List of Publications by Wolfgang Kühnel   <small>(as of April 2022)</small>

1974 - 1983:

1. (with H.Ehrig)
   Topological automata, R.A.I.R.O. **8**, 73–91 (1974), Zbl. 355.94064

2. (with H.Ehrig, K.D.Kiermeier, H.-J.Kreowski)
   Universal Theory of Automata, 240 S., Teubner-Verlag 1974, Zbl. 289.94023

3. (with H.Ehrig, M.Pfender)
   Diagram-characterization of recursion, Category Theory Applied to Computation and Control, Proceedings San Francisco 1974 (E.G. Manes, ed.), 137–143, Lecture Notes in Computer Science **25**, Springer-Verlag 1975, Zbl. 311.18001

4. (with J.Meseguer, M.Pfender, I.Sols)
   Primitive recursive algebraic theories with application to program-schemes, Cah. Top. Geom. Diff. **16**, 271–273 (1975), Zbl. 353.02016

5. *Ein Produktsatz für die zweite Totalkrümmung*, J. London Math. Soc. (2) **14**, 357–363 (1976), Zbl. 341.53036

6. (with J.Meseguer, M.Pfender, I.Sols)
   Primitive recursive algebraic theories and program schemes, Bull. Austr. Math. Soc. **17**, 207–233 (1977), Zbl. 354.18001

7. *Total curvature of manifolds with boundary in E^n*, J. London Math. Soc. (2) **15**, 173–182 (1977), Zbl. 343.53034

8. *$(n-2)$-tightness and curvature of submanifolds with boundary*, Intern. J. Math. and Math. Sci. **1**, 421–431 (1978), Zbl. 402.53035

9. *Total absolute curvature of polyhedral manifolds with boundary in E^n*, Geom. Dedicata **8**, 1–12 (1979), Zbl. 404.53048

10. *A lower bound for the ith total absolute curvature of an immersion*, Colloq. Math. **41**, 253–255 (1979), Zbl. 451.53045

11. *Die totale mittlere Krümmung gewisser Hyperflächen im $\mathbb{R}^5$*, Monatsh. Math. **87**, 123–131 (1979), Zbl. 409.53003

12. (with H.Ehrig)
    Categorical approach to nonlinear constant continuous-time systems, R.A.I.R.O. **13**, 107–133 (1979), Zbl. 417.93008

13. *Tight and 0-tight polyhedral embeddings of surfaces*, Inventiones mathematicae **58**, 161–177 (1980), Zbl. 432.53041

14. 0-*tight surfaces with boundary and the total curvature of curves in surfaces*, Colloq. Math. **45**, 251–256 (1981), Zbl. 499.53047

15. (with U.BREHM)
    Smooth approximation of polyhedral surfaces with respect to curvature measures, Global Differential Geometry and Global Analysis, Proceedings Berlin 1979 (D. Ferus et al., eds.), 64–68, Lecture Notes in Mathematics **838**, Springer-Verlag 1981, Zbl. 437.53040

16. *Zur inneren Krümmung der zweiten Grundform*, Monatsh. Math. **91**, 241–251 (1981), Zbl. 449.53043

17. (with J. MESEGUER, M. PFENDER, I. SOLS)
    Algebras with actions and automata, Intern. J. Math. and Math. Sci. **5**, 61–85 (1982), Zbl. 469.18001

18. (with U. BREHM)
    Smooth approximation of polyhedral surfaces regarding curvatures, Geom. Dedicata **12**, 435–461 (1982), Zbl. 483.53046

19. (with G. LASSMANN)
    The unique 3-*neighborly* 4-*manifold with few vertices*, J. Comb. Th. (A) **35**, 173–184 (1983), Zbl. 526.52008

20. (with T.F. BANCHOFF)
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1984 - 1993:

21. (with G. LASSMANN)
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22. (with U. PINKALL)
    Tight smoothing of some polyhedral surfaces, Global Differential Geometry and Global Analysis, Proceedings Berlin 1984 (D. Ferus et al., eds.), 227–239, Lecture Notes in Mathematics **1156**, Springer-Verlag 1985, Zbl. 566.53054

23. (with G. LASSMANN)
    Neighborly combinatorial 3-*manifolds with dihedral automorphism group*, Israel J. Math. **52**, 147–166 (1985), Zbl. 573.52010

24. *Higher dimensional analogues of Császár's torus*, Res. Math. **9**, 95–106 (1986), Zbl. 581.52008

25. (with U. BREHM)
    A polyhedral model for Cartan's hypersurface in S^4, Mathematika (London) **33**, 55–61 (1986), Zbl. 697.51015

26. (with U. PINKALL)
    On total mean curvatures, Quart. J. Math. Oxford (2) **37**, 437–447 (1986), Zbl. 627.53044

27. *Minimal triangulations of Kummer varieties*, Abh. Math. Sem. Univ. Hamburg **57**, 7–20 (1987), Zbl. 637.52007

28. (with U. BREHM)
    Combinatorial manifolds with few vertices, Topology **26**, 465–473 (1987),
    Zbl. 681.57009

29. (with G. LASSMANN)
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30. *Conformal transformations between Einstein spaces*, Conformal Geometry (Aspects of Mathematics E12; R. Kulkarni, U. Pinkall, eds.), 105–146, Vieweg-Verlag 1988, Zbl. 667.53039

