

Dana Bartošová

Department of Mathematical Sciences
358 Little Hall
University of Florida
Gainesville, FL 32611, USA

Phone: +1-412-277-0924
Email: dbartosova@ufl.edu
Web: people.clas.ufl.edu/dbartosova
Citizenship: Czech Republic
Languages: Czech, English, Portuguese, French

RESEARCH INTEREST

Ramsey theory, topological dynamics, set theory, model theory, functional analysis, abstract harmonic analysis, continuum theory, general topology

EMPLOYMENT

- 2023–present **University of Florida** (Gainesville, USA)
Associate Professor
- 2018–2023 **University of Florida** (Gainesville, USA)
Assistant Professor
- 2017–2018 **Carnegie Mellon University** (Pittsburgh, USA)
Postdoctoral Associate
- 2014–2016 **Universidade de São Paulo** (São Paulo, Brazil)
Postdoctoral Fellow
- 2013 **Hausdorff Research Institute for Mathematics** (Bonn, Germany)
Postdoctoral Fellow of the Hausdorff Trimester Program on Universality and Homogeneity
-

THEMATIC PROGRAMS AND RESEARCH VISITS

- 2015 I was a visiting fellow at the programme **Mathematical, Foundational and Computational Aspects of the Higher Infinite** (Isaac Newton Institute for Mathematical Sciences, Cambridge, UK) between August 23 and November 6, 2015.
- 2014 I visited Prof. Alexander S. Kechris at the California Institute of Technology between September 21 and December 13, 2014.
- 2012 I participated at the **Thematic Program on Forcing and its Applications** (Fields Institute, Toronto, Canada) between June 1 and December 31, 2012.
- 2010 I participated at the **Thematic Program on Asymptotic Geometric Analysis** (Fields Institute, Toronto, Canada) between September 1 and December 31, 2010.
-

EDUCATION

- 2013 **University of Toronto** (Toronto, Canada)
PhD in Mathematics
– *Supervisor: Stevo Todorčević (University of Toronto)*

- 2009 **Charles University in Prague** (Prague, Czech Republic)
MSc in Mathematics (with honors)
– *Supervisor: Petr Simon (Charles University in Prague)*
- 2008 **VU University Amsterdam** (Amsterdam, the Netherlands)
MSc in Applied Mathematics (Thesis-based)
– *Supervisor: Klaas Pieter Hart (TU Delft)*
- 2006 **Charles University in Prague** (Prague, Czech Republic)
BSc in General Mathematics (with honors)
– *Supervisor: Miroslav Hušek*
-

GRANTS AND AWARDS

- 2022–2027 NSF CAREER grant DMS 2144118, “Uncountable topological dynamics,” PI, \$400,000.
- 2021–2023 American Institute of Mathematics (AIM), SQuaREs (Structured Quartet Research Ensembles), “Model theory of big Ramsey Structures” (with Mirna Džamonja, Rehana Patel, and Lynn Scow).
- 2020–2023 NSF grant DMS 1953955, “Dynamics, Topology, and Combinatorics,” PI, \$215,093.
- 2020–2022 NSF grant DMS 1945890, “Southeastern Logic Symposium,” co-PI.
- 2014–2016 FAPESP grants 2013/14458-9 (2014–2016), 2014/12405-8 (2014) and 2015/09278-7 (2015).
- 2009–2013 University of Toronto Graduate Fellowship.
- 2009–2011 Student Research Grant, Grant Agency of Charles University in Prague, Grant project: Model Theory in Topology
- 2009 First prize in Student Research Project in Mathematics and Informatics 2009, Category: Mathematical Structures - Algebra, Topology and Geometry, Project title: “Lelek’s Conjecture.”
- 2008 Research Assistantship, VU University Amsterdam.
- 2007–2008 Faculty of Sciences Fellowship, VU University Amsterdam.
- 2004–2009 Merit Scholarship, Charles University in Prague.
-

