [57] **2009**. “Tropical convex hull computations”. In: *Tropical and Idempotent Mathematics*. Ed. by G. L. Litvinov and S. N. Sergeev. Vol. 495. Contemporary Mathematics. Amer. Math. Soc.
- [58] **2009** (with, and Benjamin Müller, and Andreas Paffenholz). “polymake and lattice polytopes”. In: *DMTCS Proceedings of the FPSAC 2009*. Ed. by Christian Krattenthaler, Volker Strehl, and Manuel Kauers, pp. 491–502.
- [59] **2011** (with and Andreas Paffenholz). “Defect polytopes and counter-examples with polymake”. *ACM Communications in Computer Algebra* 45.3/4, pp. 177–179.
- [60] **2013** (with Benjamin Assarf, and Andreas Paffenholz). “On a classification of smooth Fano polytopes”. English. In: *Proceedings of the 25th international conference on formal power series and algebraic combinatorics, FPSAC 2013, Paris, France, June 24–28, 2013*. <https://dmtcs.episciences.org/2690>. Nancy: The Association. Discrete Mathematics & Theoretical Computer Science (DMTCS), pp. 421–432.
- [61] **2014** (with, and Frank H. Lutz, and Mimi Tsuruga). “Heuristics for sphere recognition”. English. In: *Mathematical software – ICMS 2014. 4th international congress, Seoul, South Korea, August 5–9, 2014. Proceedings*. Berlin: Springer, pp. 152–159. DOI: 10.1007/978-3-662-44199-2_26.
- [62] **2016** (with Ewgenij Gawrilow, and Simon Hampe). “The polymake XML file format”. English. In: *Mathematical software – ICMS 2016. 5th international congress, Berlin, Germany, July 11–14, 2016. Proceedings*. Berlin: Springer, pp. 403–410. DOI: 10.1007/978-3-319-42432-3_50.

- [63] **2016** (with, Georg Loho, and Benjamin Lorenz, and Benjamin Schröter). “Linear programs and convex hulls over fields of Puiseux fractions”. In: *Proceedings of MACIS 2015, Berlin, November 11–13, 2015. LNCS 9582*. Springer, pp. 429–445. DOI: 10.1007/978-3-319-32859-1_37.
- [64] **2017** (with Jules Depersin, and Stéphane Gaubert). “A tropical isoperimetric inequality”. *Sém. Lothar. Combin. – FPSAC 2017 – 78B*, Art. 27, 12.
- [65] **2017**. “The Cayley trick for tropical hypersurfaces with a view toward Ricardian economics”. In: *Homological and computational methods in commutative algebra*. Vol. 20. Springer INdAM Ser. Springer, Cham, pp. 107–128.
- [66] **2017** (with, Georg Loho, and Benjamin Lorenz, and Rico Raber). “MatchTheNet - An Educational Game on 3-Dimensional Polytopes (Multimedia Contribution)”. In: *33rd International Symposium on Computational Geometry (SoCG 2017)*. Ed. by Boris Aronov and Matthew J. Katz. Vol. 77. Leibniz International Proceedings in Informatics (LIPIcs). Dagstuhl, Germany: Schloss Dagstuhl–Leibniz-Zentrum fuer Informatik, 66:1–66:5. DOI: 10.4230/LIPIcs.SoCG.2017.66.
- [67] **2018** (with and Lars Kastner). “New counts for the number of triangulations of cyclic polytopes”. In: *Mathematical software – ICMS 2018*. Ed. by James Davenport, Manuel Kauers, George Labahn, and Josef Urban. Vol. 10931. Lecture Notes in Computer Science. Springer, pp. 264–271. DOI: 10.1007/978-3-319-96418-8_31.

