

Raphaël Clouâtre

CONTACT INFORMATION	Department of Mathematics 420 Machray Hall University of Manitoba 186 Dysart Road Winnipeg, Manitoba, Canada R3T 2N2	phone: 204-474-8734 raphael.clouatre@umanitoba.ca
CITIZENSHIP	Canadian	
LANGUAGES	English, French (native)	
RESEARCH INTERESTS	Functional analysis: operator algebras and operator theory	
EDUCATION	Indiana University Ph.D. in Mathematics, May 2013 <ul style="list-style-type: none">• Dissertation title: Some similarity results for contractions of class C_0• Advisor: Hari Bercovici Université de Montréal M.S. in Mathematics, August 2008 <ul style="list-style-type: none">• Master's Thesis title: Universal series in \mathbb{C}^N and on non-compact Riemann surfaces• Advisor: Paul M. Gauthier B.S. in Mathematics, May 2006	
POSITIONS HELD	Assistant professor, University of Manitoba (since August 2015) Postdoctoral fellow, University of Waterloo (August 2013-July 2015)	
PUBLICATIONS	<ol style="list-style-type: none">1. Clouâtre, Raphaël, Timko, Edward J., <i>Row contractions annihilated by interpolating vanishing ideals</i>, submitted for publication, arXiv:1902.068262. Clouâtre, Raphaël, Hartz, Michael, Schillo, Dominik, <i>A Beurling-Lax-Halmos theorem for spaces with a complete Nevanlinna-Pick factor</i>, accepted for publication in Proceedings of the American Mathematical Society, arXiv:1905.058043. Clouâtre, Raphaël, Ramsey, Christopher, <i>A completely bounded non-commutative Choquet boundary for operator spaces</i>, accepted for publication in International Mathematics Research Notices IMRN, arXiv:1703.029244. Clouâtre, Raphaël, Ramsey, Christopher, <i>Residually finite-dimensional operator algebras</i>, J. Funct. Anal. 277 (2019), no. 8, 2572–2616.5. Clouâtre, Raphaël, Timko, Edward J., <i>Cyclic row contractions and rigidity of invariant subspaces</i>, J. Math. Anal. Appl. 479 (2019), no. 2, 1906–1938.6. Clouâtre, Raphaël, Marcoux, Laurent W., <i>Residual finite dimensionality and representations of amenable operator algebras</i>, J. Math. Anal. Appl. 472 (2019), no. 2, 1346–1368.7. Clouâtre, Raphaël, Mbacke, Diarra, <i>Joint similarity for commuting families of power bounded matrices</i>, Linear Algebra Appl. 560 (2019), 1–16.	