PAPERS

Papers published/accepted in refereed journals

1. “Universal minimal flows of extensions of and by compact groups.” *Ergodic Theory and Dynamical Systems*, 43(8) (2023), 2538–2548. <https://www.doi.org/10.1017/etds.2022.52>
2. (with *Jordi Lopez-Abad, Martino Lupini, and Brice R. Mbombo*) “The Ramsey property for Operator spaces and noncommutative Choquet simplices.” *J. Func. Anal.* 281 (9) (2021), <https://doi.org/10.1016/j.jfa.2021.109192>.
3. (with *Jordi Lopez-Abad, Martino Lupini, and Brice R. Mbombo*) “The Ramsey properties for Grassmannians over \mathbb{R}, \mathbb{C} .” *Combinatorica* 42 (2022), 9–69, <https://doi.org/10.1007/s00493-020-4264-0>. (<https://arxiv.org/abs/1910.00311>)
4. (with *Jordi Lopez-Abad, Martino Lupini, and Brice R. Mbombo*) “The Ramsey property for Banach spaces and Choquet simplices.” *J. Eur. Math. Soc., Soc.* 24, no.4 (2022), 1353–1388, DOI: 10.4171/JEMS/1121. (<https://arxiv.org/abs/1708.01317>)
5. (with *Andy Zucker*) “Fraïssé structures and a conjecture of Furstenberg.” *Comment. Math. Univ. Carolin.* vol. 60, no. 1 (2019), pp. 1–24, <https://arxiv.org/abs/1802.02513>.
6. (with *Aleksandra Kwiatkowska*) “The universal minimal flow of the group of homeomorphisms of the Lelek fan”. *Trans. Amer. Math. Soc.* 371 (2019), 6995–7027, <https://arxiv.org/abs/1706.09154>.

7. (with *Jordi Lopez-Abad, Martino Lupini, and Brice Mbombo*) “The Ramsey property for Banach spaces and Choquet simplices, and applications” (short version). *Comptes Rendus Mathématique* 355 no.12 (2017), 1242–1246, <https://doi.org/10.1016/j.crma.2017.11.001>.
8. (with *Aleksandra Kwiatkowska*) “Gowers’ Ramsey Theorem with multiple operations and dynamics of the homeomorphism group of the Lelek fan”. *Journal of Combinatorial Theory, Series A*, Volume 150, 2017, 108–136, <http://arxiv.org/abs/1411.5134>.
9. (with *Aleksandra Kwiatkowska*) “Lelek fan from a projective Fraïssé limit”. *Fund. Math.* 231 (2015), 57–79, <http://arxiv.org/abs/1312.7514>.
10. “More universal minimal flows of groups of automorphisms of uncountable structures”, *Asymptotic Geometric Analysis. Proceedings of the Fall 2010 Fields Institute Thematic Program*. (Monika Ludwig, Vitali Milman, Vladimir Pestov, Nicole Tomczak-Jaegermann, editors), *Fields Institute Communications* 68, Springer-Verlag, 2013, <https://arxiv.org/abs/1204.0037>.
11. “Universal minimal flows of groups of automorphisms of uncountable structures”. *Canad. Math. Bull.* Vol. 56 (4) (2013), pp. 709–722, [dx.doi.org:10.4153/CMB-2012-023-4](https://doi.org/10.4153/CMB-2012-023-4).
12. (with *Klaas Pieter Hart, Logan Hoehn, Berd van der Steeg*) “Lelek’s problem is not a metric problem”. *Topology Appl.*, 158(18), (2011), 2479–2484, <https://arxiv.org/abs/0810.1643>.

Submitted for Publication

13. (with *Lynn Scow*) “A new perspective on semi-retractions and the Ramsey property.” Submitted. <https://arxiv.org/abs/2204.10991>.
14. (with *Mirna Džamonja, Rehana Patel, and Lynn Scow*) “Big Ramsey degrees in ultraproducts of finite structures.” Submitted. https://people.clas.ufl.edu/dbartosova/files/Ultraproduct_preprint.pdf.

