Curriculum Vitae
Adam Clay

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Date of Birth:	1981, Halifax, Canada (Canadian citizenship)
Date of CV:	March 17, 2017

Education/Employment

2013 –	Assistant Professor, University of Manitoba
2012 – 2013	CIRGET postdoctoral fellow, Université du Québec à Montréal (advisor: Steve Boyer)
2010 – 2012	NSERC postdoctoral fellow, Université du Québec à Montréal (advisor: Steve Boyer)
2010 Ph.D.	University of British Columbia, Mathematics (advisor: Dale Rolfsen)
2005 M.Sc.	University of British Columbia, Mathematics (advisor: Dale Rolfsen)
2003 B.Sc.	University of King's College, Halifax, Canada, Mathematics (with Honours).

Research interests

Group theory, topology, 3-manifolds, knot theory; specifically actions of fundamental groups on S^1 and $\mathbb{R}$, left orderability of fundamental groups of 3-manifolds, Dehn surgery and foliations, algebraic properties of orderable groups.

Publications

Books

1. (with Dale Rolfsen) *Ordered groups and Topology.* Graduate Studies in Mathematics. American Mathematical Society, Providence RI, 2016.

Articles in progress

2. (with Tali Pinsky) *Anosov flows on torus knot complement*, in preparation.
3. (with Steve Boyer) *Cable knots, left-orderability and slope detection*, in preparation.
4. (with Cristobal Rivas and Kathryn Mann) *On the cardinality of $CO(G)$.*, in preparation.
5. (with Steve Boyer) *Slope detection, foliations in graph manifolds, and L-spaces*, (2015), 30 pages. arXiv:1510.02378. Under revision.

Peer-reviewed journal articles

6. (with Sina Zabanfahm) Automorphisms acting on the left-orderings of a bi-orderable group. 14 pages, to appear in to the New York Journal of Mathematics.
7. (with Steve Boyer) *Foliations, orders, representations, L-spaces and graph manifolds*, 55 pages. arXiv:1401.7726, to appear in Advances in Mathematics.
8. *Left-Orderability Of 3-Manifold Fundamental Groups* (invited expository piece for CMS Notes, April 2016).
9. (with Colin Desmarais and Patrick Naylor) *Testing bi-orderability of knot groups*, Canadian Mathematical Bulletin, (2016), 11 pages. http://dx.doi.org/10.4153/CMB-2016-023-6.
10. (with Tye Lidman and Liam Watson) *Graph manifolds, left-orderability and amalgamation*, Algebr. Geom. Topol. 13 (2013), no. 4, 2347–2368.

11. (with Masakazu Teragaito) *Left-orderability and exceptional Dehn surgery on two-bridge knots*, Geometry and topology down under, 225–233, Contemp. Math., 597, Amer. Math. Soc., Providence, RI, 2013.
12. *Left-orderings and quotients of the braid groups*, J. Knot Theory Ramifications 21 (2012), no. 14, 125–130, 9 pp.
13. (with Dale Rolfsen) *Ordered groups, eigenvalues, knots, surgery and L-spaces*, Math. Proc. Cambridge Philos. Soc. 152 (2012), no. 1, 115–129.
14. (with Liam Watson) *Left-orderable fundamental groups and Dehn surgery*, Int. Math. Res. Not. IMRN 2013, no. 12, 2862–2890.
15. *Free lattice-ordered groups and the space of left-orderings*, Monatsh. Math. 167 (2012), no. 3-4, 417–430.
16. (with Liam Watson) *On cabled knots, Dehn surgery, and left-orderable fundamental groups*, Math. Res. Lett. 18 (2011), no. 6, 1085–1095.
17. *Exotic left orderings of the free groups from the Dehornoy ordering*, Bull. Aust. Math. Soc. 84 (2011), no. 1, 103–110.
18. *Isolated points in the space of left orderings of a group*, Groups Geom. Dyn. 4 (2010), no. 3, 517–532.
19. (with Andrés Navas and Cristóbal Rivas, my contribution is the appendix) *A new characterization of Conrad's property for group orderings, with applications*, Algebr. Geom. Topol. 9 (2009) 2079–2100.
20. (with Lawrence H. Smith) *Corrigendum to "On ordering free groups" [J. Symbolic Comput. 40 (2005) 1285-1290]*, J. Symbolic Comput. 44 (2009), no. 10, 1529–1532.
21. (with Dale Rolfsen) *Densely ordered braid subgroups*, J. Knot Theory Ramifications 16 (2007), no. 7, 869–877.

