Curriculum Vitae
Aaron Tikuisis

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Personal

Born June 9, 1982 in Toronto, Canada.
Canadian citizen and native English speaker.

Research interests

Operator algebras, particularly the structure, classification, and regularity of C^*-algebras.

Employment

2017-current	Associate Professor (tenured), University of Ottawa
2016-2017	Reader, University of Aberdeen
2015-2016	Lecturer, University of Aberdeen
2013-2015	NSERC postdoctoral fellow, University of Aberdeen
2011-2013	Postdoctoral researcher, University of Münster

Education

2007-2011	Ph.D.
	Thesis title: The Cuntz semigroup of $C(X, A)$
	Advisor: George Elliott
	University of Toronto
	Toronto, Canada

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2006-2007	M.Math
	Thesis title: Amenability for the Fourier algebra
	Advisors: Brian Forrest and Nico Spronk
	University of Waterloo
	Waterloo, Canada
2001-2006	B.Math, co-operative education program
	University of Waterloo
	Waterloo, Canada

Research grants

2018	NSERC Discovery Grant, $20,000 yearly for 5 years
2018	NSERC Discovery launch supplement, $12,500
2016	Glasgow Mathematical Journal Trust grant for "Scottish operator algebras research" cluster meetings, £3000
2015	EPSRC First Grant, c. £98,000
2015	EPSRC Overseas Travel Grant, c. £5,000
2015	Glasgow Mathematical Journal Trust grant for "Scottish operator algebras research" cluster meetings, £3000
2015	Edinburgh Mathematical Society Research Support Fund grant for "Scottish operator algebras research" cluster meetings, £660
2015	LMS Visitors Grant (Scheme 2) for a visit by Prof. Ilijas Farah, £1150
2014	Glasgow Mathematical Journal Trust grant for "Scottish operator algebras seminar," £3000 (applied with S. White)
2013	NSERC Postdoctoral Fellowship (2 year), CAD$90,000

Awards

2020	Israel Halperin Prize
2013	NSERC Postdoctoral Fellowship (2 year)
2008, 2010	(University of Toronto) M.I. Elliott Graduate Scholarship
2007-2009	NSERC Canadian Graduate Scholarship - Doctoral (3 year)

2007	Ontario Graduate Scholarship (declined)
2006	NSERC Canadian Graduate Scholarship - Master's
2006	(University of Waterloo) President's Graduate Scholarship
2005	(University of Waterloo) Mike Vangoch Memorial Award
2003-2006	(University of Waterloo) Mathematics Senate Scholarship

Papers

1. Hung-Chang Liao and Aaron Tikuisis. *Almost finiteness, comparison, and tracial $\mathcal{Z}$-stability*.
Journal of Functional Analysis. To appear. arXiv:2001.10107.
24 pages.

2. Jorge Castillejos, Samuel Evington, Aaron Tikuisis, and Stuart White. *Classifying maps into uniform tracial sequence algebras*.
Mnster Journal of Mathematics. To appear. arXiv:2006.04485.
18 pages.

3. Jorge Castillejos, Samuel Evington, Aaron Tikuisis, and Stuart White. *Uniform property Gamma*.
IMRN. To appear. arXiv:1912.04207.
39 pages.

4. Jorge Castillejos, Samuel Evington, Aaron Tikuisis, Stuart White, and Wilhelm Winter. *Nuclear dimension of simple C^*-algebras.*
Inventiones Mathematicae. Volume 224 (2021), pp. 245–290.

5. Ilijas Farah, Bradd Hart, Martino Lupini, Leonel Robert, Aaron Tikuisis, Alessandro Vignati, and Wilhelm Winter. *The model theory of C^*-algebras.*
Memoirs of the American Mathematical Society. Volume 271 (2021), no. 1324. 127 pages.

6. George Elliott, Zhuang Niu, Luis Santiago, and Aaron Tikuisis. *Decomposition rank of approximately subhomogeneous C^*-algebras.*
Forum Mathematicum. Volume 32 (2020), pp. 827–889.