Preprints

15. “Ramsey property for Boolean algebras with ideals and $\mathcal{P}(\omega_1)/\text{fin}$ ”, arxiv.org/abs/1212.1529.
16. “Universal minimal flow in the language of near filters and its applications”, arxiv.org/abs/1212.1532.

Theses

- “Topological dynamics of automorphism groups of ω -homogeneous structures via near ultrafilters”, *PhD Thesis, Department of Mathematics, University of Toronto, 2013*.
- “Span and Chainability in Non-metric Continua”, *Master Thesis, Faculty of Sciences, VU University Amsterdam, 2008*.
- “Variations of Brouwer Fixed Point Theorem”, *Bachelor Thesis, Faculty of Mathematics and Physics, Charles University in Prague, 2006*.

INVITED TALKS

Invited Conference Talks

- | | |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Aug 2023 | <i>Descriptive set theory & dynamics</i>
University of Warsaw, Poland
“Maximal factor flows with respect to topologizing a group.” |
| Aug 2023 | <i>Midsummer Combinatorial Workshop</i>
Charles University in Prague, Czech Republic
“Transferring the Rasmsey property by semi-retractions.” |
| Jul 2023 | <i>The 37th Summer Conference on Topology and its Applications</i>
Youngstown State University, OH
“Greatest ambit and the universal minimal flow as spaces of near ultrafilters.” (Invited semi-plenary talk). |

- May 2023 *BLAST 2023*
University of North Carolina at Charlotte, NC
“Dynamics, Ramsey theory, and model theory.” (Plenary talk.)
- Mar 2023 *2023 Spring Southeastern Sectional Meeting*
Georgia Tech, GA
“Topological dynamics and combinatorics.”
- Feb 2023 *Oxford Logic Seminar* (online)
“Semi-retractions, pre-adjunctions, and examples. ”
- Jan 2023 *Workshop on the Geometry and Dynamics of Groups of Transformations*
Fields Institute, Toronto, Canada
“Model theoretic transfer principles in Ramsey theory.”
- Jan 2023 *AMS-ASL special session at JMM*
Boston, MA
“Ramsey properties of ultraproducts of classes of finite structures with finite Ramsey degrees.”
- Nov 2022 *Invariant descriptive computability theory*
American Institute of Mathematics, San Jose, CA
- Oct 2022 *2022 Langenhop lecture and Siu probability and statistic conference*
Southern Illinois University at Carbondale.
“Minimal dynamical systems with unique probability measure.” (Plenary lecture.)
- Aug 2022 *Workshop on C*-Dynamics and Set Theory*
Paris, France [unable to participate due to GC processing].
- Jul 2022 *Toposym 2022* (semi-plenary lecture)
Prague, Czech Republic [unable to participate due to GC processing].
- Apr 2022 *2022 ASL Annual North American Meeting*
Cornell University Ithaca, NY
“Ramsey theory in ultraproducts of finite structures.”
- Mar 2022 *55th Spring Topology and Dynamics Conference*
Baylor University, Waco, TX
“Ramsey properties of ultraproducts of finite structures.” (semi-plenary lecture)
- Jan 2022 *Oberwolfach Workshop Groups and Dynamics: Topology, Measure, and Borel Structure*
Online/Oberwolfach, Germany
“Ramsey properties of ultraproducts of finite structures.”
- Sep 2021 *El Congreso Latinoamericano de Matemáticos 2021*
Online
“Group operations and universal minimal flows”
- Jan 2021 *ASL Winter Meeting at JMM*
Online
“Non-metrizable universal minimal flows.”
- Dec 2019 *Set Theory Session in the XVIII Latin American Symposium on Mathematical Logic*
University of Concepción, Chile
“Phase spaces of universal minimal flows”
- Sep 2019 *AMS Sectional Meeting, Special Session*
University of Wisconsin-Madison, WI, USA
“Topological dynamics via combinatorics.”
- Jun 2019 *BEST*
Southern Oregon University, Ashland, Oregon, USA
“Ramsey theoretic methods in dynamics of topological groups”

