

# Curriculum Vitae

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*Personal data* born in Illinois (USA), 1941  
United States citizen  
Australian citizen  
Married (1966) - wife Rita  
Children - Kenneth and Elizabeth

*Education* BA, Lehigh University 1962  
MS, New York University 1964  
PhD, University of Illinois 1969

*Academic Posts* 2006-present Emeritus Professor of Mathematics, University of Melbourne  
1976-2006 Professor of Mathematics, University of Melbourne  
2001-2 Visiting Professor, City College of New York  
1971-76 Assistant Professor, Princeton University  
1970-71 U.S. National Science Foundation postdoctoral fellow, Mathematical Institute, University of Oxford  
1969-70 and in 1979 Member, Institute for Advanced Study, Princeton, N.J.  
1968-69 Instructor, University of Illinois

*Research interests* Combinatorial and geometric group theory, homological properties of groups, computational group theory, decision problems in algebra, relationships between topology, logic and group theory.

*Administration* 2003-2004 Chair of Selection Procedures Committee (admissions policy), University of Melbourne  
1998-2000 Associate Dean (Academic Programs), Faculty of Science, University of Melbourne  
1997-1998 Head, Department of Mathematics and Statistics, University of Melbourne  
1987-1990 Chairman, School of Mathematical Sciences, University of Melbourne  
1980-1985 Chairman, Department of Mathematics, University of Melbourne  
1990,1992-2002 Academic Programs Committee, University of Melbourne  
1987-1990. 2003-2004 Selection Procedures Committee, University of Melbourne

*Other  
Professional*

1998 - 2006, Editor, Journal of the Australian Mathematical Society. Hence, ex-officio member of the Council of the AustMS.

1986-1990 Convenor, Mathematics Field of Study Committee of the Victorian Curriculum and Assessment Board, including part time secondment for two years.

1984-2006 Scheduling consulting (with J. Cross and C. Mengelsdorf): at various times we worked as paid consultants to the Australian Football League, the VFL, the SANFL and the Australian National Basketball League concerning scheduling and venue assignments. We used scheduling algorithms and computer programs we have developed to produce schedules based on criteria specified by these sporting enterprises.

Organising committees for numerous conferences.

### Publications of C. F. Miller III

- [1] C. F. Miller III, *On Britton's Theorem A*, Proc. Amer. Soc. **19** (1968), 1151-1154.
- [2] C. F. Miller III, *On group-theoretic decision problems and their classification*, Annals of Mathematics Studies, No. 68, Princeton University Press (1971).
- [3] C. F. Miller III and P. E. Schupp, *Embeddings into hopfian groups*, Journal of Algebra **17** (1971), 171-176.
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- [5] C. F. Miller III, *Decision problems in algebraic classes of groups*, in Word Problems, eds. Boone, Cannonito, and Lyndon, Amsterdam, North-Holland (1973), 507- 523.
- [6] C. F. Miller III, *Some connections between Hilbert's 10th problem and the theory of groups*, in Word Problems, eds. Boone, Cannonito, and Lyndon, Amsterdam, North-Holland (1973), 483-506.
- [7] C. F. Miller III and P. E. Schupp, *The geometry of Higman-Neumann-Neumann extensions*, Comm. on Pure and Applied Math. **26** (1973), 787-802.
- [8] D. J. Collins and C. F. Miller III, *The conjugacy problem and subgroups of finite index*, Proc. of London Math. Soc. **33**, Series 3 (1977), 535-556.
- [9] G. Baumslag, F. B. Cannonito and C. F. Miller III, *Infinitely generated subgroups of finitely presented groups I*, Math. Zeit, **153** (1977), 117-134.
- [10] G. Baumslag, F. B. Cannonito and C. F. Miller III, *Infinitely generated subgroups of finitely presented groups II*, Math. Zeit, **172** (1980), 97-105.
- [11] G. Baumslag, F. B. Cannonito and C. F. Miller III, *Computable algebra and group embeddings*, Journal of Algebra **69** (1981), 186-212.

