

CURRICULUM VITAE

ISAAC GOLDBRING

University of California, Irvine
Department of Mathematics
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EMPLOYMENT

University of California, Irvine Professor	July 2022-Present
University of California, Irvine Associate Professor	July 2018-June 2022
University of California, Irvine Assistant Professor	June 2016-June 2018
University of Illinois at Chicago Assistant Professor	June 2012-August 2016
University of California, Los Angeles Hedrick Assistant Adjunct Professor	July 2009-June 2012

EDUCATION

Ph.D., Mathematics University of Illinois at Urbana-Champaign <i>Thesis Title: Nonstandard Methods in Lie Theory</i> <i>Thesis Advisor: Lou van den Dries</i>	October 2009
B.S. & M.A. in Mathematics, University of California, Los Angeles <i>Major: Mathematics (Departmental Highest Honors)</i> <i>Minor: Philosophy</i> <i>Graduated Magna Cum Laude</i>	June 2004

RESEARCH INTERESTS

- Model theory
- Nonstandard analysis
- Continuous logic
- Lie theory
- Geometric group theory
- Operator algebras

- Combinatorial number theory
- Quantum complexity and quantum foundations

PUBLICATIONS

1. *Bezout domains and elliptic curves* (with Marc Masdeu Sabate)
Communications in Algebra, Volume 36 (2008) 4492-4499.
2. *Nonstandard hulls of locally exponential Lie algebras*
Journal of Logic and Analysis, Volume 1:5 (2009), 1-25.
3. *Locally compact contractive local groups* (with Lou van den Dries)
Journal of Lie Theory, Volume 19 (2009), 685-695.
4. *Hilbert's fifth problem for local groups*
Annals of Mathematics, Volume 172 (2010), 1269-1314.
5. *Globalizing locally compact local groups* (with Lou van den Dries)
Journal of Lie Theory, Volume 20 (2010), 519-524.
6. *Ends of groups: a nonstandard perspective*
Journal of Logic and Analysis, Volume 3:7 (2011), 1-28.
7. *Definable functions in Urysohn's metric space*
Illinois Journal of Mathematics, Volume 55 (2011), 1423-1435.
8. *Thorn-forking in continuous logic* (with Clifton Ealy)
Journal of Symbolic Logic, Volume 77 (2012), 63-93.
9. *Definable operators on Hilbert spaces*
Notre Dame Journal of Formal Logic, Volume 53 (2012), 193-201.
10. *An approximate Herbrand's theorem and definable functions in metric structures*
Mathematical Logic Quarterly, Volume 58 (2012), 208-216.
11. *Nonstandard hulls of locally uniform groups*
Fundamenta Mathematicae, Volume 220 (2013), 93-118.
12. *Further thoughts on definability in the Urysohn sphere*
Proceedings of the 12th Asian Logic Conference, World Scientific (2013), 144-154.
13. *The theory of tracial von Neumann algebras does not have a model companion* (with Bradd Hart and Thomas Sinclair)
Journal of Symbolic Logic, Volume 78 (2013), 1000-1004.
14. *Transseries and Todorov-Vernaev's asymptotic fields* (with Matthias Aschenbrenner)
Archive for Mathematical Logic, Volume 53 (2014), 65-87.
15. *An approximate logic for measures* (with Henry Towsner)
Israel Journal of Mathematics, Volume 199 (2014), 867-913.
16. *Definable closure in randomizations* (with Uri Andrews and H. Jerome Keisler)
Annals of Pure and Applied Logic, Volume 166 (2015), 325-341.
17. *High density piecewise syndeticity of sumsets* (with Mauro di Nasso, Renling Jin, Steven Leth, Martino Lupini, and Karl Mahlburg)
Advances in Mathematics, Volume 278 (2015), 1-33.
18. *On Kirchberg's embedding problem* (with Thomas Sinclair)
Journal of Functional Analysis, Volume 269 (2015), 155-198.