- May 2019 *Association for Symbolic Logic 2019 Annual North American Meeting*
CUNY, New York City, NY, USA
"Dynamics of topological groups via structures."
- Mar 2019 *Spring Topology and Dynamics Conference*
University of Alabama at Birmingham, USA
"Samuel compactification of topological groups."
- Dec 2018 *II joint meeting Basil–Spain in Mathematics*
University of Cadiz, Spain
"Closedness of the minimal ideal of $S(G)$."
- Aug 2018 *BLAST 2018*
University of Denver, USA
"Unique amenability of topological groups." (plenary speaker)
- Jun 2018 *Descriptive set theory conference*
Bernoulli Center, EPFL, Lausanne, Switzerland
"Complexity of the minimal ideal in the greatest ambit."
- Nov 2017 *Ultrafilters, Ramsey Theory and Dynamics*
Villeurbanne, France
"Approximate Ramsey theory."
- Dec 2016 *II Congresso Brasileiro de Jovens Pesquisadores em Matemática Pura e Aplicada*
IMECC/Unicamp
"Algebra in the Samuel compactification."
- Oct 2016 *EDAÍ*
Universidade Federal do Rio de Janeiro
"Constructions in topological dynamics via ultrafilters."
- Set 2016 *Set Theory and its Applications in Topology*
BIRS at Casa Matemática Oaxaca, Mexico
"Ultrafilter combinatorics in topological dynamics," video at
<http://www.birs.ca/events/2016/5-day-workshops/16w5053/videos/watch/201609151130-Bartosova.html>
- Set 2016 *Colloquium Logicum 2016*
University of Hamburg, Germany
"Dual Ramsey Theorem and its applications in Topological Dynamics"
- Jun 2016 *Young Set Theory 2016 Masterclass*
University of Copenhagen, Denmark
"Ramsey theory and topological dynamics."
- Jun 2016 *Toronto Set Theory Seminar*
Fields Institute, Toronto, Canada
"Algebra in the Samuel compactification."
- May 2016 *Fields Workshop on Dynamical Systems and Operator Algebras*
University of Ottawa, Canada
"On a problem of Ellis."
- May 2016 *13th Annual Workshop on Topology and Dynamical Systems*
University of Nipissing, North Bay, Canada
"Combinatorics of ultrafilters on automorphism groups."
- Apr 2016 *Seminário de Matemática Aplicada*
UNIFESP, São José dos Campos, Brazil
"Ramsey theory in topological dynamics."
- Jan 2016 *ASL Winter Meeting (with Joint Mathematics Meetings)*
Seattle, Washington, USA
"Ramsey properties in topological dynamics."

- Dec 2015 *The Role of the Higher Infinite in Mathematics and Other Disciplines*
Isaac Newton Institute, Cambridge, UK
“Ramsey theory in topological dynamics.”
video at <https://www.newton.ac.uk/seminar/20151214100011001>
- Dec 2015 *2015 CMS Winter Meeting*
Montréal, Canada
“Problems about Boolean algebras in topological dynamics.”
- Nov 2015 *Independence Results in Mathematics and Challenges in Iterated Forcing*
University of East Anglia, Norwich, UK
“Boolean algebras in topological dynamics.”
- Jun–Jul 2015 *When Topological Dynamics meets Model Theory*
Université Aix-Marseille, Marseille, France
“The group of linear isometries of the Gurarij space is extremely amenable.”
- Mar–Apr 2015 *Forcing and its Applications Retrospective Workshop*
Fields Institute, Toronto, Canada
“Applications of Ramsey theory in topological dynamics,”
video at <https://www.fields.utoronto.ca/video-archive/2015/04/340-4507>
- Feb 2015 *SEALS 2015*
University of Florida, Gainesville, USA
“Partition theorems from the dual Ramsey theorem.”
- Feb 2015 *Workshop on Functional Analysis and Dynamical Systems*
UFSC, Florianópolis, Brazil
“Ramsey theory and the group of homeomorphisms of the Lelek fan.”
- Aug 2014 *Novi Sad Conference in Set Theory and General Topology*
University of Novi Sad, Novi Sad, Serbia
“Lelek fan and generalizations of finite Gowers’ FIN_k theorem.”
- May 2014 *DU Sesquicentennial Ramsey Theory Conference*
University of Denver, Denver, USA
“Finite Gowers’ FIN_k Theorem with multiple tetris-like operations.”
- Apr 2014 *AMS Spring Western Sectional Meeting*
University of New Mexico, Albuquerque, USA
“Ramsey classes of Boolean algebras with ideals.”
- Mar 2014 *48th Spring Topology and Dynamics Conference*
University of Richmond, Richmond, USA
“Applications of Ramsey theory and near ultrafilters in topological dynamics.” (semi-plenary speaker)
- Mar 2014 *INFTY Final Conference*
University of Bonn, Bonn, Germany
“Lelek fan from a projective Fraïssé limit.”
- Feb 2014 *Geometric functional analysis and group actions*
UFSC, Florianópolis, Brazil
“Lelek fan and projective Fraïssé theory.”
- Oct 2013 *Workshop on Homogeneous Structures*
Hausdorff Research Institute for Mathematics, Bonn, Germany
“The universal minimal flow of the group of automorphisms of $\mathcal{P}(\omega_1)/\text{fin}$,”
video at <https://www.youtube.com/watch?v=wb2nvg1GG4s>
- Sep 2013 *ESI 2013 Descriptive Set Theory Workshop*
Erwin Schrödinger Institute, Vienna, Austria
“Near ultrafilters, groups of automorphisms and unique amenability.”

