

Gregory Cousins

PRESENT ADDRESS

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PERMANENT ADDRESS

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PERSONAL INFORMATION

Date of Birth: May 11th, 1990.
Place of Birth: Hamilton, Ontario, Canada.
Citizenship: Canada, Italy.

WORK EXPERIENCE

- McMaster University, Assistant Professor (Contractually Limited Appointment), 2019 - Present
- Omnium CPG, Data Science Intern, May 2020 - August 2020

EDUCATION

University of Notre Dame, South Bend, Indiana, U.S.A
Ph.D., August, 2019
Advisor: Anand Pillay

Somerville College, University of Oxford, Oxford, U.K.
Master of Science, Mathematics and the Foundations of Computer Science, September 2013 (with Distinction)
Dissertation Supervisor: Boris Zilber

McMaster University, Hamilton, Ontario, Canada
Honours Bachelor of Science, Mathematics, April 2012 (Summa cum laude)
Major in Pure Mathematics
Minor in Physics

RESEARCH INTERESTS

Model theory, field theory, algebraic geometry, and interactions between them. Especially the model theory of large fields, or large fields with extra structure.

PAPERS AND PREPRINTS

- Tim Champion, Greg Cousins, & Jinhe Ye (2018). Classifying spaces and the Lascar group, *submitted to the Journal of Symbolic Logic*, arXiv:1808.04915
- Quentin Brouette, Greg Cousins, Anand Pillay, & Francoise Point (2018). Embedded Picard-Vessiot extensions, *Communications in Algebra*, DOI:10.1080/00927872.2018.1448848

TEACHING EXPERIENCE

- Time Series (with applications in R) (McMaster University, Stats 4A03) - Instructor, January 2021 - April 2021
- Calculus for Business, Humanities and the Social Sciences (Math 1M03, McMaster University) - Course Coordinator, January 2021 - April 2021
- Statistical Methods and Applications with R (Stats 2MB3, McMaster University) - Instructor, January 2021 - April 2021

- Applied Probability and Statistics for Engineers (Stats 3Y03/3J04, McMaster University) - Course Coordinator, September 2020 - December 2020
- Introduction to Mathematical Reasoning (Math 1C03, McMaster University) - Instructor, September 2020 - December 2020
- Graduate Algebra (Math 701, McMaster University) - Instructor, September 2020 - December 2020
- Linear Algebra I (Math 1B03, McMaster University) - Instructor, January 2020 - April 2020
- Introduction to Mathematical Reasoning (Math 1C03, McMaster University) - Instructor, January 2020 - April 2020
- Linear Algebra II (Math 2R03, McMaster University) - Instructor, January 2020 - April 2020
- Introduction to Probability Theory (Stats 2D03, McMaster University) - Instructor, September 2019 - December 2019
- Applied Probability and Statistics for Engineers (Stats 3Y03/3J04, McMaster University) - Instructor, September 2019 - December 2019
- Calculus III (Math 22550, University of Notre Dame) - Teaching Assistant, September 2018 - December 2018
- Calculus II (Math 10560, University of Notre Dame) - Instructor, January 2018 - April 2018
- Honors Calculus III (Math 22850, University of Notre Dame) - Teaching Assistant, September 2017 - December 2017
- Calculus B (Math 10360, University of Notre Dame) - Instructor, September 2016 - December 2016
- Introduction to Linear Algebra and Differential Equations (Math 20580, University of Notre Dame) - Teaching Assistant, September 2015 - December 2015
- Calculus B (Math 10360, University of Notre Dame) - Teaching Assistant, January 2015 - April 2015
- Calculus II (Math 10560, University of Notre Dame) - Teaching Assistant, September 2014 - December 2014
- Engineering Mathematics III (Math 2ZZ3, McMaster University) - Teaching Assistant/MatLab Tutorial Leader, January 2012 - April 2012
- Calculus for Life Science (Math 1LS3, McMaster University) - Head Teaching Assistant, September 2011 - December 2011

SERVICE

- Outreach Committee, Department of Mathematics & Statistics, McMaster University, 2020-2021
- Honours and Awards Committee, Department of Mathematics & Statistics, McMaster University, 2020-2021

HONORS AND AWARDS

- Archibald Jackson Prize 2013 (Somerville College, Oxford)
- NSERC Postgraduate Scholarship (Masters), September 2013 - September 2014
- NSERC Alexander Graham Bell Canada Graduate Scholarship (Masters), September 2013 - September 2014 (Declined)
- Bradshaw Fund Travel Grant (Somerville College, Oxford), April 2013
- Natural Science and Engineering Research Council (NSERC) Undergraduate Student Research Award (USRA) (Supervisor: Bradd Hart), May 2012
- NSERC USRA (Supervisor: Deirdre Haskell), May 2011
- The Emanuel Williams Scholarship in Physics: April 2012

