

Curriculum Vitae of Dale Rolfsen

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PERSONAL DATA:

Born February 3, 1942 in Chicago
Citizenship: USA, CANADA
Married to Gloria Rolfsen, children: Amy and Catherine

EDUCATION:

Illinois Institute of Technology, B.Sc. 1963
University of Wisconsin M.Sc. 1965
University of Wisconsin Ph.D. 1967

FIELDS OF INTEREST: Topology, knot theory, geometry, algebra, dynamics.

PROFESSIONAL EMPLOYMENT:

- Visiting member, Inst. for Advanced Study, Princeton, 1967-69.
- Visiting fellow, Eidgenossische Technische Hochschule, Zurich, 1968.
- Visiting member, Tata Institute of Fund. Research, Bombay, 1969-70.
- Visiting Professor: University of Wyoming, 1973; University of Sussex, 1984; University of Hawaii, 1985; University of California, Los Angeles, 1986, ETH Zurich, and University of Geneva, 1994-95.
- Faculty, University of British Columbia, 1970-present. Present rank: Professor. Dept. head: 1989-1994.

SUPERVISION: 10 M.Sc., 7 Ph.D., 8 Postdoc, 4 NSERC undergraduate research students.

PROFESSIONAL MEMBERSHIPS:

- American Mathematical Society, Book Prize Committee (2003-)
- Canadian Mathematical Society, (Board of Directors 1987-1990, Human Rights Officer 2002-2008)
- Mathematical Sciences Research Institute, Trustee (1997-2002)
- Pacific Institute for the Mathematical Sciences, UBC Site Director (1998-2003)
- New Zealand Institute for Mathematics and Applications, Scientific Advisory Committee (2002-)
- Associate editor: Journal of Knot Theory and Ramifications.

GRANTS and AWARDS:

- Grants: Canadian NRC Research 1971-1980; Canadian NSERC Research/Discovery 1980-present; U.K. SERC Fellowship 1984; NATO Fellowship 1989; NSERC Equipment 1989, 1990, 1998; Swiss-Canadian International Exchange 1995; U.K. SERC Grant 1995; NSF conference grant 2004.
- Prof. Invité: Univ. de Provence, Marseille, May 1995; Inst. H. Poincaré, Paris, May 1996; Univ. P. Sabatier, Toulouse, April 1997; Univ. Bourgogne, Dijon, May 1998 and May 2000; Univ. Caen, Nov. 2007.
- Member, MSRI program in Low Dimensional Topology, Jan-April 1997.
- Distinguished Scholar, Peter Wall Institute for Advanced Study, 2000-01.
- Honorary doctorate *honoris causa* awarded by Université de Caen, 2007.
- “Rolfsenfest” conference on Low Dimensional Topology, Knots and Orderable groups, held at CIRM, Luminy-Marseille, July 1-5, 2013.

BOOKS:

- D. Rolfsen, Tutorial on the braid groups, chapter in Braids, Lect. Notes Ser. Inst. Math. Sci. Natl. Univ. Singap., 19, World Sci. Publ., Hackensack, NJ, 2010, pp. 1 - 30.
- P. Dehornoy, I. Dynnikov, D. Rolfsen and B. Wiest, *Ordering Braids*, American Math. Soc. Surveys and Monographs, 2008, 330 pp.
- D. Rolfsen, *Knots and Links*, American Math. Soc. Chelsea, 2003, xiv + 439 pp.
- P. Dehornoy, I. Dynnikov, D. Rolfsen and B. Wiest, *Why are braids orderable?*, Soc. Math. Français, Panoramas et Synthèses 14 (2002), xiii + 190 pp.
- S. Matveev and D. Rolfsen, Zeeman’s Collapsing Conjecture, refereed chapter in *Algebraic topology of 2-complexes and group theory*, ed. C. Hog-Angeloni, W. Metzler and A. Zieradski, Cambridge University Press (1993), chapter 11, pp. 335-364.
- D. Rolfsen (editor), *Knot Theory and Manifolds*, Lecture Notes in Mathematics no. 1144, Springer 1985, 163 pp.

RESEARCH PUBLICATIONS:

- D. Rolfsen, Low-dimensional topology and ordering knot groups, Math. Slovaca, to appear.
- D. Rolfsen, Ordering knot groups, Proceedings of Topology Conference, Oberwolfach, 2012, to appear.
- D. Rolfsen, A topological view of ordered groups, Proceedings of Knots in Poland conference, to appear.
- A. Clay and D. Rolfsen, Ordered groups, eigenvalues, knots, surgery and L-spaces, Math. Proc. Cambridge Philos. Soc. 152 (2012), no. 1, 115129.
- P. Linnell, A. Rhemtulla, D. Rolfsen, Discretely ordered groups. Algebra Number Theory 3 (2009), no. 7, 797807.
- P. A. Linnell, A. Rhemtulla and D. Rolfsen, Invariant group orderings and Galois conjugates, J. Algebra 319 (2008), 4891-4898. arXiv: math.GR/0605344
- A. Clay and D. Rolfsen, Densely ordered braid subgroups, J. Knot Theory and Ramifications, 16 (2007), 869-877.
- J. Mulholland and D. Rolfsen, Local indicability and commutator subgroups of Artin groups, preprint on arXiv: math.GR/0606116
- B. Perron and D. Rolfsen, Invariant ordering of surface groups and 3-manifolds which fibre over S^1 , Math. Proc. Camb. Phil. Soc. 141(2006), 273-280.
- S. Boyer, D. Rolfsen and B. Wiest, Orderable 3-manifold groups, Annales de l’Institut Fourier 55(2005), 243-288.
- D. Rolfsen, Mappings of nonzero degree between 3-manifolds: a new obstruction, *Advances in Topological Quantum Field Theory*, ed. J. Bryden, Kluwer Academic 2004, 267-273.