- Apr 2013 *AMS Spring Western Sectional Meeting*
University of Colorado, Boulder, USA
“Filter dynamical systems.”
- Apr 2012 *The Fifth MIG*
University of Denver, Denver, USA
“Universal minimal flows in the language of filters.”

Invited Seminar and Colloquia Talks

- April 2023 *Colloquium*
Auburn University, AL
“Model Theory in Ramsey Theory.”
- Oct 2022 *University of Wisconsin Logic Seminar*
Madison, WI
“Transfer of Ramsey phenomena via semi-retractions.”
- Oct 2022 *Nankai Logic Colloquim (Online)*
“Model theory in Ramsey theory”
- Nov 2021 *Dynamic Seminar at University of Maryland*
“Interactions between group operations and universal minimal flows.”
- Nov 2021 *UIC Logic Seminar*
“Ramsey phenomena in ultraproducts of finite structures.”
- May 2021 *Turine-Udine Logic Seminar*
“Short exact sequences and universal minimal flows.”
- March 2021 *University of Wisconsin Logic Seminar*
“Extensions of and by compact groups and their universal minimal flows.”
- Mar 2021 *Leeds Models and Sets seminar*
“Dynamics of extensions of compact groups.”
- Dec 2020 *Wroclaw Set-Top Zoominar*
“Attempts to understand the universal minimal flow of $\mathbb{Z} \times \mathbb{Z}$.”
- Sep 2020 *Caltech Logic seminar*
“On phase spaces of universal minimal flows of groups with compact normal subgroups.”
- Jul 2020 *Online Logic Seminar*
“Dynamics of products of groups and group extensions.”
- Dec 2019 *Logic Seminar*
Caltech, Pasadena, USA
“Questions about phase spaces of minimal Boolean flows.”
- Dec 2019 *Logic Colloquium*
University of California at Berkeley, Berkeley, USA
“Questions about phase spaces of minimal Boolean flows.”
- Oct 2017 *McGill Seminar on Logic, Category Theory, and Computation*
McGill University, Montreal, Canada
“Questions on freedom of actions.”
- Sep 2017 *Caltech-UCLA Logic Seminar*
University of California, Los Angeles, USA
“Free actions via graphs.”
- Nov 2016 *Seminário de Combinatória*
Universidade Federal Fluminense
“Combinatória em dinâmica topológica.”

