

Douglas Farenick

Curriculum Vitae

Department of Mathematics & Statistics
University of Regina
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Academic Background & Professional Background

Education

PhD, University of Toronto, 1990
MSc, University of Calgary, 1986
BSc, University of Regina, 1984

Academic Appointments

University of Regina
Professor, 2002-present; Associate Professor, 1996-2002; Assistant Professor, 1992-1996
Université de Montréal
CRM Postdoctoral Fellow, Centre de recherches mathématiques, 1990-1992

Contributions to Research

Areas of Expertise

Operator algebras, operator theory, functional analysis, linear algebra

Refereed Journal Publications

1. M. Argerami, D. Farenick, P. Massey, *The gap between local multiplier algebras of C^* -algebras*, Quarterly Journal of Mathematics (Oxford) 60 (2009), 273–281.
2. D. Farenick, C. Ramsey, *Unitary groups of Hermitian forms and the homotopy groups of pseudospheres*, Journal of Pure and Applied Algebra 212 (2008), 2358–2367.
3. M. Argerami, D.R. Farenick, *Local multiplier algebras, injective envelopes, and type $I W^*$ -algebras*, Journal of Operator Theory 59 (2008), 237–245.
4. D.R. Farenick, F. Zhou, *Jensen's inequality relative to matrix-valued measures*, Journal of Mathematical Analysis and Applications, (2007), 919–929.
5. D.R. Farenick, S.M. Manjegani, *Young's inequality in operator algebras*, Journal of the Ramanujan Mathematical Society 20 (2005), 107–124.
6. D.R. Farenick, B.E. Forrest, L.W. Marcoux, *Amenable operators on Hilbert spaces*, Journal für die reine und angewandte Mathematik 582 (2005), 201–228; Erratum 206 (2007), 235.
7. D.R. Farenick, *Pure matrix states on operator systems*, Linear Algebra and its Applications 393 (2004), 149–173.

8. D.R. Farenick, B.A. Pidkowich, *The spectral theorem in quaternions*, Linear Algebra and its Applications 371 (2003), 75–102.
9. M. Argerami, D.R. Farenick, *Young's inequality in trace-class operators*, Mathematische Annalen 325 (2003), 727–744.
10. D.R. Farenick, P. Psarrakos, *A triangle inequality in Hilbert modules over matrix algebras*, Linear Algebra and its Applications 341 (2002), 57–67.
11. D.R. Farenick, *Symmetry in algebraic algebras with positive involution*, Communications in Algebra 30 (2002), 369–382.
12. J. Erlijman, D.R. Farenick, R. Zeng, *Young's inequality in compact operators*, Operator Theory: Advances and Applications 30 (2001), 170–184.
13. D.R. Farenick, *Extremal matrix states on operator systems*, Journal of the London Mathematical Society 61 (2000), 885–892.
14. D.R. Farenick, D. Hadwin, *Finitely strongly reductive operators*, Journal of Operator Theory 41 (1999), 199–211.
15. D.R. Farenick, H. Zhou, *The structure of C^* -extreme points in spaces of completely positive linear maps on C^* -algebras*, Proceedings of the American Mathematical Society 126 (1998), 1467–1477.
16. D.R. Farenick, W.Y. Lee, *On hyponormal Toeplitz operators with polynomial and circulant-type symbols*, Integral Equations and Operator Theory 29 (1997), 202–210.
17. D.R. Farenick, P.B. Morenz, *C^* -extreme points in the generalised state spaces of a C^* -algebra*, Transactions of the American Mathematical Society 349 (1997), 1725–1748.
18. D.R. Farenick, W.Y. Lee, *Hyponormality and spectra of Toeplitz operators*, Transactions of the American Mathematical Society 348 (1996), 4153–4174.
19. D.R. Farenick, *Irreducible positive linear maps on operator algebras*, Proceedings of the American Mathematical Society 124 (1996), 3381–3390.
20. D.R. Farenick, M. Krupnik, N. Krupnik, W.Y. Lee, *Normal Toeplitz matrices*, SIAM Journal on Matrix Analysis and Applications 17 (1996), 1037–1043.
21. I.A. Affleck, D.R. Farenick, *Numerical radius of a multigraph*, Ars Combinatoria 44 (1996), 23–32.
22. D.R. Farenick, R. McEachin, *Toeplitz operators hyponormal with the unilateral shift*, Integral Equations and Operator Theory 22 (1995), 273–280.
23. P. Binding, D.R. Farenick, C.-K. Li, *A dilation and norm in several variable operator theory*, Canadian Journal of Mathematics 47 (1995), 449–461.
24. D.R. Farenick, *Normal compressions and restrictions to 2-dimensional subspaces, and the Berberian spectral extension*, Linear and Multilinear Algebra 37 (1994), 131–138.
25. D.R. Farenick, *Matricial extensions of the numerical range: a brief survey*, Linear and Multilinear Algebra 34 (1993), 197–211.
26. D.R. Farenick, P.B. Morenz, *C^* -extreme points of some compact C^* -convex sets*, Proceedings of the American Mathematical Society 118 (1993), 765–775.