BOOKS

- [68] **2003** (with and Nobuki Takayama), eds. *Algebra, geometry, and software systems*. Springer-Verlag, Berlin, pp. xiv+331. DOI: 10.1007/978-3-662-05148-1.
- [69] **2008** (with and Thorsten Theobald). *Algorithmische Geometrie*. Vieweg Studium: Aufbaukurs Mathematik. Polyedrische und algebraische Methoden. Wiesbaden: Vieweg, pp. vi+265. DOI: 10.1007/978-3-8348-9440-3.
- [70] **2010** (with Komei Fukuda, Joris van der Hoeven, and Nobuki Takayama), eds. *Mathematical software – ICMS 2010. Third international congress on mathematical software, Kobe, Japan, September 13–17, 2010. Proceedings*. English. Berlin: Springer, pp. xvi + 368. DOI: 10.1007/978-3-642-15582-6.
- [71] **2013** (with and Thorsten Theobald). *Polyhedral and algebraic methods in computational geometry*. Universitext. Revised and updated translation of the 2008 German original. London: Springer, pp. x+250. DOI: 10.1007/978-1-4471-4817-3.
- [72] **2017**. *Essentials of tropical combinatorics*. Draft of a book available a <http://www.math.tu-berlin.de/~joswig/etc>.

SOFTWARE

- [73] **1997–2018** (with Ewgenij Gawrilow). *polymake, version 3.2: a Software Package for Analyzing Convex Polytopes*. Open source software, presented at the Mathematical Software Sessions of ICM 98 (Berlin) and ECM 2000 (Barcelona), <https://polymake.org>.
- [74] **1992** (with Richard Bödi). *RealLie*. Open source software for the representation theory of real Lie algebras, <http://www.math.tu-berlin.de/~joswig/RealLie/index.html>.
- [75] **2016** (with, Georg Loho, and Benjamin Lorenz, and Rico Raber). *MatchTheNet — an educational game on 3-dimensional polytopes*. Open source software, <http://www.matchthenet.de>.
- [76] **2018** (with Charles Jordan, and Lars Kastner). *mptopcom, version 1.0*. Open source software for the parallel enumeration of triangulations, <http://www.polymake.org/mptopcom>.

CHAPTERS IN BOOKS AND OTHER COLLECTIONS

- [77] **2002** (with and Konrad Polthier). “EG-Models — a New Journal for Digital Geometry Models”. In: *Multimedia Tools for Communicating Mathematics*. Ed. by J. Borwein, M. Morales, K. Polthier, and J.F. Rodrigues. Springer, pp. 165–190.