7. Ján Špakula and Aaron Tikuisis. *Relative commutant pictures of Roe algebras.*
Communications in Mathematical Physics. Volume 365 (2019), pp. 1019–1048

8. Joan Bosa, Nathaniel Brown, Yasuhiko Sato, Aaron Tikuisis, Stuart White, and Wilhelm Winter. *Covering dimension of C*-algebras and 2-coloured classification.*
Memoirs of the American Mathematical Society. Volume 257 (2019), no. 1288. 97 pages.

9. Nathanial Brown, Aaron Tikuisis, and Aleksey Zelenberg. *Rokhlin dimension for C*-correspondences.*
Houston Journal of Mathematics, Volume 44, (2018), pp. 613–643.

10. Robert Archbold, Leonel Robert, and Aaron Tikuisis. *Maximally mixed states on a C*-algebra.*
Journal of Operator Theory, Volume 80, (2018), pp. 187–211.

11. Aaron Tikuisis, Stuart White, and Wilhelm Winter. *Quasidiagonality of nuclear C*-algebras.*
Annals of Mathematics, Volume 185 (2017), pp. 229–284.

12. Ilijas Farah, Bradd Hart, Aaron Tikuisis, and Mikael Rørdam. *Relative commutants of strongly self-absorbing C*-algebras.*
Selecta Mathematica, Volume 23 (2017), pp. 363–387.

13. Leonel Robert and Aaron Tikuisis. *Nuclear dimension and $\mathcal{Z}$-stability of non-simple C*-algebras.*
Transactions of the American Mathematical Society, Volume 369 (2017), pp. 4631–4670.

14. Robert Archbold, Leonel Robert, and Aaron Tikuisis. *The Dixmier property and tracial states for C*-algebras.*
Journal of Functional Analysis, Volume 273 (2017), pp. 2655–2718.

15. Aaron Tikuisis. *K-theoretic characterization of C*-algebras with approximately inner flip.*
International Mathematics Research Notices, Volume 2016 (2016), pp. 5670–5694.

16. Aaron Tikuisis. *Finite dimensional ordered vector spaces with Riesz interpolation and Effros-Shen's unimodularity conjecture.*
Journal of the Australian Mathematical Society, Volume 101 (2016), pp. 277–287.

17. Ilijas Farah, Daniel Hathaway, Takeshi Katsura, and Aaron Tikuisis. *A simple C*-algebra with finite nuclear dimension which is not $\mathcal{Z}$-stable.*
Münster Journal of Mathematics 7 (2014), pp. 515–528.

18. Henning Petzka and Aaron Tikuisis. *Corrigendum to "Regularity for stably projectionless, simple C*-algebras" [J. Funct. Anal. 263 (5) (2012) 1382–1407].*
Journal of Functional Analysis, Volume 270 (2015), pp. 2376–2380.

19. Aaron Tikuisis. *High-dimensional $\mathcal{Z}$-stable AH algebras.*
Journal of Functional Analysis, Volume 269 (2015), pp. 2171–2186.

20. Aaron Tikuisis and Andrew Toms. *On the structure of the Cuntz semigroup in (possibly) nonunital C*-algebras.*
Canadian Mathematical Bulletin, Volume 58 (2015), pp. 402–414.

21. Aaron Tikuisis and Wilhelm Winter. *Decomposition rank of $\mathcal{Z}$-stable C*-algebras.*
Analysis and PDE, Volume 7 (2014), pp. 673–700.

22. Aaron Tikuisis. *Nuclear dimension, $\mathcal{Z}$-stability, and algebraic simplicity for stably projectionless C*-algebras.*
Mathematische Annalen, Volume 358 (2014) pp. 729–778.

23. Aaron Tikuisis. *Regularity for stably projectionless, simple C*-algebras.*
Journal of Functional Analysis. Volume 263 (2012), pp. 1382–1407.

24. Bruce Blackadar, Leonel Robert, Aaron Tikuisis, Andrew Toms, Wilhelm Winter. *An algebraic approach to the radius of comparison.*
Transactions of the American Mathematical Society. Volume 364 (2012), pp. 3657–3674.

25. Aaron Tikuisis. *The Cuntz semigroup of continuous functions into certain simple C*-algebras.*
International Journal of Mathematics, Volume 22 (2011) pp. 1051–1087.