19. *On a sunset conjecture of Erdős* (with Mauro di Nasso, Renling Jin, Steven Leth, Martino Lupini, and Karl Mahlburg)
Canadian Journal of Mathematics, Volume 67 (2015), 795-809.
20. *Pseudofinite and pseudocompact metric structures* (with Vinicius Cifú Lopes)
Notre Dame Journal of Formal Logic, Volume 56 (2015), 493-510.
21. *Games and elementary equivalence of II_1 factors* (with Thomas Sinclair)
Pacific Journal of Mathematics, Volume 278 (2015), 103-118.
22. *Dividing and weak quasi-dimensions in arbitrary theories* (with Henry Towsner)
Archive for Mathematical Logic, Volume 54 (2015), 915-920.
23. *Hilbert's fifth problem* (with Lou van den Dries)
L'Enseignement Mathématique, Volume 61/62 (2015), 3-43.
24. *Model theory and the QWEP conjecture*.
Illinois Journal of Mathematics, Volume 59 (2015), 795-599.
25. *The fundamental group of a locally finite graph with ends: a hyperfinite approach* (with Alessandro Sisto)
Fundamenta Mathematicae, Volume 232 (2016), 21-39.
26. *Existentially closed II_1 factors* (with Ilijas Farah, Bradd Hart, and David Sherman)
Fundamenta Mathematicae, Volume 233 (2016), 173-196.
27. *The pseudoarc is a co-existentially closed continuum* (with Christopher Eagle and Alessandro Vignati)
Topology and its applications, Volume 207 (2016), 1-9.
28. *A computability-theoretic reformulation of the Connes Embedding Problem* (with Bradd Hart)
Bulletin of Symbolic Logic, Volume 22 (2016), 238-248.
29. *Approximate polynomial structure in additively large sets* (with Mauro Di Nasso, Renling Jin, Steven Leth, Martino Lupini, and Karl Mahlburg)
Integers, Volume 16 (2016), A49.
30. *High density piecewise syndeticity of product sets in amenable groups* (with Mauro Di Nasso, Renling Jin, Steven Leth, Martino Lupini, and Karl Mahlburg)
Journal of Symbolic Logic, Volume 81 (2016), 1555-1562.
31. *A monad measure space for logarithmic density* (with Mauro Di Nasso, Renling Jin, Steven Leth, Martino Lupini, and Karl Mahlburg)
Monatshefte für Mathematik, Volume 181 (2016), 577-599.
32. *Robinson forcing and the quasidiagonality problem* (with Thomas Sinclair)
International Journal of Mathematics, Volume 23 (2017), Article 1750008.
33. *Omitting types in operator systems* (with Thomas Sinclair)
Indiana University Mathematics Journal, Volume 66 (2017), 821-844.
34. *On the theories of McDuff's II_1 factors* (with Bradd Hart)
International Mathematics Research Notices, Volume 27, Issue 18 (2017), 5609-5628.
35. *Model-theoretic aspects of the Gurarij operator system* (with Martino Lupini)
Israel Journal of Mathematics, Volume 226 (2018), 87-118.
36. *Explicit sentences distinguishing McDuff's II_1 factors* (with Bradd Hart and Henry Towsner)
Israel Journal of Mathematics, Volume 227 (2018), 365-377.
37. *Hindman's theorem and idempotent types* (with Uri Andrews)
Semigroup Forum, Volume 97 (2018), 471-477.