- Nov 2016 *Álgebras de Operadores*
Universidade Federal de Santa Catarina, Florianópolis, Brazil
“Álgebra e combinatória em compactificação de Samuel.”
- Oct 2016 *Colóquio do Departamento de Matemática*
Universidade Federal de Santa Catarina, Florianópolis, Brazil
“Teoria de Ramsey estrutural e a propriedade de ponto fixo dos grupos de automorfismos.”
- Set 2016 *ML Seminar*
University of Hamburg, Germany
“Algebra and combinatorics in the Samuel compactification of automorphism groups.”
- Jun 2016 *Toronto Set Theory Seminar*
Fields Institute, Toronto, Canada
“Algebra in the Samuel compactification.”
- Dec 2015 *CUNY Logic Workshop*
CUNY Graduate Center, New York, USA
“Ramsey theory and topological dynamics.”
- Aug 2015 *Toronto Set Theory Seminar*
Fields Institute, Toronto, Canada
“On the structure of the universal minimal flows via (near) ultrafilters.”
- Aug 2015 *Analysis seminar*
University of Ottawa, Canada
“On the structure of the universal minimal flows via (near) ultrafilters.”
- Jul 2015 *Nipissing Computer Science and Mathematics Seminar*
Nipissing University, North Bay, Canada
“Topological dynamics and dual Ramsey theory.”
- May 2015 *Seminário de Análise/EDP* Universidade Federal do Rio de Janeiro, Brazil
“Dynamics of isometry groups of approximately homogeneous Banach spaces.”
- May 2015 *Lógica, Topologia e Teoria dos Conjuntos*
Universidade Federal da Bahia, Salvador, Brasil
“Approximate Ramsey properties for finite-dimensional Banach spaces and simplexes”
video at <https://www.youtube.com/watch?v=WL61QbMzeS0>
- Nov 2014 *UCLA Logic Colloquium*
University of California, Los Angeles, USA
“The group of linear isometries of the Gurarij space is extremely amenable.”
- Oct 2014 *Toronto Set Theory Seminar*
Fields Institute, Toronto, Canada
“Finite Gowers’ Theorem and the Lelek fan.”
- Apr 2013 *Nipissing Computer Science and Mathematics Seminar*
Nipissing University, North Bay, Canada
“Groups of Automorphisms and the Ramsey Property.”
- Mar 2013 *Toronto Set Theory Seminar*
Fields Institute, Toronto, Canada
“Filter dynamical systems.”
- Feb 2013 *UCLA Logic Colloquium*
University of California, Los Angeles, USA
“Ramsey property for Boolean algebras with ideals and Katowice problem.”
- Feb 2013 *Caltech Logic Seminar*
California Institute of Technology, Pasadena, USA
“Universal minimal flow in the language of filters.”

Apr 2012 *UIUC Logic Seminar*
University of Illinois, Urbana-Champaign, USA
“Universal minimal flows in the language of filters.”

Apr 2012 *UIC Logic Seminar*
University of Illinois, Chicago, USA
“Universal minimal flows in terms of Boolean algebras and its applications.”

CONFERENCE ORGANIZATION

Mar 2023 I co-organized a special session on Set Theoretic Topology at the Spring Topology and Dynamics Conference (online).

Jun 2022 I co-organized a special session on Set Theory at 2022 Logic Colloquium in Reykjavik, Iceland.

May 2022 I co-organized a special session on Ramsey theory of infinite structures at AMS Western Sectional Meeting at Denver University (online).

Jan 2022/23 I co-organized ASL session at 2023 JMM (postponed from 2022) in Boston.

Mar 2020 I co-organized a Special Session on Forcing and Ramsey Theory of the 2020 Annual Association for Symbolic Logic meeting, University of California at Irvine.

Feb 2020–2022 I co-organized the South Eastern Logic Symposium (SEALS), University of Florida.

Nov 2019 I co-organized a Special Session of the AMS Fall Southeastern Sectional Meeting, University of Florida.

SERVICE

2023–present I am an editor of Topology and its Applications.

2023 I organized UF Math Festival with 29 activities and over 200 participants.

2023 I organized Math Kangaroo competition for K–12 students.

2022–present I am the director of UF Math Circle. <https://circle.math.ufl.edu/>

2022 & 2023 I organized a visit of Orlando Math Circle top students at the University of Florida and facilitated mentorship for research projects for four high school students.