Non-peer-reviewed work

22. *Left-Orderability Of* 3*-Manifold Fundamental Groups*, CMS Notes 48 (2016) no. 2, 14–15. (invited expository piece for the CMS Notes).
23. (with Mathieu Anel) *Orderable groups and bundles*, (2012) 13 pages. arXiv:1208.5844
24. *Orderable groups and topology minicourse notes*, (2014) 22 pages. server.math.umanitoba.ca/∼claya/Santiago_notes.pdf

Lectures and presentations

Conferences

2016 Apr. Fargo, USA (AMS sectional meeting): Orderability and Dehn fillings of knot complements.
2015 July Vancouver, Canada (PIMS Symposium on the Geometry and Topology of Manifolds): Foliations of graph manifolds
—— April Victoria, Canada (The 54^{th} Cascade Topology Seminar): Foliations, left-orderability and L-spaces
2014 Sept. Santiago, Chile (Orderable Groups): Ordered groups and topology (minicourse, three lectures)
—— Aug. Dublin, Ireland (The 10^{th} William Rowan Hamilton Geometry and Topology Workshop): Graph manifolds, left-orderability and L-spaces
—— June Winnipeg, Canada (CMS special session on low-dimensional topology and geometric group theory): Bi-orderability of fundamental groups of 3-manifolds

2013 Dec. Ottawa, Canada (CMS special session on geometric group theory and low-dimensional topology): The Burns-Hale theorem and its generalizations
2012 Dec. Montreal, Canada (CMS special session on geometrical group theory): Graph manifolds, orderability, L-spaces and foliations
—— June Regina, Canada (CMS special session on geometry and topology): Foliations of graph manifolds and left-orderability
—— Feb. Banff, Canada (BIRS workshop): Left-orderability and foliations
2010 Apr. Banff, Canada (Cascade topology seminar): Group orderings and knots
2009 Jan. Washington DC, USA (AMS special session on orderings and logic): Limit points in the space of left orderings of a group
2008 May Montreal, Canada (Colloque Panquébecois des Étudiants): Cofinal elements in orderable groups
2007 June Vancouver, Canada (Pure Math Graduate Student Conference): Densely ordered braid subgroups
—— May Banff, Canada (BIRS workshop): Normal subgroups of the braid groups and the Dehornoy order

Seminars

2016 July Dalhousie University (Colloquium): Smooth Foliations of 3-Manifolds
2015 Nov. University of Manitoba (Learning seminar in geometry and topology): Introduction to the space of left-orderings (2 talks)
—— Sept. University of Manitoba (Learning seminar in geometry and topology): Introduction to group growth
—— Mar. University of British Columbia (invited lecturer for a graduate class on orderable groups): Foliations and left-orderings of Seifert fibred manifolds (2 talks)
2014 Oct. University of Manitoba (Learning seminar in geometry and topology): Dehn surgery and fundamental groups of manifolds (2 talks)
—— Mar. University of Manitoba (Colloquium): Knot groups and orderability
—— Feb. University of Manitoba (Learning seminar in geometry and topology): Introduction to braids and knot theory (3 talks)
2013 May Dalhousie University (Colloquium): Ordered groups and 3-manifolds
—— Mar. Université du Québec à Montréal (CIRGET geometry & topology): Orderability and knots
—— Feb. University of Manitoba: Ordered groups and 3-manifolds
2012 Oct. McMaster University (geometry & topology): Left-orderability, foliations, L-spaces and graph manifolds
2011 July University of British Columbia (algebra & topology): Left-orderability and Dehn surgery
2010 Nov. Université du Québec à Montréal (CIRGET geometry & topology): Orderability and knots
2009 Nov. University of Tokyo (topology): An introduction to orderable groups
—— Jan. Dalhousie University (graduate student seminar): An introduction to orderable groups
2008 Nov. Universidad de Santiago de Chile (dynamical systems seminar): Isolated points in the space of left orderings of a group
—— Feb. University of British Columbia (algebra & topology): The space of left orders of the braid groups
2007 Nov. Laboratoire de Mathématiques Nicolas Oresme (invited speaker): The space of orderings and the braids
—— Nov. University of British Columbia (algebra & topology): Normal subgroups of the braid groups and the Dehornoy order

Organizing conferences, meetings and activities

2015	Co-organizer: CMS session in low dimensional topology and geometric group theory, December 6–9 Montreal, Canada.
2014	Co-organizer: CMS session in low dimensional topology and geometric group theory, June 6–9 Winnipeg, Canada.
2013	Co-organizer: CMS session in geometric group theory and low dimensional topology, December 6–9 Ottawa, Canada.
	Co-organizer: Low dimensional topology, knots and orderable groups, July 1–5 at Centre International de Rencontres Mathématiques, Luminy, Marseille.