8. Clouâtre, Raphaël, Marcoux, Laurent W., *Compact ideals and rigidity of representations for amenable operator algebras*, *Studia Math.* 244 (2019), no. 1, 25–41.
9. Clouâtre, Raphaël, *Non-commutative peaking phenomena and a local version of the hyperrigidity conjecture*, *Proc. Lond. Math. Soc.* (3) 117 (2018), no. 2, 221–245.
10. Clouâtre, Raphaël, *Unperforated pairs of operator spaces and hyperrigidity of operator systems*, *Canad. J. Math.* 70 (2018), no. 6, 1236–1260.
11. Clouâtre, Raphaël, Hartz, Michael, *Multiplier algebras of complete Nevanlinna-Pick spaces: dilations, boundary representations and hyperrigidity*, *J. Funct. Anal.* 274 (2018), no. 6, 1690–1738.
12. Clouâtre, Raphaël, Davidson, Kenneth R., *Ideals in a multiplier algebra on the ball*. *Trans. Amer. Math. Soc.* 370 (2018), no. 3, 1509–1527.
13. Clouâtre, Raphaël, Davidson, Kenneth R., *Absolute continuity for commuting row contractions*. *J. Funct. Anal.* 271 (2016), no. 3, 620–641.
14. Clouâtre, Raphaël, Davidson, Kenneth R., *Duality, convexity and peak interpolation in the Drury-Arveson space*. *Adv. Math.* 295, (2016), 90–149.
15. Clouâtre, Raphaël, Davidson, Kenneth R., *The unit ball of the predual of $H^\infty(\mathbb{B}_d)$ has no extreme points*. *Proc. Amer. Math. Soc.* 144 (2016), no. 4, 1575–1580.
16. Clouâtre, Raphaël, *Completely bounded isomorphisms of operator algebras and similarity to complete isometries*. *Indiana Univ. Math. J.* 64 (2015), no.3, 825–846.
17. Clouâtre, Raphaël, *Unitary equivalence and similarity to Jordan models for weak contractions of class C_0* . *Canad. J. Math.* 67 (2015), no. 1, 132–151.
18. Clouâtre, Raphaël, *Spectral and homological properties of Hilbert modules over the disc algebra*. *Studia Math.* 222 (2014), no. 3, 262–282.
19. Clouâtre, Raphaël, *Similarity results for operators of class C_0 and the algebra $H^\infty(T)$* . *Oper. Matrices* 8 (2014), no. 2, 425–447.
20. Clouâtre, Raphaël, *Quasiaffine orbits of invariant subspaces for uniform Jordan operators*. *J. Funct. Anal.* 266 (2014), no. 7, 4101–4114.
21. Clouâtre, Raphaël, *On the Unilateral Shift as a Hilbert Module over the Disc Algebra*. *Complex Anal. Oper. Theory* 8 (2014), no. 1, 283–309.
22. Clouâtre, Raphaël, *Quasimilarity of invariant subspaces for C_0 operators with multiplicity two*. *J. Operator Theory* **70** (2013), no. 2, 495–511.
23. Clouâtre, Raphaël, *Similarity results for operators of class C_0* . *Integral Equations Operator Theory* **71** (2011), no. 4, 557–573.
24. Clouâtre, Raphaël, *Universal power series in \mathbb{C}^N* . *Canad. Math. Bull.* **54** (2011), no. 2, 230–236.
25. Clouâtre, Raphaël, *Universal series on a Riemann surface*. *Canad. J. Math.* **63** (2011), no. 5, 1025–1037.
26. Gauthier, Paul M., Clouâtre, Raphaël, *Approximation by translates of Taylor polynomials of the Riemann zeta function*. *Comput. Methods Funct. Theory* **8** (2008), no. 1-2, 15–19.

Residual finite-dimensionality for general operator algebras, Analysis and Synthesis for Operator Algebras, International Workshop on Operator Theory and Applications (IWOTA), Lisbon. (July 2019)

Residual finite-dimensionality for general operator algebras, Banach Algebras and Applications, Winnipeg. (July 2019)

Residual finite-dimensionality for general operator algebras, Finite and Infinite Dimensional Structures in Non-Commutative Analysis, Canadian Mathematical Society Summer meeting, Regina. (June 2019)

Uniform quotients and C^ -envelopes on the Drury-Arveson space*, Functional and Complex Analysis, Canadian Mathematical Society Summer meeting, Regina. (June 2019)

Completely bounded analogues of the Choquet and Shilov boundaries for operator spaces, Analysis seminar, University of Illinois. (March 2019)

Classifying cyclic row contractions, AMS Special Session on Recent Progress in Multivariate Operator Theory, Joint Mathematics Meetings, Baltimore. (January 2019)

Choquet theory on state spaces of C^ -algebras and the hyperrigidity conjecture*, Recent advances in operator theory and operator algebras 2018, Bangalore. (December 2018)

Cyclic row contractions and rigidity of invariant subspaces, Special Session on Operator and Function Theory, American Mathematical Society Sectional Meeting, Newark. (September 2018)

Residual finite-dimensionality for general operator algebras, Wabash conference, IUPUI, Indianapolis. (September 2018)

Hyperrigidity via non-commutative function systems on state spaces, International Workshop on Operator Theory and Applications (IWOTA), Shanghai. (July 2018)

Hyperrigidity via non-commutative function systems on state spaces, 27th International Conference in Operator Theory, West University of Timisoara. (July 2018)

Towards a classification theory for constrained row contractions, Analysis seminar, Washington University in St.Louis. (March 2018)

Completely bounded analogues of the Choquet and Shilov boundaries for operator spaces, Seminar in operator theory and operator algebras, University of Virginia. (February 2018)

Completely bounded analogues of the Choquet and Shilov boundaries for operator spaces, Operator algebras, Canadian Mathematical Society Winter meeting, Waterloo. (December 2017)

Kadison's property for representations of amenable operator algebras, Satellite Conference on Operator Algebras, Mathematical Congress of the Americas, Toronto. (August 2017)

