

List of Publications ¹

Egon Schulte

Book

- *Abstract Regular Polytopes* (with P.McMullen). Encyclopedia of Mathematics and its Applications, Volume 92, Cambridge University Press (Cambridge – New York, 2002), 566 pp.
(<http://books.cambridge.org/0521814960.htm>).

Others

1. The graphicahedron (with G.Araujo-Pardo, M.Del Río-Francos, M.López-Dudet and Deborah Oliveros). *European Journal of Combinatorics*, (21 pp, to appear).
2. Polytopes with groups of type $PGL_2(q)$ (with D.Leemans). *Ars Mathematica Contemporanea*, 2 (2009), 163–171.
3. Regular polygonal complexes in space, I (with D.Pellicer). *Transactions American Mathematical Society*, (41 pp, to appear).
4. A local characterization of combinatorial multihedrality in tilings (with N.Dolbilin). *Contributions to Discrete Mathematics* 4 (2009), 1-11.
5. Modular reduction in abstract polytopes (with B.Monson). *Canadian Mathematical Bulletin* 52 (3) (2009), 435–450.
6. Locally toroidal polytopes and modular linear groups (with B.Monson). *Discrete Mathematics*, (21 pp, to appear).
7. *European Journal of Combinatorics* 29 (2008), 1801–1958. Guest Editor (with N.Dolbilin), Special Issue in Honor of Ludwig Danzer’s 80-th Birthday.
8. Reflection groups and polytopes over finite fields, III (with B.Monson). *Advances in Applied Mathematics* 41 (2008), 76–94.
9. Groups of type $L_2(q)$ acting on polytopes (with D.Leemans). *Advances in Geometry* 7 (2007), 529–539.
10. Semisymmetric graphs from polytopes (with B.Monson, T.Pisanski and A.I.Weiss). *J. Combinatorial Theory, Series A*, 114 (2007), 421–435.
11. Reflection groups and polytopes over finite fields, II (with B.Monson). *Advances in Applied Mathematics* 38 (2007), 327–356.

¹As of October 9, 2009.

12. Petrie-Coxeter maps revisited (with I.Hubard and A.I.Weiss). *Contributions to Algebra and Geometry* 47 (2006), 329–343.
13. Problems on polytopes, their groups, and realizations (with A.I.Weiss). *Periodica Mathematica Hungarica*, (Special Issue on Discrete Geometry) 53 (2006), 231–255.
14. Regular and chiral polytopes in low dimensions (with P.McMullen). In *The Coxeter Legacy – Reflections and Projections* (eds. C.Davis and E.W.Ellers), Fields Institute Communications, Volume 48, American Mathematical Society (Providence, RI, 2006), 87–106.
15. Chiral polyhedra in ordinary space, II. *Discrete & Computational Geometry* 34 (2005), 181–229.
16. The Local Theorem for Monotypic Tilings (with N.Dolbilin). *Electronic Journal of Combinatorics* 11(2) (2004/5), #R7 (19 pp).
17. Reflection Groups and Polytopes over Finite Fields, I (with B.Monson). *Advances in Applied Mathematics* 33 (2004), 290–317.
18. Chiral polyhedra in ordinary space, I. *Discrete & Computational Geometry* 32 (2004), 55–99.
19. Polyhedral maps (with U.Brehm). Chapter in *Handbook of Discrete and Computational Geometry, Second Edition* (eds. J.E.Goodman and J.O'Rourke), Chapman & Hall/CRC (Boca Raton, 2004), 477–491.
20. Symmetry of polytopes and polyhedra. Chapter in *Handbook of Discrete and Computational Geometry, Second Edition* (eds. J.E.Goodman and J.O'Rourke), Chapman & Hall/CRC (Boca Raton, 2004), 431–454.
21. Combinatorial aperiodicity of polyhedral prototiles. In *Discrete Geometry: In Honor of W.Kuperberg's 60th Birthday* (ed. A.Bezdek), Marcel Dekker Inc. (New York, 2003), 397–406.
22. Locally unitary groups and regular polytopes (with P.McMullen). *Advances in Applied Mathematics* 29 (2002), 1–45.
23. The mix of a regular polytope with a face (with P.McMullen). *Annals of Combinatorics* 6 (2002), 77–86.
24. Tilings. Chapter in *Encyclopedia of Physical Science and Technology, Third Edition*, Volume 16, Academic Press (San Diego, 2001), 763–782.
25. *Discrete Mathematics* 221 (2000), 1–156. Guest Editor (with M.Senechal), Special Issue in Honor of Ludwig Danzer's 70-th Birthday.
26. Symmetric tessellations on euclidean space-forms (with M.Hartley and P.McMullen). *Canadian Journal of Mathematics* 51 (1999), 1230–1239.