31. *Triangulations of manifolds with few vertices*, Advances in Differential Geometry and Topology, (F. Tricerri, ed.), 59–114, Proc. of a workshop at the Institute for Scientific Interchange (Torino, Italy), World Scientific Publ. 1990, Zbl. 836.57002

32. (with CH. SCHULZ)
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33. *On the inner curvature of the second fundamental form*, Proc. 3rd Congr. Geom. (N.K. Stephanidis, ed.), 248–253, Thessaloniki 1991, Zbl. 760.53002

34. *Hamiltonian surfaces in polytopes*, Proc. Conf. Intuitive Geometry, Szeged 1991 (K. Böröczky et al., eds.), 197–203, Coll. Math. Soc. J. Bolyai **63**, North-Holland, Amsterdam 1994, Zbl. 818.52009

35. (with U. BREHM)
    15-vertex triangulations of an 8-manifold, Math. Annalen **294**, 167–193 (1992), Zbl. 757.57015

36. *Tightness, torsion, and tubes*, Ann. Global Analysis and Geometry **10**, 227–236 (1992), Zbl. 836.53038

37. (with T.F. BANCHOFF)
    Equilibrium triangulations of the complex projective plane, Geom. Dedicata **44**, 313–333 (1992), Zbl. 769.52013

1994 - 2003:

38. (with H.-B. RADEMACHER)
    Twistor spinors with zeros and conformal flatness, C. R. Acad. Sci. Paris **318**, 237–240 (1994), Zbl. 792.53042

39. *Manifolds in the skeletons of convex polytopes, tightness, and generalized Heawood inequalities*, Polytopes: Abstract, Convex and Computational, (T. Bisztriczky et al., eds.), 241–247, Proc. NATO Advanced Study Institute (ASI) Ser. C **440**, Kluwer 1994, Zbl. 811.52006

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    Essential conformal fields in pseudo-Riemannian geometry, J. Math. Pures et Appl. (9) **74**, 453–481 (1995), Zbl. 873.53047

48. *Centrally-symmetric tight surfaces and graph embeddings*, Beiträge zur Algebra und Geometrie **37**, 347–354 (1996), Zbl. 879.53045

49. (with G. LASSMANN)
    Permuted difference cycles and triangulated sphere bundles, Discrete Math. **162**, 215–227 (1996), Zbl. 866.52011

50. (with M. BECKER)
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52. (with H.-B. RADEMACHER)
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57. (with H.-B. RADEMACHER)
    Twistor spinors on conformally flat manifolds, Illinois J. Math. **41**, 495–503 (1997), Zbl. 881.53039

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    Tight submanifolds, smooth and polyhedral, in: Tight and taut submanifolds (T.E. Cecil and S.-s. Chern, eds.), MSRI Publications Vol. **32**, 51–118, Cambridge University Press 1997, Zbl. 904.53003

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    Bibliography on tight, taut and isoparametric submanifolds, ibid. 307–339, Zbl. 904.53001

60. (with H.-B. RADEMACHER)
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68. (with F. H. LUTZ)
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77. (with M. STELLER)
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78. (with J. ITOH)
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80. (with T.F. BANCHOFF)
Tight polyhedral models of isoparametric families, and PL–taut submanifolds, Advances in Geometry **7**, 613–629 (2007), Zbl.1134.52021

81. (with H.-B. RADEMACHER)
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Einstein spaces with a conformal group, Results in Math. **56**, 421–444 (2009)
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93. (with U. Brehm)
    Smallest polyhedral tilings of 3-tori by parallelohedra, Beiträge zur Algebra und Geometrie **62**, 83–100 (2021), DOI: 10.1007/s13366-020-00530-7

94. (with R. Grunert, G. Rote)
    PL Morse theory in low dimensions, Advances in Geometry (to appear)

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- (with H.-B. Rademacher)
  Conformal geometry of gravitational plane waves, Oberwolfach Reports **1**, 2501–2503 (2004)

- *Discrete models of isoparametric hypersurfaces in spheres*, Oberwolfach Reports **3**, 665–667 (2006)

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Preprints:

- *Pohl's conjecture on tight surfaces in higher codimension* (submitted)

Publications on High School mathematics and related topics:

1. (with H.P. Klein, Th. Jahnke, Th. Sonar, M. Spindler)
   Sind Hamburgs Abiturienten mathematisch und naturwissenschaftlich klüger geworden? Nach welchen Maßstäben übertrifft das achtjährige Gymnasium das neunjährige?, Vierteljahrsschrift für wissenschaftliche Pädagogik **89/4**, 627–648 (2013)

2. (with Th. Jahnke, H.P. Klein, Th. Sonar, M. Spindler)
   Die Hamburger Abituraufgaben im Fach Mathematik – Entwicklung von 2005 bis 2013, Mitteilungen der DMV **22**, 115–121 (2014)

3. (with H.-J.Bandelt, Th.Jahnke, H.P.Klein, D.Remus, M.Schweighofer, Th.Sonar, M.Spindler, S.Walcher)
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5. *Das Märchen von der voruniversitären Mathematik*, Pädagogische Korrespondenz **51**, 90–100 (2015)

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12. (with F.Lemmermeyer, M.Spindler, H.P.Klein)
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14. (with F.Lemmermeyer)
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