

List of publications

(Jürgen Richter-Gebert, 14.04.2011)

Published articles:

- [1] J. Richter: "Kombinatorische Realisierbarkeitskriterien für orientierte Matroide". *Mitteilungen aus dem Math. Sem. Gießen*, **194** (1989) 113 p.
- [2] J. Bokowski & J. Richter: "On the finding of final polynomials". *Europ. J. Combinatorics*, **11** (1990) 21–34.
- [3] J. Bokowski, J. Richter & B. Sturmfels: "Nonrealizability proofs in computational geometry". *Discrete Comput. Geometry*, **5** (1990) 333–350.
- [4] J. Bokowski, A. Guedes de Oliveira & J. Richter-Gebert: "Algebraic Varieties Characterizing Matroids and Oriented Matroids". *Advances in Math.*, **87** (1991) 160–185.
- [5] J., Richter & B. Sturmfels: "On the topology and geometric construction of oriented matroids and convex polytopes". *Trans. Amer. Math. Soc.*, **325** (1991) 389–412.
- [6] J. Bokowski & J. Richter-Gebert: "A new Sylvester–Gallai configuration representing the 13-point projective plane in R^4 ". *J. Comb. Theory*, **B 54** (1992) 161–165.
- [7] J. Bokowski, J. Richter-Gebert & W. Schindler: "On the distribution of order types". *Computational Geometry: Theory and Applications*, **1** (1992) 127–142.
- [8] J. Richter-Gebert: "Euclideaness and final polynomials in oriented matroid theory". *Combinatorica*, **13** (1993) 259–268.
- [9] N. Mněv & J. Richter-Gebert: "Two constructions of oriented matroids with disconnected extension space". *Discrete Comput. Geometry, (special issue: "Oriented Matroids", eds. J. Richter-Gebert, G.M. Ziegler)*, **10** (1993) 271–285.
- [10] J. Richter-Gebert: "Oriented matroids with few mutations". *Discrete Comput. Geometry, (special issue: "Oriented Matroids", eds. J. Richter-Gebert, G.M. Ziegler)*, **10** (1993) 251–269.
- [11] J. Richter-Gebert: "Combinatorial obstructions to the lifting of weaving diagrams". *Discrete Comput. Geometry, (special issue: "Oriented Matroids", eds. J. Richter-Gebert, G.M. Ziegler)*, **10** (1993) 287–312.
- [12] J. Richter-Gebert: "Line arrangements and zonotopal tilings: A little printer exercise". *Hyperspace*, **2** (1993) 8–17.
- [13] J. Richter-Gebert & G.M. Ziegler: "Zonotopal tilings and the Bohne-Dress Theorem". *Contemporary Mathematics*, **178** (1994) 211–232.
- [14] J. Richter-Gebert: "Mechanical theorem proving in projective geometry". *Annals of Mathematics and Artificial Intelligence*, **13** (1995) 139–172.
- [15] J. Richter-Gebert: "Mněv's universality theorem revisited". *Séminaire Lotharingien de Combinatoire*, 1995, 211–225.
- [16] J. Richter-Gebert & G.M. Ziegler: "Realization spaces of 4-polytopes are universal". *Bulletin of the AMS (research report)*, **32** (1995) 403–412.