38. *Definable sets containing product sets in expansion of groups* (with Uri Andrews and Gabriel Conant)
Journal of Group Theory, Volume 22 (2019), 63-82.
39. *Independence in randomizations* (with Uri Andrews and H. Jerome Keisler)
Journal of Mathematical Logic, Volume 19 (2019), Article 1950005.
40. *On the axiomatizability of C^* algebras as operator systems* (with Thomas Sinclair)
Glasgow Journal of Mathematics, Volume 61 (2019), 629-635.
41. *An invitation to nonstandard analysis and its recent applications* (with Sean Walsh)
Notices of the American Mathematical Society, Volume 66 (2019), 842-851.
42. *Boundary amenability of groups via ultrapowers* (with Stephen Avsec)
Houston Journal of Mathematics, Volume 45 (2019), 731-741.
43. *On supra-SIM sets of natural numbers* (with Steven Leth)
Combinatorial and Additive Number Theory III (2020), 123-132.
44. *Scattered sentences have few separable randomizations* (with Uri Andrews Sherwood Hachtman, H. Jerome Keisler, and David Marker)
Archive for Mathematical Logic, Volume 59 (2020), 743-754.
45. *Properties expressible in small fragments of the theory of the hyperfinite II_1 factor* (with Bradd Hart)
Confluentes Mathematici, Tome 12 (2020), 37-47.
46. *On Popa's factorial commutant embedding property*
Proceedings of the American Mathematical Society, Volume 148 (2020), 5007-5012.
47. *Enforceable operator algebras*
Journal of the Institute of Mathematics of Jussieu, Volume 20 (2021), 31-63.
48. *Operator algebras with hyperarithmetic theory* (with Bradd Hart)
Journal of Logic and Computation, Volume 31 (2021), 612-629.
49. *Ultrafilter methods in combinatorics*
Snapshots of modern mathematics from Oberwolfach, 2021-06.
50. *A nonstandard proof of the spectral theorem for unbounded self-adjoint operators*
Expositiones Mathematicae, Volume 39 (2021), 590-603.
51. *Oracle computability of conditional expectation onto subfactors*
New York Journal of Mathematics, Volume 27 (2021), 1085-1095.
52. *The almost sure theory of finite metric spaces* (with Bradd Hart and Alex Kruckman)
Bulletin of the London Mathematical Society, Volume 53 (2021), 1740-1748.
53. *A tribute to Lou van den Dries*, *Celebratio Mathematica* (2021).
54. *Factorial commutants and II_1 factors with the generalized Jung property* (with Scott Atkinson and Srivatsav Kunnawalkam Elayavalli), *Advances in Mathematics*, Volume 396 (2022), Paper No. 108107.
55. *Continuous sentences preserved under reduced products* (with H. Jerome Keisler)
Journal of Symbolic Logic, Volume 87 (2022), 649-681.

PAPERS ACCEPTED FOR PUBLICATION

56. *Spectral gap and definability*
To appear in the book *Beyond First Order Model Theory Volume 2*. arXiv 1805.02752
57. *A nonstandard take on central sets*
To appear in the volume *Research Trends in Contemporary Logic*. arXiv 1812.08362.

58. *Non-embeddable II₁ factors resembling the hyperfinite II₁ factor*
To appear in the Journal of noncommutative geometry. arXiv 2101.10467
59. *The Connes Embedding Problem: a guided tour*, to appear in the Bulletin of the American Mathematical Society. arXiv 2109.12682.
60. *Existentially closed W*-probability spaces* (with Cyril Houdayer), to appear in Mathematische Zeitschrift. arXiv 2108.09223
61. *Everettian mechanics with hyperfinitely many worlds*, to appear in Erkenntnis. arXiv 2106.04544.

PAPERS SUBMITTED FOR PUBLICATION

1. *Correspondences, ultraproducts, and model theory* (with Bradd Hart and Thomas Sinclair) arXiv 1809.00049
2. *Generic algebraic properties in spaces of enumerated groups* (with Srivatsav Kunnawalkam Elayavalli and Yash Lodha) arXiv 2006.14048
3. *The universal theory of the hyperfinite II₁ factor is not computable* (with Bradd Hart) arXiv 2006.05629
4. *On the complexity of the theory of a computably presented metric structure* (with Caleb Camrud and Timothy McNicholl) arXiv 2106.05372.
5. *Unitary representations of locally compact groups as metric structures* (with Itai Ben yaacov) arXiv 2111.02835
6. *The undecidability of having QWEP* (with Jananan Arulseeelan and Bradd Hart) arXiv 2205.07102

BOOKS

1. *Ultrafilters throughout mathematics*, Graduate Studies in Mathematics Series, Volume 220 (2022), American Mathematical Society.
2. *Nonstandard methods in Ramsey theory and combinatorial number theory* (with Mauro Di Nasso and Martino Lupini), Lecture Notes in Mathematics 2239, Springer-Verlag.