27. Flat regular polytopes (with P.McMullen). *Annals of Combinatorics* 1 (1997), 261–278.
28. On prismatic tiles (with A.I.Weiss). *Acta Mathematica Hungarica* 76 (1997), 101–107.
29. Symmetry of polytopes and polyhedra. Chapter in *Handbook of Discrete and Computational Geometry* (eds. J.E.Goodman and J.O'Rourke), CRC Press (Boca Raton, 1997), 311–330.
30. Polyhedral maps (with U.Brehm). Chapter in *Handbook of Discrete and Computational Geometry* (eds. J.E.Goodman and J.O'Rourke), CRC Press (Boca Raton, 1997), 345–358.
31. Regular polytopes in ordinary space (with P.McMullen). *Discrete & Computational Geometry* 17 (1997), 449–478.
32. Twisted groups and locally toroidal regular polytopes (with P.McMullen). *Transactions American Mathematical Society* 348 (1996), 1373–1410.
33. Higher toroidal regular polytopes (with P.McMullen). *Advances in Mathematics* 117 (1996), 17–51.
34. Manifold structures on abstract regular polytopes (with U.Brehm and W.Kühnel). *Aequationes Mathematicae* 49 (1995), 12–35.
35. Chiral polytopes from hyperbolic honeycombs (with B.Nostrand). *Discrete & Computational Geometry* 13 (1995), 17–39.
36. Free extensions of chiral polytopes (with A.I.Weiss). *Canadian Journal of Mathematics* 47 (3) (1995), 641–654.
37. Classification of locally toroidal regular polytopes. In *NATO Advanced Study Institute on Polytopes – Abstract, Computational and Convex* (eds. T.Bisztriczky, P.McMullen, R.Schneider and A.Ivić Weiss), Kluwer (Dordrecht, 1994), 125–154.
38. Space-fillers of higher genus. *Journal Combinatorial Theory A* 68 (1994), 438–453.
39. Quotients of polytopes and C-groups (with P.McMullen). *Discrete & Computational Geometry* 11 (1994), 453–464.
40. Chirality and projective linear groups (with A.I.Weiss). *Discrete Mathematics* 131 (1994), 221–261.
41. Constructions of chiral polytopes (with B.Nostrand and A.I.Weiss). *Congressus Numerantium* 97 (1993), 165–170.
42. Tilings. Chapter in *Handbook of Convex Geometry* (eds. J.M.Wills and P.Gruber), Elsevier Science Publishers (Amsterdam, 1993), 899–932.

43. Locally toroidal regular polytopes of rank 4 (with P.McMullen). *Commentarii Mathematici Helvetici* 67 (1992), 77–118.
44. Regular polytopes of type $\{4, 4, 3\}$ and $\{4, 4, 4\}$ (with P.McMullen). *Combinatorica* 12 (2) (1992), 203–220.
45. Finite quotients of infinite universal polytopes (with P.McMullen). In *Discrete and Computational Geometry* (eds. J.Goodman, R.Pollack and W.Steiger), DIMACS Series in Discrete Mathematics and Theoretical Computer Science, Volume 6, American Mathematical Society & Association Computing Machinery (1991), 231–236.
46. Chiral polytopes (with A.I.Weiss). In *Applied Geometry and Discrete Mathematics – The Victor Klee Festschrift* (eds. P.Gritzmann and B.Sturmfels), DIMACS Series in Discrete Mathematics and Theoretical Computer Science, Volume 4, American Mathematical Society & Association Computing Machinery (1991), 493–516.
47. Combinatorially regular polyhedra in three-space (with J.M.Wills). In *Symmetry of Discrete Mathematical Structures and Their Symmetry Groups* (eds. K.H.Hofmann and R.Wille), Research and Exposition in Mathematics, Volume 15, Heldermann-Verlag (Berlin, 1991), 49–88.
48. Hermitian forms and locally toroidal regular polytopes (with P.McMullen). *Advances in Mathematics* 82 (1990), 88–125.
49. Regular polytopes from twisted Coxeter groups and unitary reflexion groups (with P.McMullen). *Advances in Mathematics* 82 (1990), 35–87.
50. On a class of abstract polytopes constructed from binary codes. *Discrete Mathematics* 84 (1990), 295–301.
51. Constructions of regular polytopes (with P.McMullen). *Journal Combinatorial Theory A* 53 (1990), 1–28.
52. Regular polytopes from twisted Coxeter groups (with P.McMullen). *Mathematische Zeitschrift* 201 (1989), 209–226.
53. Generating combinatorial complexes of polyhedral type. *Transactions American Mathematical Society* 309 (1988), 35–50.
54. Amalgamation of regular incidence-polytopes. *Proceedings London Mathematical Society* (3) 56 (1988), 303–328.
55. Infinite series of combinatorially regular polyhedra in three-space (with P.McMullen and J.M.Wills). *Geometriae Dedicata* 26 (1988), 299–307.
56. Combinatorial prototiles. In *Shaping space – A polyhedral approach* (eds. G.Fleck and M.Senechal), Birkhäuser (Boston, 1988), 198–204.
57. On a theorem of McMullen about combinatorially regular polytopes (with A.W.M. Dress). *Simon Stevin* 61 (1987), 265–273.