- [78] **2003**. “Beneath-and-beyond revisited”. In: *Algebra, geometry, and software systems*. Berlin: Springer, pp. 1–21.
- [79] **2004**. “Software”. In: *Handbook of Discrete and Computational Geometry*. Ed. by Jacob E. Goodman and Joseph O’Rourke. 2nd edition. CRC Press. Chap. 64, pp. 1415–1433.
- [80] **2005** (with Ewgenij Gawrilow). “Geometric reasoning with polymake”. In: *Forschung und wissenschaftliches Rechnen 2005: Beiträge zum Heinz-Billing-Preis 2005*. Ed. by Kurt Kremer and Volker Macho. Vol. 69. Bericht. Gesellschaft für wissenschaftliche Datenverarbeitung mbh Göttingen, pp. 37–52.
- [81] **2005**. “Polytope propagation on graphs”. In: *Algebraic statistics for computational biology*. New York: Cambridge Univ. Press, pp. 181–192.
- [82] **2005** (with and Konrad Polthier). “Publication of EG-Models”. In: *Mathematics and culture II. Visual perfection: Mathematics and creativity*. Springer, pp. 151–162.
- [83] **2006**. “An approach to combinatorial holonomy”. *Oberwolfach Reports* 3.1, pp. 718–720. DOI: 10.4171/OWR/2006/12.
- [84] **2007a**. “Products of foldable triangulations and real roots of polynomial systems”. *Oberwolfach Reports* 4.1, pp. 224–226. DOI: 10.4171/OWR/2007/04.
- [85] **2007b**. “Tropical and ordinary convexity combined”. *Oberwolfach Reports* 4.4, pp. 3266–3268. DOI: 10.4171/OWR/2007/57.
- [86] **2008**. “What are higher-dimensional trees, and how do they look like?” *Oberwolfach Reports* 5.4, pp. 2528–2530. DOI: 10.4171/OWR/2008/44.
- [87] **2011**. “Computing bounded subcomplexes of unbounded polyhedra”. *Oberwolfach Reports* 8.1, pp. 376–377. DOI: 10.4171/OWR/2011/08.
- [88] **2012a**. “From Kepler to Hales, and back to Hilbert”. *Doc. Math.* Extra volume: Optimization stories, pp. 439–446.
- [89] **2012b**. “Triangulations of products of simplices with a view towards tropical geometry”. *Oberwolfach Reports* 9.2, pp. 1415–1416. DOI: 10.4171/OWR/2012/24.
- [90] **2015a**. “Long and winding central paths”. *Oberwolfach Reports* 12.1, pp. 307–309. DOI: 10.4171/OWR/2015/05.
- [91] **2015b**. “Webs of stars or how to triangulate free sums of point configurations”. *Oberwolfach Reports* 12.4, pp. 2660–2662. DOI: 10.4171/OWR/2015/45.
- [92] **2016** (with, Milan Mehner, Stefan Sechelmann, and Jan Techter, and Alexander I. Bobenko). “DGD Gallery: Storage, sharing, and publication of digital research data”. In: *Advances in Discrete Differential Geometry*. Ed. by Alexander I. Bobenko. Springer.
- [93] **2017** (with Stéphane Gaubert, Dima Grigoriev, and Thorsten Theobald). “Algorithms and Effectivity in Tropical Mathematics and Beyond (Dagstuhl Seminar 16482)”. *Dagstuhl Reports* 6.11. Ed. by Stéphane Gaubert, Dima Grigoriev, Michael Joswig, and Thorsten Theobald, pp. 168–184. DOI: 10.4230/DagRep.6.11.168.
- [94] **2017** (with Simon Hampe). “Tropical computations in polymake”. In: *Algorithmic and experimental methods in algebra, geometry, and number theory*. Ed. by Gebhard Böckle, Wolfram Decker, and Gunter Malle. Springer, Cham, pp. 361–385.
- [95] **2018** (with and Benjamin Lorenz). “Software”. In: *Handbook of Discrete and Computational Geometry*. Ed. by Csaba D. Tóth, Jacob E. Goodman, and Joseph O’Rourke. 3rd edition. CRC Press. Chap. 67.

- [96] **1994**. “Translationsvierecke”. PhD Thesis. Universität Tübingen.

NEWSLETTER PUBLICATIONS

- [97] **2000**. “Mathematica 4.0”. *Mitteilungen der DMV* 8.1, pp. 52–53.
- [98] **2000a** (with and Konrad Polthier). “Digital Models and Computer Assisted Proofs”. *EMS Newsletter* 38, p. 30.
- [99] **2000b** (with and Konrad Polthier). “www.eg-models.de: digitale geometrische Modelle”. *Mitteilungen der DMV* 8.4, pp. 20–22. DOI: 10.1515/dmvm-2000-0109.
- [100] **2003**. “polymake”. *Computeralgebra-Rundbrief* 33, pp. 15–16.
- [101] **2009**. “Wer zahlt gewinnt”. *Mitteilungen der DMV* 17.1, pp. 38–40. DOI: 10.1515/dmvm-2009-0017.
- [102] **2011**. “Auf der Suche nach der Mathematik der Anna Depenbusch”. *Mitteilungen der DMV* 19.1, p. 48. DOI: 10.1515/dmvm-2011-0024.
- [103] **2013** (with and Andreas Paffenholz). “Torische Geometrie mit polymake”. *Computeralgebra-Rundbrief* 52, pp. 13–17.
- [104] **2015**. “Über die Anfänge einer Fields-Medaillistin”. *Mitteilungen der DMV* 23.1, pp. 43–45. DOI: 10.1515/dmvm-2015-0015.
- [105] **2016a**. “Jugendstreich einer Fields-Medaillistin”. *Spektrum der Wissenschaft* 10, pp. 76–79.
- [106] **2016b**. “Leibniz und der Garten”. *Mitteilungen der DMV* 24.3, pp. 163–166. DOI: 10.1515/dmvm-2016-0063.