2021–present I organize Math Parents Coffee to tackle systemic obstacles caretakers face in academia. <https://people.clas.ufl.edu/dbartosova/math-parents-coffee/>

2018 I organized the Logic seminar at the University of Florida.

2010–2012 I organized Student Set Theory and Topology Seminar for the University of Toronto and York University students.

MENTORING

May 2023 – present Samuel Kim, undergraduate research, University of Florida

May 2023 – Aug 2023 Caleb Davis, Ph.D. student, University of Florida

June 2021 – present Jake Park, Ph.D. student, University of Florida

Aug 2020 – present Mentor at University Multicultural Mentor Program

May 2020 – Apr 2023 Alan Curtin, undergraduate research

May 2019 – Aug 2022 Lauren Wickman, Ph.D. student, University of Florida

Dec 2018 – May 2021 Ankit Vishnubhotla, undergraduate research, University Scholar 2020/21, University of Florida

COURSES – LECTURER

I lectured the following courses.

- 2018–2022 **University of Florida**
- MAT4930/MAT6932 Topics Course: Topological Dynamics
 - MAT4930/MAT6932 Topics Course: Category Theory
 - MAT4930/MAT6932 Topics Course: Model Theory
 - MAT4930/MAT6932 Topics Course: Topological Groups
 - MAT4930/MAT6932 Topics Course: Combinatorial Number Theory
 - MHF4102/MHF5107 Introduction to Set Theory
 - MHF3202 Sets and Logic
- 2017–2018 **Carnegie Mellon University**
- 21-373 Algebraic structures
 - 21-301 Combinatorics
 - 21-111 Calculus I
- 2013 **University of Toronto**
- MAT223 - Linear Algebra I (**course coordinator**)
 - MAT187 - Calculus II (Engineering)
- I lectured the following mini-courses.
- Feb 2022 **The Annual Introductory Logic Course of Logic Assoc. Malaysia**
- Introductory Set Theory
- Dec 2016 **DOCCOURSE Ramsey Theory, Charles University Prague, fall 2016**
- Dual Ramsey, the Gurarij space and the Poulsen simplex
- Nov 2016 **Universidade de São Paulo**
- Ramsey theory in topological dynamics/ Teoria de Ramsey e dinâmica topológica
- Feb 2014 **Universidade Federal de Santa Catarina, Escola de Verão 2014**
- Countable ultrahomogeneous structures and their automorphism groups
-

COURSES - TEACHING ASSISTANT

I was a teaching assistant for the following courses.

- 2009–2013 **University of Toronto**
- MAT185 - Linear Algebra (Engineering Science)
 - MAT188 - Linear Algebra (Engineering)
 - MAT196 - Calculus A (Engineering)
 - MAT223 - Linear Algebra I
 - MAT224 - Linear Algebra II

MAT246 - Concepts in Abstract Mathematics
MAT335 - Chaos, Fractals and Dynamics
MAT401 - Polynomial Equations and Fields
MAT475 - Problem Solving Seminar

COMMITTEES

2021 & 2023	Search Committee
2022-2024	Steering Committee
2021-present	Co-advisor for AWM Student Chapter
2020-present	Diversity, Equity, and Inclusion Committee
2020-present	Undergraduate Committee Upper Division
2018-present	PhD Examination Committees: Logic
2018-2020 & 2022	Graduate Selection Committee
2018-2020	Colloquium, Conferences, Visitors, and Travel Committee

REFEREEING

I have refereed for the following journals.

Algebra Universalis
Combinatorial Theory
Comment.Math.Univ.Carolin.
Ergodic Theory and Dynamical Systems
European J. Combinatorics
European Journal of Mathematics
Forum of Mathematics, Sigma
Fundamenta Mathematicae
Journal of Combinatorial Theory Series A
Journal of Mathematical Logic
Journal of Symbolic Logic
Proceedings of the Amer. Math. Soc.
I have refereed a book for Springer.