Referee and review activities

Journals refereed

Compositio Mathematica
Journal of Knot theory and its Ramifications
Communications in Analysis and Geometry
Journal of Algebra
Algebraic & Geometric Topology
Communications in Algebra
Proceedings of the American Mathematical Society
Canadian Mathematical Bulletin

Scientific/Academic honours and grants

2014 – 2015	University of Manitoba URGP ($6000)
2014 – 2019	NSERC Discovery grant ($95000 over 5 years)
2013 – 2016	University of Manitoba startup grant, ($45000)
2013	Co-PI for NSF conference grant 1305741, ($32000 USD)
——	PI for PIMS conference grant, ($4000)
2010 – 2012	NSERC postdoctoral fellowship, Université du Québec à Montréal
2008	University graduate fellowship, University of British Columbia
2005 – 2007	NSERC PGS-D, University of British Columbia
2003 – 2005	NSERC PGS-M, University of British Columbia
2003	King's Medal

Teaching awards

2008	University of British Columbia graduate teaching award (departmental)

Teaching activities

2016	Winter	Algebra 1 (MATH 2020 at the University of Manitoba)
		Differential Calculus (Math 1500 at the University of Manitoba)
2015	Fall	Introduction to Topology (Math 3390 at the University of Manitoba)
2015	Winter	Engineering Analysis 1 (Math 2132 at the University of Manitoba)
		Advanced Calculus (Math 3760 at the University of Manitoba)
2014	Fall	Advanced Calculus (Math 3760 at the University of Manitoba)
2014	Winter	Topology I (Math 3240 at the University of Manitoba)
		Differential Calculus (Math 1500 at the University of Manitoba)
2012	Fall	Enriched Linear Algebra and Geometry (Math 134 at McGill)

2011 Fall	Linear Algebra and Geometry (Math 133 at McGill)
2010 Fall	Linear Algebra and Geometry (Math 133 at McGill)
2009 – 2010	Organizer of nine calculus workshops (Math 110 at UBC)
2005 – 2008	Ordinary differential equations (Math 265 at UBC)
2005 Winter	Integral calculus (Math 103 at UBC)

MSc students advised

current	Serhii Dovhyi (2nd year MSc student)
completed	Ali Khardani (MSc student joint with Steve Boyer at UQAM)
	Thesis: Groupes ordonnés et les variétés de dimension 3.

Undergraduate students mentored

2016 USRA	Sina Zabanfahm *Spaces of left-orderings of braid groups*
2015 USRA	Patrick Naylor *Diffuse groups and locally invariant orderings*
2015 USRA	Colin Desmarais *A brute force approach to knot group bi-orderability*
2014 USRA	Patrick Naylor *Bi-orderability of two bridge knot groups*
2014 USRA	Colin Desmarais *Testing bi-orderability of knot groups*

Postdocs mentored

2015–2016	Juliana Theodoro de Lima (co-supervisor with Steve Boyer)

Seminars organized or co-organized

2014–2016	Learning seminar in geometry and topology (at University of Manitoba, co-organizer)
2013	Co-organizer, CIRGET-LaCIM seminar (at UQAM)
2011	Working group in low dimensional topology (at UQAM)

Committee work

Administrative committees

Promotion (U of M departmental committee) (2016)
Member of the CMS finance committee (2016–present)
Executive (U of M departmental committee) (2016–present)
Scholarships and awards (U of M departmental committee) (2016–present)
Hiring (U of M departmental committee) (2015)
Research advisory team science (U of M faculty committee) (2014–present)
Hiring (U of M departmental committee) (2014)
Strategic planning (U of M departmental committee) (2013–2016)

Oral examination committees

Monsur Chowdhury (Chair, 2016)
Ji Zhou (Chair, 2016)
Juliana Theodoro de Lima (External examiner, 2014)
Armin Hatefi (Chair, 2014)

References

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