26. Greg Maloney and Aaron Tikuisis. *A classification of finite rank dimension groups by their representations in ordered real vector spaces.*
Journal of Functional Analysis. Volume 260 (2011) pp. 3404–3428.

27. Leonel Robert and Aaron Tikuisis. *Hilbert C*-modules over a commutative C*-algebra.*
Proceedings of the London Mathematical Society. Volume 102 (2011) pp. 229–256.

28. Nevan J. Krogan et al. (Listed tenth of 53 authors.) *Global landscape of protein complexes in the yeast* Saccharomyces cerevisiae.
Nature, Volume 440 (2006) pp. 637–643.

Lecture series

Structure and regularity for C-algebras: nuclear dimension, $\mathcal{Z}$-stability, and classification*, Canadian operator symposium, University of Manitoba, 2018, 3 lectures.

Masterclass *Quasidiagonality and classification of C*-algebras*, Mittag-Leffler Institute, Sweden, 2016, 2 lectures.

Lecture series *Quasidiagonality of nuclear C*-algebras*, University of Copenhagen, 2015, 2 lectures.

Invited addresses

Tracially complete C-algebras.* Cuntz semigroups, Münster, 2021.

Classifying embeddings of C-algebras.* Groups meet C*-algebras, Münster, 2021.

Classifying embeddings of C-algebras.* Special week on operator algebras, Shanghai, 2021.

Classification of C-algebras and *-homomorphisms.* Zagreb workshop on operator theory, Zagreb, 2020.

Uniformly tracially complete C-algebras.* Canadian operator symposium, Toronto, 2020.

Classification of *-homomorphisms. C*-algebras, Oberwolfach, 2019.

Classification of finite simple nuclear C-algebras: two approaches.* Special week on operator algebras, Shanghai, 2019.

The Toms-Winter conjecture and complemented partitions of unity. Workshop on model theory and operator algebras, Banff International Research Station, 2018.

Nuclear dimension, $\mathcal{Z}$-stability, and affine partitions of unity. Noncommutative geometry and operator algebras, Münster, 2018.

$\mathcal{Z}$-stability, property Γ, partitions of unity and nuclear dimension Mini-workshop: MASAs and automorphisms of C^*-algebras, Oberwolfach, 2017.

Roe algebras and quasi-local operators Satellite conference on operator algebras (MCA2017), Fields Institute, Toronto, 2017.

Colouring C^*-algebras. Barcelona conference on C^*-algebras: structure, classification, dynamics, Barcelona, 2017.

Quasidiagonality. Noncommutative geometry and operator algebras, Vanderbilt, 2017.

Roe algebras as relative commutants. C^*-algebras, Oberwolfach, 2016.

The Roe algebra as a relative commutant. Groups, dynamics, and operator algebras, Queen Mary University of London, 2016.

Quasidiagonality and amenability. Canadian annual symposium on operator algebras and their applications, Université de Montréal, 2016.

Classifying maps by traces and covering dimension for C^*-algebras. Workshop on C^*-algebras: geometry and actions, Münster, 2015.

ASH algebras and decomposition rank. International conference on C^*-algebras and dynamical systems, Shijiazhuang, 2015.

Regularity for C^*-algebras and the Toms–Winter conjecture. Great plains operator theory seminar, Purdue University, 2015.

C^*-algebras, ultrapowers, and central sequences. Model theory seminar, McMaster University, 2015.

Dimension of approximately subhomogeneous C^*-algebras. Departmental analysis seminar, Glasgow, 2014.

Topological dimension of C^*-algebras. Pure mathematics colloquium, Southampton, 2014.

Dimension and regularity for C-algebras.* Dynamics and C*-algebras: amenability and soficity, Banff International Research Station, 2014.

Maps that agree on traces. Classification, structure, amenability, and regularity, Glasgow, 2014.

Popular C-algebra invariants.* Model theory and C*-algebras, Münster, 2014.

The dimension of approximately subhomogeneous C-algebras.* Canadian annual symposium on operator algebras and their applications, Fields Institute, Toronto, 2014.

Noncommutative dimension and tensor products. Departmental functional analysis seminar, Oxford, 2014.