Annihilating ideals and spectra for commuting row contractions, Special Session on Operator Theory on Function Spaces, Mathematical Congress of the Americas, Montreal. (July 2017)

Kadison's property for representations of amenable operator algebras, Wabash Modern Analysis Seminar, Crawfordsville. (April 2017)

Spectra and purity of constrained contractions, Special Session on Multivariate Operator Theory and Function Theory, American Mathematical Society Sectional Meeting, Bloomington. (April 2017)

Ideals and zero sets for multipliers on the ball, Complex analysis and application, Canadian Mathematical Society Winter meeting, Niagara Falls. (December 2016)

Kadison's property for representations of amenable operator algebras, Special Session on Operator Algebras and Applications, American Mathematical Society Sectional Meeting, Denver. (October 2016)

Representations of multiplier algebras of complete Pick spaces on the ball, International Workshop on Operator Theory and Applications (IWOTA), Washington University in Saint-Louis. (July 2016)

Absolute continuity for commuting row contractions, Special Session on Matrix and Operator Theory, American Mathematical Society Sectional Meeting, Fargo. (April 2016)

Absolute continuity for commuting row contractions, Operator Algebras, Canadian Mathematical Society Winter meeting, Montreal. (December 2015)

Absolutely continuous commuting row contractions, "From Commutators to BCP Operators", Texas A & M University. (July 2015)

Duality and peak interpolation for multipliers of the Drury-Arveson space, Operator Theory on Analytic Function Spaces, Canadian Mathematical Society Summer meeting, Charlottetown. (June 2015)

Duality and peak interpolation for multipliers of the Drury-Arveson space, Workshop on Multivariate Operator Theory, Banff International Research Station. (April 2015)

Peak interpolation for continuous multipliers of the Drury-Arveson space, Mathematics Colloquium, College of William and Mary. (February 2015)

Peak interpolation for continuous multipliers of the Drury-Arveson space, Mathematics Colloquium, Kansas State University. (February 2015)

Peak interpolation for continuous multipliers of the Drury-Arveson space, Mathematics Colloquium, University of Manitoba. (February 2015)

Duality and peak interpolation for continuous multipliers of the Drury-Arveson space, Operator Algebras and Operator Theory, Canadian Mathematical Society Winter meeting, Hamilton. (December 2014)

Henkin measures for the multiplier algebra of the Drury-Arveson space, Analysis seminar, Université Laval. (October 2014)

An operator algebraic approach to similarity problems in operator theory, Mathematics department colloquium, University of Windsor. (April 2014)

Unitary equivalence to Jordan models for weak contractions of class C_0 , AMS Special Session on Classification Problems in Operator Algebras, Joint Mathematics Meetings, Baltimore. (January 2014)

Unitary equivalence to Jordan models for weak contractions of class C_0 , Operator Algebras and their Applications, Canadian Mathematical Society Winter meeting, Ottawa. (December 2013)

Unitary equivalence to Jordan models for weak contractions of class C_0 , Analysis seminar, Carleton University. (November 2013)

Classification of C_0 contractions, Analysis seminar, University of Western Ontario. (September 2013)

On the Unilateral Shift as a Hilbert Module over the Disc Algebra, Analysis seminar, University of Waterloo. (March 2013)

Similarity results for operators of class C_0 and the algebra $H^\infty(T)$, Complex Analysis and Operator Theory, Canadian Mathematical Society Winter meeting, Montreal. (December 2012)

Similarity results for operators of class C_0 , Analysis seminar, Georgia Institute of Technology. (September 2012)

Similarity results for operators of class C_0 , Complex Analysis seminar, Université de Montréal. (July 2012)

CONTRIBUTED
TALKS

The Kadison property for representations of amenable operator algebras, Canadian Operator Symposium, Lakehead University. (June 2017)

The Kadison property for representations of amenable operator algebras, Great Plains Operator Theory Symposium, Texas Christian University. (May 2017)

Purity of absolutely continuous constrained commuting row contractions, Southeastern Analysis Meeting, University of Tennessee. (March 2017)

Hyperrigidity and C^ -envelopes for multiplier algebras on the ball*, Canadian Operator Symposium, Centre de recherches mathématiques, Montreal. (June 2016)

Representations of multiplier algebras of complete Pick spaces on the ball, Great Plains Operator Theory Symposium, University of Illinois at Urbana-Champaign. (May 2016)