PREPRINTS AND TECHNICAL REPORTS

- [107] **1999** (with and Volker Kaibel). “Randomized simplex algorithms and random cubes”. Unpublished <http://www.math.uni-magdeburg.de/~kaibel/ALT/Downloads/RPRC.pdf>.
- [108] **2004**. “Computing invariants of simplicial manifolds”. Unpublished [arXiv:math.AT/0401176](https://arxiv.org/abs/math/0401176).
- [109] **2014** (with Xavier Allamigeon, Pascal Benchimol, and Stéphane Gaubert). “Long and winding central paths”. Unpublished [arXiv:1405.4161](https://arxiv.org/abs/1405.4161).
- [110] **2015** (with, and Frank H. Lutz, and Mimi Tsuruga). *Sphere recognition: heuristics and examples*. Preprint [arXiv:1405.3848v2](https://arxiv.org/abs/1405.3848v2).
- [111] **2017** (with and Georg Loho). *Monomial tropical cones for multicriteria optimization*. Preprint [arXiv:1707.09305](https://arxiv.org/abs/1707.09305).
- [112] **2018** (with Timo Burggraf, Marc E. Pfetsch, and Manuel Radons, and Stefan Ulbrich). *Semi-automatically optimized calibration of internal combustion engines*. Preprint [arXiv:1806.10980](https://arxiv.org/abs/1806.10980).
- [113] **2018** (with Holger Eble, and Lisa Lamberti, and Will Ludington). *Cluster partitions and fitness landscapes of the Drosophila fly microbiome*. Preprint [arXiv:1809.02533](https://arxiv.org/abs/1809.02533).
- [114] **2018** (with and Ben Smith). *Polyhedral tropical geometry of higher rank*. Preprint [arXiv:1809.01457](https://arxiv.org/abs/1809.01457).

REVIEWS

- [115] **2016**. “Diane Maclagan, Bernd Sturmfels: ‘Introduction to Tropical Geometry’”. *Jahresbericht der DMV* 118.3, pp. 233–237. DOI: 10.1365/s13291-016-0133-6.

44 reviews for MathSciNet, more than 50 reviews for Zentralblatt.

OTHER PUBLICATIONS

- [116] **1996**. *Quadratic forms*. Lecture notes for a course given at Johannes-Kepler-Universität Linz. RISC Technical Report No. 96–23.
- [117] **1998**. “Correction: “Generalized polygons with highly transitive collineation groups””. *Geom. Dedicata* 72.2, pp. 217–220.
- [118] **2000** (with, Volker Kaibel, and Marc E. Pfetsch, and Günter M. Ziegler). “Ambiguous incidences of unbounded polyhedra”. *Electronic Geometry Models*. No. 2000.05.001, <http://www.eg-models.de/2000.05.001>.

- [119] **2000** (with and Günter M. Ziegler). “A neighborly cubical 4-polytope”. *Electronic Geometry Models*. No. 2000.05.003, <http://www.eg-models.de/2000.05.003>.
- [120] **2012** (with and Thilo Rörig). “Erratum zu: Polytope mit vielen Splits und ihre Sekundärfächer”. *Math. Semesterber.* 59.2, p. 153. DOI: 10.1007/s00591-012-0109-2.

For the German daily newspaper *Handelsblatt*, from 2008 to 2009, I wrote more than 30 pieces called “Zahlensalat”. Texts that I wrote as the Editor-on-Chief of *Mitteilungen der DMV* are not listed.

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