INVITED TALKS-MEETINGS

- *IMS Graduate Summer School in Logic* (5 day course), National University of Singapore, July 16-20, 2022.
- *Ultramath 2022*, University of Pisa (recorded Zoom talk), June 6-12, 2022.
- *19th International Conference on Computability and Complexity in Analysis*, Arcadia University (via Zoom), May 23-26, 2022.
- *2022 North American Annual Meeting of the Association for Symbolic Logic* (3 part conference tutorial), Cornell University, April 7-10, 2022.
- *38th Southeastern Analysis Meeting*, University of Florida (via Zoom), March 5-7, 2022.

- *Yonsei University Lecture Series in Logic* (8 talks), January-February, 2022.
- *2020 Chinese Mathematical Logic Annual Meeting* (via Zoom), November 14, 2020.
- *Groundwork for Operator Algebra Lecture Series*, Michigan State University (via Zoom), July 9, 2020.
- *Model theory: groups, geometries, and combinatorics*, Oberwolfach, Germany, January 12-18, 2020.
- *American Mathematical Society Fall Sectional Meeting*, Special Session on Advances in Operator Algebras, UC Riverside, November 2019.
- *Classification problems in von Neumann algebras*, Banff International Research Station, October 2019.
- *XXIII Latinamerican Algebra Colloquium*, Special Session on Logic and Universal Algebra, Mexico City, August 5-9, 2019.
- *Antalya Algebra Days XXI*, Nesin Mathematics Village, Turkey, May 15-19, 2019.
- *2019 Southern Ontario Operator Algebras Seminar*, Fields Institute, Toronto, Canada, February 16-17, 2019.
- *Nebraska-Iowa Functional Analysis Seminar: One day workshop on operator algebras*, University of Nebraska Lincoln, November 3, 2018.
- *Workshop on approximation properties in operator algebras and ergodic theory*, IPAM, UCLA, April 30-March 5, 2018.
- *Workshop on model theory of finite and pseudo finite structures*, University of Leeds, April 2018.
- *American Mathematical Society Fall Sectional Meeting*, Special Session on Advances in Operator Algebras, UC Riverside, September 2017.
- *Mathematical Congress of the Americas*, Special Session on Interactions between model theory and analysis and topology, Montréal, Canada, July 2017
- *Virginia Operator Theory and Complex Analysis Meeting*, University of Virginia, October 2016
- *2016 Joint Mathematics Meeting*, Special Session on Classification problems in operator algebras, Seattle, Washington, January 2016
- *Combinatorics meets ergodic theory*, Banff, Alberta, Canada, July 2015
- *Neostability theory*, Oaxaca, Mexico, July 2015
- *Canadian Mathematical Society Winter Meeting*, Plenary lecture, McMaster University, December 2014
- *East Coast Operator Algebra Symposium*, Fields Institute, Toronto, Canada, October 2014
- *American Mathematical Society Fall Sectional Meeting*, Special Session on Von Neumann algebras and related fields, University of Wisconsin-Eau Claire, September 2014
- *DMV-PTM Joint Meeting*, Special Session on Wild algebraic and geometric topology, Poznan, Poland, September 2014
- *16th Latin American Symposium on Mathematical Logic*, Conference tutorial on Applications of Continuous Model Theory (4 hours) and Semiplenary talk in Special Session on Model Theory, Buenos Aires, Argentina, July 2014
- *Model Theory of C^* Algebras*, Münster, Germany, July 2014
- *2014 Joint Mathematics Meeting*, AMS-ASL Special Session on Logic and Probability, Baltimore, Maryland, January 2014