Absolutely continuous commuting row contractions, Canadian Operator Symposium, University of Waterloo. (June 2015)

Completely contractive representations of multiplier algebras of Nevanlinna-Pick spaces, Great Plains Operator Theory Symposium, Purdue University. (May 2015)

Completely bounded isomorphisms of operator algebras and classification of Hilbert space contractions, Canadian Operator Symposium, University of Toronto. (June 2014)

Completely bounded isomorphisms of operator algebras and classification of Hilbert space contractions, Great Plains Operator Theory Symposium, Kansas State University. (May 2014)

Completely bounded isomorphisms of operator algebras and classification of Hilbert space contractions, Southeastern Analysis Meeting, Clemson University. (March 2014)

On the Unilateral Shift as a Hilbert Module over the Disc Algebra, Canadian Operator Symposium, University of Toronto. (May 2013)

On the Unilateral Shift as a Hilbert Module over the Disc Algebra, Great Plains Operator Theory Symposium, University of California, Berkeley. (May 2013)

Similarity results for operators of class C_0 and the algebra $H^\infty(T)$, Wabash Mini-conference, Indiana University-Purdue University Indianapolis. (September 2012)

Similarity results for operators of class C_0 , Great Plains Operator Theory Symposium, University of Houston. (June 2012)

Similarity results for operators of class C_0 , 28th Southeastern Analysis Meeting, University of Alabama. (March 2012)

A Corona Theorem for Multipliers on the Dirichlet Space (by T. Trent), Internet Analysis Seminar conference on the Dirichlet space, Georgia Institute of Technology. (June 2011)

The Jordan model for operators of class C_0 , ISM Graduate Students conference, Université de Montréal. (May 2011)

SUPERVISION

Puxuan Wang (undergraduate summer researcher; May 2019–August 2019)

Brock Klippenstein (undergraduate summer researcher; May 2019–August 2019)

Babak Irandoust Azar (master’s student; September 2017–present)

Edward Timko (postdoctoral fellow; August 2017–present)

Christopher Ramsey (postdoctoral fellow; June 2016–July 2018)

Diarra Mbacke (undergraduate summer researcher; May 2017–August 2017, May 2018–present)

Alex Penner (undergraduate summer researcher; May 2017–August 2017)

PROFESSIONAL SERVICE

Organizer of the 46th Canadian Operator Symposium (COSy 2018) at the University of Manitoba

TEACHING EXPERIENCE

Vector geometry and linear algebra, University of Manitoba (Fall 2018)

Real Analysis I, University of Manitoba (Winter 2018)

Abstract Measure Theory, University of Manitoba (Fall 2017)

Multivariable Calculus, University of Manitoba (Fall 2017, Fall 2018)

Introduction to Analysis, University of Manitoba (Fall 2016)

Calculus 2, University of Manitoba (Fall 2016)

Basic Functional Analysis, University of Manitoba (Winter 2016, Winter 2017, Winter 2019)

Integral Calculus, University of Manitoba (Winter 2016)

Applied Complex Analysis, University of Waterloo (Winter 2015)

Calculus 1 for Honours Math, University of Waterloo (Fall 2014)

Calculus 2 for Engineers, University of Waterloo (Winter 2014)

Calculus 1 for the Sciences, University of Waterloo (Fall 2013)

Precalculus with Trigonometry, Indiana University (Fall 2012, Spring 2013)

HONORS AND AWARDS

NSERC Discovery Grant (2016-2021)

CRM-ISM Postdoctoral Fellowship (2015, declined)

FQRNT Postdoctoral Fellowship (2013-2015)

William B. Wilcox Mathematics Award for outstanding graduate student, Indiana University (2013)

Rothrock Teaching Award for associate instructors, Indiana University (2013)

NSERC Postgraduate Scholarship for Doctoral degree (2008-2011)

NSERC Alexander Graham Bell Canada Graduate Scholarship for Doctoral degree (2008, declined)

National Bank award (2007)

FQRNT Master's research scholarship (2007)

NSERC Canada Graduate Scholarship for Master's degree (2006)

Jean Maranda award (2006)

Maurice L'Abbé award (2005)

NSERC Undergraduate Student Research Award (2004, 2005, 2006)

Université de Montréal welcome award (2003)

Governor General academic medal (2003)