- B. Perron and D. Rolfsen, On orderability of fibred knot groups, *Math. Proc. Camb. Phil. Soc.* 135(2003), 147-153.
- D. Rolfsen, New developments in the theory of Artin's braid groups, *Proc. Conf. on Quantum Invariants of 3-manifolds, Topology and Applications* 127(2003), 77-90.
- D. Kim and D. Rolfsen, An ordering for groups of pure braids and fibre-type hyperplane arrangements, *Canad. J. Math.* 55(2002), 822-838.
- A. Rhemtulla and D. Rolfsen, Local indicability in ordered groups: braids and elementary amenable groups, *Proc. Amer. Math. Soc.* 130(2002), 2569-2577.
- D. Rolfsen and B. Wiest, Free group automorphisms, invariant orderings and topological applications, *Alg. Geom. Topology* 1(2001), 311-320 (electronic).
- L. Paris and D. Rolfsen, Geometric subgroups of mapping class groups, *J. Reine Angew. Math.* 521(2000), 47-83.
- D. Austin and D. Rolfsen, Homotopy of knots and the Alexander polynomial, *Canadian Math. Bull.* 42(1999), 257-262.
- R. Fenn, M. Greene, D. Rolfsen, C. Rourke and B. Wiest, Ordering the braid groups, *Pacific J. Math* 191(1999), 49-74.
- L. Paris and D. Rolfsen, Geometric subgroups of surface braid groups, *Annals Inst. Fourier* 49(1999), 417-472.
- D. Rolfsen and J. Zhu, Braids, ordered groups and zero divisors, *Jour. Knot Theory and Ramifications* 7(1998), 837-841.
- D. Rolfsen, Braid subgroup normalisers, commensurators and induced representations, *Invent. Math.* 130(1997), 575-587..
- Z. Li and D. Rolfsen, Classification of punctured 3-manifolds in $\text{Triod} \times I \times I$, *Canadian Math. Bulletin* 40(1997), 370-375..
- A. Kholodenko and D. Rolfsen, Knot complexity and related observables from path integrals for semiflexible polymers, *J. Physics A* 29(1996), 5677-5691.
- R. Fenn, D. Rolfsen and J. Zhu, Centralisers in braid groups and singular braid monoids, *L'Enseignement Math* 42(1996), 75-96.
- S. Matveev and D. Rolfsen, Spines and embeddings of n -manifolds, *Journal of the London Mathematical Society* 59(1999), 359-368.
- V. F. R. Jones and D. Rolfsen, A theorem regarding 4-braids, and the $V=1$ problem, in *Quantum Topology* (ed. D. Yetter), World Scientific (1994), 127-135.
- D. Rolfsen, Global mutation of knots, *J. Knot Theory and its Ramifications*, 3(1994), 407-417.
- D. Gillman, S. Matveev and D. Rolfsen, Collapsing and reconstruction of manifolds, *Contemporary Mathematics* 164 (1994), 35-39.
- D. Rolfsen, The quest for a knot with trivial Jones polynomial: diagram surgery and the Temperley-Lieb algebra, in *Topics in Knot Theory*, NATO Advanced Studies Institute Series C, vol. 399, ed. M. Bozhuyuk, Kluwer (1993), 195-210.
- D. Rolfsen, Three dimensional manifolds, groups and collapsing: some persistent conjectures, *Gazette Math.* (1993).
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- G. T. Jin and D. Rolfsen, Some remarks on rotors in link theory, *Canad. Math. Bull.* 34(1991), 480-484.
- D. Rolfsen, PL link isotopy, essential knotting and quotients of polynomials, *Canad. Math. Bull.* 34(1991), 536-541.
- R. Anstee, J. Przytycki and D. Rolfsen, Knot polynomials and generalized mutation, *Topology and its*

Applications, 32(1989), 237-249.

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- R. Fenn and D. Rolfsen, Spheres may link homotopically in four- space, J. London Math. Soc. (2) 34(1986) 177-184.
- W. S. Massey and D. Rolfsen, Homotopy classification of higher- dimensional links, Indiana Univ. Math. J. 34(1985), 375-391.
- D. Rolfsen, Piecewise-linear I-equivalence of links, London Math. Soc. Lecture Note Series 95(1985).
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- D. Rolfsen, A surgical view of Alexander's polynomial, Proceedings of 1974 Utah Topology Conference, Springer (1975).
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