Central sequence algebras and their Cuntz semigroups. Departmental analysis seminar, Glasgow, 2014.

Noncommutative dimension reduction and the no-retraction theorem. Departmental analysis seminar, Newcastle, 2014.

Dimension and $\mathcal{Z}$-stability of C-algebras.* Classifying structures for operator algebras and dynamical systems, Aberystwyth, 2013.

Central sequences, dimension, and $\mathcal{Z}$-stability of C-algebras.* C*-Algebren, Oberwolfach, 2013.

Dimension and tensorial absorption in operator algebras. Canadian annual symposium on operator algebras and their applications, Fields Institute, Toronto, 2013.

Dimension reduction and Jiang-Su stability. C*-algebras, dynamics, and classification, Oberwolfach, 2012.

Decomposition rank and Jiang-Su stability. Applications to operator algebras, Fields Institute, Toronto, 2012.

$\mathcal{Z}$-stability and decomposition rank. Departmental functional analysis seminar, Purdue University, 2012.

The Cuntz semigroup and its role in classification. Departmental analysis seminar, Waterloo, 2011.

Computing the Cuntz semigroup of $C(X, A)$. Classification of amenable C^*-algebras, Banff International Research Station, 2010.

Public engagement

SET for Britain: A poster competition at Westminster for early-career researchers, 2014.

Service

Organizer (main contact) (with I. Farah, M. Kennedy, J. Mingo, K. Strung) for 6-month thematic program "Operator algebras and applications", Fields Institute, 2023.

Organizer (with T. Giordano and K. Davidson), "Canadian operator symposium", Ottawa, 2022.

Co-organizer (with T. Giordano and I. Putnam). Operator algebras and applications session of the Summer Meeting of the Canadian Mathematical Society, Ottawa (online), 2021.

Lead organizer (with T. Giordano and I. Putnam), "Graduate summer school in operator algebras", Ottawa (online), 2021.

Co-organizer (with D. Penneys, E. Peters, S. White), "Actions of tensor categories on C^*-algebras", IPAM (online), 2021.

Lead applicant and organizer (with G. Elliott and Z. Niu), "Future targets in the classification program for amenable C^*-algebras" workshop, BIRS, 2017.

Co-director (with S. White) of the Scottish Operator Algebras Research (SOAR) cluster with regular meetings (4 meetings). Supported by funding of £1000/meeting from the Glasgow Mathematical Journal Trust. 2015–2017.

Program committee member (with A. Törnquist), "Classification and set theory" workshop, Mittag–Leffler Institute, 3/16.

Co-organizer (with S. White), "Scottish Operator Algebras Seminar" (4 meetings, 2013-2015) supported by funding of £1000/meeting from the Glasgow Mathematical Journal Trust.

Local organizer of "North British Functional Analysis Seminar" in Aberdeen (6/15).

Co-organizer (main contact). Operator Algebras Session of the Winter Meeting of the Canadian Mathematical Society, Toronto, 2011.

Co-organizer (main contact). 2-day minicourse on Operator Algebras, Toronto, 2011.

Administrative

2018-current	Departmental Analysis seminar organizer
2016-2017	Line manager and supervisor of Research Associate (postdoc) in C^*-algebras
2016-2017	School executive (School of Natural and Computing Sciences)
2015-2017	Teaching committee (Mathematics Department)
2014-2016	Postgraduate officer (Mathematics Department)

Undegraduate teaching

My teaching abilities have been informed by working in different higher-education systems in Canada, Germany, and the U.K., as well as my completion of a 4-month course on teaching undergraduate mathematics, taken in Toronto during 2010.

University of Ottawa (2017-current): 11 courses (typically 3 courses per year).
University of Aberdeen (2013-2017): 6 courses. Designed 4 new courses (Analysis I-IV) with one colleague.
University of Toronto (2010): 1 course.

Graduate student supervision

I currently supervise two Ph.D. students and one M.Sc. student.

Community involvement

2015-2017	Staff representative, mathematics club (University of Aberdeen)

2010-2011   Private math tutoring for undergraduate and high school students

2008   Co-organized and volunteered at Hamilton Central Neighbourhood's youth soccer day