- *Model theory and applications workshop*, Lisbon, Portugal, July 2013
- *Association for Symbolic Logic European Summer Meeting*, Special Session in Logic and Analysis, Evora, Portugal, July 2013
- *Association for Symbolic Logic North American Annual Meeting*, Special Session in Applications of Logic to Operator Algebras, University of Waterloo, May 2013
- *Midwest Model Theory Day*, University of Illinois at Chicago, October 2012
- *Association for Symbolic Logic North American Annual Meeting*, Plenary talk, University of Wisconsin, March 2012
- *American Mathematical Society Spring Sectional Meeting*, Special Session on Nonstandard Analysis, University of Hawaii, March 2012
- *12th Asian Logic Conference*, Victoria University of Wellington, New Zealand, December 2011
- *Logic in Southern California*, UC Irvine, December 2011
- *Model Theory of Groups (Interactions between Model Theory and Geometric Group Theory)*, Luminy, France, November 2011
- *Geometric Group Theory and Logic: The Elementary Theory of Groups*, University of Illinois at Chicago, August 2011
- *Association for Symbolic Logic North American Annual Meeting*, Special Session in Model Theory, University of California, Berkeley, March 2011
- *2011 Joint Mathematics Meeting*, American Mathematical Society Special Session on Model Theory of Fields and Applications, New Orleans, Louisiana, January 2011
- *First Joint Meeting between the American Mathematical Society and Sociedadad Matematica de Chile*, Special Session in Algebra and Model Theory, Pucon, Chile, December 2010
- *Model Theory Conference in Seoul*, Yonsei University, Seoul, South Korea, May 2010
- *Yonsei University Special Logic Colloquium*, Seoul, South Korea, May 2010
- *American Mathematical Society Spring Sectional Meeting*, Special Session on Geometric Group Theory, University of New Mexico, Albuquerque, April 2010
- *Urbana in Lyon Meeting*, Lyon, France, July 2009
- *Association for Symbolic Logic North American Annual Meeting*, Special Session in Model Theory, Notre Dame University, May 2009
- *Seminar Sophus Lie*, University of Paderborn, Germany, January 2009
- *Meeting on Dependent Theories*, Bogota, Colombia, March 2008
- *Geometric Groups on the Gulf Coast*, Pensacola Beach, Florida, March 2008

INVITED TALKS-SEMINARS/COLLOQUIA

- *University of Illinois Operator Algebras and Quantum Information Seminar*, April 2022.
- *University of Maryland Logic Seminar*, April 2022.
- *University of Oxford Logic Seminar*, April 2022.
- *Iowa State Math Department Colloquium*, November 2021.
- *UCSD Functional Analysis Seminar*, September 2021.

- *Geometry and Analysis on Groups Research Seminar, University of Vienna, May 2021.*
- *Notre Dame Model Theory Seminar, December 2020.*
- *University of Colorado, Colorado Springs Math Department Colloquium, November 2020.*
- *UCLA Functional Analysis Seminar, April 2020.*
- *Ohio State University Math Department Colloquium, February 2020.*
- *UCLA Logic Colloquium, November 2019.*
- *Berkeley Logic Colloquium, November 2019.*
- *USC Math Department Colloquium, November 2018.*
- *Imperial College Logic Seminar, London, April 2018.*
- *Groups, actions, and von Neumann algebras, Université Paris-Sud, February 2018.*
- *Géométrie et Théorie des Modèles (Geometry and Model Theory Seminar), Paris, France, January 2018.*
- *UC Riverside Mathematical Physics and Dynamical Systems Seminar, June 2017.*
- *UCLA Logic Colloquium, March 2017.*
- *UCLA Functional Analysis Seminar, March 2017.*
- *University of Virginia Math Department Colloquium, October 2016.*
- *Purdue Operator Algebra Seminar, February 2016*
- *Caltech Logic Seminar, February 2016*
- *Bogotá Logic Colloquium, December 2015*
- *University of California, Irvine Math Department Colloquium, November 2015*
- *University of California, San Diego Model Theory and Operator Algebras Seminar, October 2015*
- *University of Wisconsin Math Department Colloquium, September 2015*
- *Southern Wisconsin Logic Colloquium, September 2015*
- *USC Algebra Seminar, March 2015*
- *University of Illinois at Urbana Champaign Logic Seminar, February 2015*
- *Notre Dame Model Theory Seminar, February 2015*
- *Notre Dame Logic Seminar, February 2015*
- *University of Iowa Operator Theory Seminar, January 2015*
- *Vanderbilt University Subfactor Seminar, March 2014*
- *University of Hawaii Math Department Colloquium, January 2014*
- *Harvard/MIT Logic Seminar, November 2013*
- *New York Logic Workshop, September 2013*
- *Vassar College Math Department Colloquium, September 2013*
- *The Ohio State University Logic Seminar, January 2013*
- *University of Waterloo Pure Math Colloquium, January 2013*
- *McMaster University Model Theory Seminar, November 2012*
- *Fields Institute Seminar on Set Theory and C^* -algebras, November 2012*
- *University of Pennsylvania Logic Seminar, October 2012*
- *University of Illinois at Urbana Champaign Logic Seminar, October 2012*
- *Southern Wisconsin Logic Colloquium, September 2012*
- *UC Irvine Logic Seminar, February 2012*
- *Cal Poly San Luis Obispo Math Department Colloquium, January 2012*
- *University of Illinois at Chicago Math Department Colloquium, January 2012*
- *Notre Dame Math Department Colloquium, January 2012*