- [12] G. Baumslag, F. B. Cannonito and C. F. Miller III, *Some recognizable properties of solvable groups*, Math. Zeit., **178** (1981) , 289-295.
- [13] C. F. Miller III , *The word problem in quotients of a group*, in Aspects of Effective Algebra, ed. J.N. Crossley, Proceedings of a conference at Monash University Aug. 1979, Upside Down A Book Company, Steel's Creek, (1981), 246-250.
- [14] G. Baumslag, E. Dyer and C. F. Miller III, *On the integral homology of finitely presented groups*, Bulletin Amer. Math. Soc. **4**, New Series (1981), 321-324.
- [15] G. Baumslag, E. Dyer and C. F. Miller III, *On the integral homology of finitely presented groups*, Topology, **22** (1983), 27-46.
- [16] J. R. J. Groves and C. F. Miller III, *Recognising free metabelian groups*, Illinois Journ. of Math, **30** (1986), 246-254.
- [17] G. Baumslag and C. F. Miller III, *A remark on the subgroups of finitely generated groups with one defining relation*, Illinois Journ. of Math, **30** (1986), 255-257.
- [18] G. Baumslag and C. F. Miller III, *Some odd finitely presented groups*, Bulletin of the London Math. Soc. **20** (1988), 239-244.
- [19] G. Baumslag and C. F. Miller III (editors) *Algorithms and Classification in Combinatorial Group Theory*, MSRI Publications No. 23, Springer-Verlag, 1992.
- [20] C. F. Miller III, *Decision problems for groups: survey and reflections* - in Algorithms and Classification in Combinatorial Group Theory (eds. G Baumslag and C. F. Miller III), MSRI Publications No. 23, Springer-Verlag (1992), 1-59.
- [21] A. J. Berrick and C. F. Miller III, *Strongly torsion generated groups*, Math. Proc. Camb. Phil. Soc. **111** (1992), 219-229.
- [22] G. Baumslag , C. F. Miller III and H. Short, *Isoperimetric inequalities and the homology of groups*, Invent. Math. **113** (1993) , 531-560.
- [23] G. Baumslag , C. F. Miller III and H. Short, *Unsolvable problems about small cancellation and word hyperbolic groups*, Bulletin of the London Math. Soc. **26** (1994), 97-101.

- [24] G. Baumslag , M. R. Bridson, C. F. Miller III and H. Short, *Finitely presented subgroups of automatic groups and their isoperimetric functions*, Journal of the London Math. Soc. **56** (1997), 292-304.
- [25] G. Baumslag and C. F. Miller III, *Experimenting and computing with infinite groups*, in DIMACS Series, volume 28, “Groups and Computation II”, (eds. W. Kantor and L. Finkelstein), Amer. Math. Soc. (1997), 19-30.
- [26] C. F. Miller III and M. D. Shapiro, *Solvable Baumslag-Solitar groups are not almost convex*, Geom. Dedicata **72** (1998), 123-127.
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- [29] J. Cossey, C. F. Miller III, W. D. Neumann and M. D. Shapiro (editors), *Geometric Group Theory Down Under*, de Gruyter Verlag, Berlin (1999).
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- [34] G. Baumslag, M. R. Bridson, D. Holt and C. F. Miller III, *Finite presentation of fibre products of metabelian groups*, Journal of Pure and Applied Algebra. **181** (2003) 15-22.

- [35] M. R. Bridson and C. F. Miller III, *Recognition of subgroups of direct products of hyperbolic groups*, Proc. Amer. Math. Soc. **132** (2004) 59-65.
- [36] G. Baumslag and C. F. Miller III, *The isomorphism problem for residually torsion-free nilpotent groups*, Groups, Geometry and Dynamics **1** (2007) 1-20.
- [37] G. Baumslag, C. F. Miller III and D. Troeger, *Reflections on the residual finiteness of one-relator groups*, Groups, Geometry and Dynamics **1** (2007) 209-219.
- [38] G. Baumslag and C. F. Miller III, *Finitely presented extensions by free groups*, Journal of Group Theory **10** (2007) 723-729.
- [39] M. R. Bridson and C. F. Miller III, *Structure and finiteness properties of subdirect products of groups*, Proc. London Math. Soc. (3) **98** (2009), 631-651.
- [40] G. Baumslag, B. Fine, C. F. Miller III and D. Troeger, *Virtual properties of cyclically pinched one-relator groups*, Internat. Journal of Algebra and Computation **19** (2009), 213-227.
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- [42] M. R. Bridson, J. Howie, C. F. Miller III and H. Short, *Subgroups of direct products of limit groups*, to appear in Annals of Mathematics (21 pages).
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