58. Kepler-Poinsot-type realizations of regular maps of Klein, Fricke, Gordan and Sherk (with J.M.Wills). *Canadian Mathematical Bulletin* 30 (2), 1987, 155-164.
59. Self-dual regular polytopes and their Petrie-Coxeter-polyhedra (with P.McMullen). *Results in Mathematics* 12 (1987), 366–375.
60. Polyedrische Realisierung regulärer Karten (with J.M.Wills). *Bayreuther Mathematische Schriften* 21 (1986), 320–327.
61. Geometric realizations for Dyck’s regular map on a surface of genus 3 (with J.M.Wills). *Discrete & Computational Geometry* 1 (1986), 141-153.
62. On Coxeter’s regular skew polyhedra (with J.M.Wills). *Discrete Mathematics* 60 (1986), 253–262.
63. *Monotypische Pflasterungen und Komplexe*. Habilitationsschrift, University of Dortmund, Germany, 1985.
64. Äquivalenz und reguläre Polyeder (with J.M.Wills). In *Proceedings Third Colloquium on Discrete Geometry, Salzburg 1985* (ed. A.Florian), 301–317.
65. Analogues of Steinitz’s theorem about non-inscribable polytopes. *Colloquia Mathematica Societatis János Bolyai* 48 (1985), 503-516.
66. A polyhedral realization of Felix Klein’s map $\{3, 7\}_8$ on a Riemann surface of genus 3 (with J.M.Wills). *Journal London Mathematical Society* (2) 32 (1985), 539–547.
67. Extensions of regular complexes. In *Finite Geometries* (eds. C.A.Baker and L.M.Batten), Lecture Notes Pure Applied Mathematics No. 103, Marcel Dekker (New York, 1985), 289–305.
68. Regular incidence-polytopes with Euclidean or toroidal faces and vertex-figures. *Journal Combinatorial Theory A* 40 (1985), 305–330.
69. The existence of nontiles and nonfacets in three dimensions. *Journal Combinatorial Theory A* 38 (1985), 75–81.
70. Nontiles and nonfacets for Euclidean space, spherical complexes and convex polytopes. *Journal Reine Angewandte Mathematik* 352 (1984), 161–183.
71. Tiling three-space by combinatorially equivalent convex polytopes. *Proceedings London Mathematical Society* (3) 49 (1984), 128–140.
72. Pflasterungen des Raumes mit Pyramiden und Doppelpyramiden. *Elemente der Mathematik* 39 (1984), 113–117.
73. Preassigning the shape for bodies of constant width (with S.Vrecica). *Monatshefte für Mathematik* 96 (1983), 157–164.
74. On arranging regular incidence-complexes as faces of higher-dimensional ones. *European Journal of Combinatorics* 4 (1983), 375–384.

75. Reguläre Inzidenzkomplexe III. *Geometriae Dedicata* 14 (1983), 57–79.
76. Reguläre Inzidenzkomplexe II. *Geometriae Dedicata* 14 (1983), 33–56.
77. Reguläre Inzidenzkomplexe I (with L.Danzer). *Geometriae Dedicata* 13 (1982), 295–308.
78. Konstruktion regulärer Hüllen konstanter Breite. *Monatshefte für Mathematik* 92 (1981), 313–322.
79. *Reguläre Inzidenzkomplexe*. Doctoral Dissertation, University of Dortmund, Germany, 1980.
80. Reguläre Inzidenzkomplexe. In *Proceedings Second Colloquium on Discrete Geometry, Salzburg 1980* (ed. A.Florian), 196–206.