27. D.R. Farenick, *On the spatial matricial spectra of operators*, Journal of Operator Theory 30 (1993), 329–352.
28. D.R. Farenick, *C^* -convexity and matricial ranges*, Canadian Journal of Mathematics 44 (1992), 280–297.
29. D.R. Farenick, *Krein–Milman-type problems for compact matricially convex sets*, Linear Algebra and its Applications 162-164 (1992), 325–334.
30. D.R. Farenick, *The fundamental group of a unitary orbit*, Linear and Multilinear Algebra 16 (1990), 1–4.
31. D.R. Farenick, P.J. Browne, *Geršgorin theory and the definiteness of determinantal operators*, Proceedings of the Royal Society of Edinburgh 106A (1987), 1-10.

Refereed Books

1. D.R. Farenick, *Algebras of Linear Transformations*, Springer–Verlag, New York, 2001.

Current Grants

NSERC Discovery Grant (2009–2014), \$22,000/year; Principal Investigator
PIMS Collaborative Research Group in Operator Algebras and Noncommutative Geometry (2009–2012), \$239,000 total; Co-Investigator (with 3 others)

Invited Conference Lectures, 2002–present

Canadian Mathematical Society Meeting, Windsor. 05.XII.2009
International Linear Algebra Society Conference, Shanghai. 17.VII.2007
Nebraska-Iowa Functional Analysis Seminar, Des Moines. 01.IV.2006
Canadian Mathematical Society Meeting, Victoria. 13.XII.2005
West Coast Operator Algebras Seminar, Banff International Research Station. 15.IX.2005
Colloquiumfest, University of Saskatchewan. 02.IV.2005
Workshop on Linear Operators, Banff International Research Station. 13.VIII.2004
International Workshop on Operator Theory & Applications, Newcastle Upon Tyne. 14.VII.2004
Workshop on Operator Spaces, Centre international de rencontres mathématiques. Luminy. 27.VI.2003

Invited University Lectures, 2002–present

Universidad Nacional de La Plata, 21.VIII.2009
Instituto Argentino de Matemática, 14.VIII.2009
University of Nebraska, 31.III.2006
University of Calgary, 10.III.2005
University of Toronto, 24.XI.2003
Université Laval, 21.XI.2003
University of Houston, 19.II.2003 & 20.II.2003
University of Waterloo, 31.X.2003

Editorial boards

Operators and Matrices, 2006-2010
Contributions to Discrete Mathematics, 2005-2007

Service to National Organisations, 2002–present

Canadian Mathematical Society

Member of the Board, 2007-2010

Publications Committee, 2005-2007

NSERC

Postgraduate Scholarships & Postdoctoral Fellowships Selection Committee. Chair, 2003 & 2004

Selection Committee for the André Hamer and Howard Alper Prizes. 2003-2004; Chair, 2005

Conference Organisational Committees, 2005–2012

Canadian Mathematical Society Summer Meeting (Regina, Jun 2012), Noncommutative Dynamics Workshop (Regina, May 2010), Northwest Functional Analysis Seminar (Banff, Oct 2009), Canadian Operator Algebra Symposium (Regina, May 2009), Prairie Mathematics Mini-Meeting (Regina, May 2007), Canadian Mathematical Society Session on Matrix Analysis (Victoria, Dec 2005), International Linear Algebra Society Conference (Regina, Jul 2005), Saskatchewan Mathematics Mini-Meeting (Regina, Apr 2005), Northwest Functional Analysis Seminar (Banff, Mar 2005)

Contributions to Teaching

Training of Highly Qualified Personnel, 2002–present

F. Zhou, NSERC PDF 2004-2006; I.H. Kim, KOSEF PDF 2001-2002; A. Al-Aharmi, PhD in progress; S.H. Mwangi, PhD in progress (co-supervision with M. Argerami); S. Lisawadi, PhD 2008 (co-supervision with A. Volodin); S.M. Manjegani, PhD 2005 (co-supervision with J. Erlijman); R. Zeng, PhD 2002 (co-supervision with J. Erlijman); F. Omer, MSc 2007; S. McCann, MSc 2008; C. Ramsey BSc Hons 2008; A. Mang, BEd 2007; B. Pidkowich, BEd 2007; N. Schonhoffer, BSc 2006; S. Wist, BSc 2006

PhD External Examiner, 2002–present

University of Alberta, 2007

University of Toronto, 2005

Public Awareness and Education, 2002–present

Contributor, UofR CMS & Esso Math Camps, University of Regina. 29.IX.2007; 30.IX.2006

Assistant, Saskatchewan Math Challenge, University of Regina. 14.III.2009; 03.III.2007; 05.III.2005

Public Lecture, Saskatchewan Indian Federated College. 16.X.2002

Contributions to University Service

University of Regina Administrative Positions, 2005–present

Acting Associate Dean (Research) of Science. 2009-2010

Member, Executive of Council (representing Faculty of Graduate Studies and Research). 2008-2010

Member, Faculty of Graduate Studies and Research Council. 2006-2009; 2009-2010

Member, External Unit Review of Canadian Plains Research Centre Press. 2006

Chair, Selection Committee for the Alumni Awards for Excellence. 2005-2007

Member, Vice-President (Research) Task Force on Publishing. 2005-2006

Mathematics & Statistics Graduate Program Coordinator. 2005-2008