- NSERC USRA (Supervisor: Matt Valeriote), May 2010
- McMaster University Dean's Honour List, 2008-2012
- McMaster Entrance Award, September, 2008

TALKS

- Ohio State University Logic Seminar, invited speaker
March 26, 2019
Title: "PAC Fields with a Strong Notion of Model Completeness"
- City University of New York, Graduate Center Model Theory Seminar, invited speaker
March 1, 2019
Title: "PAC Fields with a Strong Notion of Model Completeness"
- University of Illinois at Urbana-Champaign Logic Seminar, invited speaker
January 22, 2019
Title: "Classifying Spaces and the Lascar Group"
- University of Illinois at Chicago Logic Seminar, invited speaker
September 25, 2019
Title: "A Homotopical View of Lascar Groups for First-Order Theories"
- AMS Spring Central Sectional Meeting, Special Session on Model Theory
April 1, 2017 - April 2, 2017
Organizers: Gabriel Conant, Philipp Hieronymi
Short talk (15 min.)
Title: "Embedded Galois Extensions for Certain Differential Fields"

CONFERENCES AND WORKSHOPS ATTENDED

- Model-Theoretic Methods in Number Theory and Algebraic Differential Equations
August 3, 2018 - August 5, 2018
University of Manchester
- Differential Algebra and Related Topics IX
July 30, 2018 - August 2, 2018
University of Leeds
- 18th Annual Graduate Student Conference in Logic
April 8, 2017 - April 9, 2017
University of Illinois at Urbana-Champaign
Organizers: Santiago Camacho, Allen Gehret
- AMS Spring Central Sectional Meeting, Special Session on Model Theory
April 1, 2017 - April 2, 2017
University of Indiana, Bloomington
Organizers: Gabriel Conant, Philipp Hieronymi
- Summer School in Tame Geometry
July 18, 2016 - July 23, 2016
Universität Konstanz
Organizers: Pantelis Eleftheriou, Salma Kuhlmann, Jonathan Pila, Daniel Plaumann, Margaret Thomas
- Thematic Program on Model Theory
June 6, 2016 - June 24, 2016
University of Notre Dame
Organizers: Isaac Goldbring, Anand Pillay, Sergei Starchenko
- 17th Annual Graduate Student Conference in Logic
April 9, 2016 - April 10, 2016
University of Notre Dame
Organizers: *Gregory Cousins*, Mike Haskel, Rose Weisshaar

- Model Theory, Difference/Differential Equations and Applications
April 7, 2015 - April 10, 2015
Centre International de Rencontres Mathématiques, Marseille, France
- Annual North American meeting of the Association for Symbolic Logic
March 25, 2015- March 28, 2015
University of Illinois at Urbana-Champaign
- Simposio Latinoamericano de Lógica Matemática XVI
July 28, 2014 - August 1, 2014
Buenos Aires, Argentina
- Model Theory in Geometry and Arithmetic
May 12, 2014 - May 16, 2014
Mathematical Sciences Research Institute, Berkeley, CA
- Connections for Women: Model Theory and Its Interactions with Number Theory and Arithmetic Geometry
February 10, 2014 - February 11, 2014
Mathematical Sciences Research Institute, Berkeley, CA
- Introductory Workshop: Model Theory, Arithmetic Geometry and Number Theory
February 3, 2014- February 7, 2014
Mathematical Sciences Research Institute, Berkeley, CA
- LMS-EP SRC Short Course on o-minimality and Diophantine Geometry
July 8, 2013 - July 12, 2013
University of Manchester
- Model Theory 2013
June 10, 2013 - June 15, 2013
Ravello, Italy
- Fondazione C.I.M.E.: Model Theory in Algebra, Analysis, and Arithmetic
July 2, 2012 - July 16, 2012
Cetraro, Italy

EXTRACURRICULAR ACTIVITIES

- Hamilton City Council LGBTQ Advisory Committee Member, 2021 - Present
- University of Notre Dame Mathematics Graduate Student Association, Executive Member (President), 2016-2017
- University of Notre Dame Graduate Student Union Representative for the Department of Mathematics, 2014-2015
- University of Notre Dame Mathematics Graduate Student Association, Executive Member (Secretary), 2013-2014
- University of Oxford Cycling Club, September 2012 - August 2013
- McMaster Math and Stats Society, Executive Member, 2010-2012

PROGRAMMING LANGUAGES

- Extensive experience with \LaTeX .
- Intermediate experience in Python.
- Intermediate experience in R.