- [17] **H. Crapo & J. Richter-Gebert**: “Automatic proving of geometric theorems”. in: “Invariant Methods in Discrete and Computational Geometry”, Neil White ed., Kluwer Academic Publishers (1995).
- [18] **J. Richter-Gebert**: “Two Interesting Oriented Matroids”. *Doc. Math. J. DMV*, **1** (1996) 149–197.
- [19] **U.H. Kortenkamp, J. Richter-Gebert, A. Sarangarajan & G.M. Ziegler**: “Extremal properties of 0/1-polytopes”. *Discrete & Computational Geometry*, **17** (1997) 439–448.
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- [21] **M. Henk, J. Richter-Gebert & G.M. Ziegler**: “Basic properties of convex polytopes”. CRC Handbook on “Discrete and Computational Geometry” (J.E. Goodman, J. O’Rourke, eds.) pp. 243–270, CRC Press, Boca Raton, New York (1997).
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- [23] **J. Richter-Gebert**: “Universality Theorems for Oriented Matroids and Polytopes”. *Contemporary Mathematics*, **223** (1999) 269–292.
- [24] **U.H. Kortenkamp & J. Richter-Gebert**: “Cinderella”. in: *Erfahrungen mit Java*, Silvano Maffei, Fridtjof Toenniessen, Christian Zeidler (eds), dpunkt.verlag, pp 383-407, (1999).
- [25] **J. Richter-Gebert**: “Orientability of matroids is NP-complete”. *Advances in Applied Mathematics (special issue: “in the honor of Henry Crapo”*, ed. J. Kung), **23** (1999) 78–90.
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- [32] **U.H. Kortenkamp & J. Richter-Gebert**: “Euklidische und Nicht-Euklidische Geometrie in Cinderella”. *Journal für Mathematik-Didaktik*, B.G. Teubner, **21** (2000) 303–324.
- [33] **J. Richter-Gebert & U.H. Kortenkamp**: “Dynamic Aspects in Computational Geometry (Extended Abstract)”. Proceedings of the EACA 2000, Barcelona, 2000, 51–61.
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- [35] **U.H. Kortenkamp & J. Richter-Gebert**: “Decision Complexity in Dynamic Geometry”. In: *Automated Deduction in Geometry*, J. Richter-Gebert, D. Wang (eds), Springer Lecture Notes in Artificial Intelligence **2061**, Springer Heidelberg, pp 216–220, (2001).
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- [50] **J. Richter-Gebert**: “Meditations on Ceva’s Theorem”. In *The Coxeter Legacy: Reflections and Projections* (Eds. Chandler Davis & Eric Ellers, American Mathematical Society, Fields Institute), 227–254, 2006.
- [51] **J. Richter-Gebert** : “Ein Drunter und Drüber - Mathematik von statischen Konstruktionen spielerisch erfahren”. Wissen & Wachsen, Schwerpunktthema Mathematik & mathematische Förderung, Praxis. Verfügbar über: <http://www.wissen-und-wachsen.de>, (2006).

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- [63] **J. Richter-Gebert & U.H. Kortenkamp**: “Cinderella – The interactive geometry software”. Springer, Heidelberg, 143 pages + CD-Rom, (1999); also: German (2000), Portuguese (2001), Italian (2001), Greek (2002), and Japanese (2003) translations.
- [64] **J. Richter-Gebert & U.H. Kortenkamp**: “Cinderella – Die Interaktive Geometriesoftware (Schülerversion)”. (Software + Manual 80 pages) Heureka-KLETT, Stuttgart, (2000).
- [65] **J. Richter-Gebert & Dongming Wang (eds)**: “Automated Deduction in Geometry”. *Proceedings of the ADG 2000 workshop*, Springer Lecture Notes in Artificial Intelligence **2061**, Springer Heidelberg, 323 pages, (2001).
- [66] **J. Richter-Gebert & U.H. Kortenkamp**: “Cinderella.2”. Online download at www.cinderella.de, documentation at docs.cinderella.de, (2006).
- [67] **J. Richter-Gebert & Th. Orendt**: “Geometrikalküle”. Springer, 210 pages, (2009).
- [68] **J. Richter-Gebert**: “Perspectives on Projective Geometry”. Springer, 580 pages, (2011).

Accepted for publication or submitted:

[69] J. Richter-Gebert & U.H. Kortenkamp: "Cinderella 2.0". Springer, Heidelberg, to appear.

Dissertations, Habilitation:

[70] J. Richter-Gebert: "On the Realizability Problem of Combinatorial Geometries – Decision Methods". Dissertation, TH-Darmstadt 1992, 144 pages.

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In preparation:

[76] M. von Gagern & J. Richter-Gebert: "Recycling of artistic content and hyperbolic artwork", (Invited for the Math. Intelligencer). In preparation.

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