- *University of Wisconsin Mathematics Department Colloquium*, November 2011
- *Southern Wisconsin Logic Colloquium*, November 2011
- *UCLA Logic Colloquium*, November 2011
- *Géométrie et Théorie des Modèles* (Geometry and Model Theory Seminar), Paris, France, May 2011
- *Paris Model Theory Seminar*, Paris, France, May 2011
- *Paris Logic Seminar*, Paris France, May 2011
- *University of California Berkeley Logic Colloquium*, October 2010.
- *University of California Berkeley Model Theory Seminar*, October 2010.
- *University of Illinois at Urbana-Champaign Model Theory Seminar*, September 2010
- *University of Illinois at Chicago Logic Seminar*, September 2010
- *California State University Dominguez Hills Mathematics Colloquium*, March 2010
- *UCLA Logic Colloquium*, November 2009
- *Notre Dame Logic Seminar*, September 2009
- *Notre Dame Model Theory Seminar*, September 2009
- *Western Illinois University Mathematics Colloquium*, May 2009
- *The Ohio State University Logic Seminar*, October 2008
- *McMaster University Model Theory Seminar*, September 2008
- *University of Illinois at Chicago Logic Seminar*, October 2007

GRANTS

- National Science Foundation Grant DMS-2054477 (2021-2024)
- National Science Foundation CAREER Grant (2014-2019)
- National Science Foundation Grant DMS-1007144 (2011-2014)

AWARDS, FELLOWSHIPS, AND INVITATIONS

- Gerald Sacks Prize for best dissertation in mathematical logic worldwide-Association for Symbolic Logic, 2009
- Banff international Research Station, Accepted Workshop Proposal; project title: *Model theory of operator algebras*.
- American Institute of Mathematics, Accepted Workshop Proposal; project title: *Nonstandard methods in combinatorial number theory and Ramsey theory*
- Invited participant of the Banff International Research Station workshop “Classification Problems in von Neumann algebras”, October 2019.
- Invited participant of the Hausdorff Research Institute of Mathematics Trimester Program on “Von Neumann Algebras”, May-July 2016.
- Invited participant of the Institut Henri Poincaré Trimester Program on “Model theory, combinatorics, and tame valued fields”, January-March 2018.
- Invited participant of the Banff International Research Station workshop “Combinatorics meets ergodic theory”, July 2015.

- Invited participant of the Banff International Research Station workshop “Neostability theory”, Oaxaca, Mexico, July 2015.
- Invited participant of the workshop “Model theory and C* algebras”, Muenster, Germany, July 2014.
- Invited participant of the Oberwolfach workshop “Model Theory: Groups, Geometry, and Combinatorics”, January 2013.
- Robert Sorgenfrey Distinguished Teaching Award, UCLA Department of Mathematics, 2012.
- American Institute of Mathematics, Accepted Proposal for SQuaREs program; project title: *Nonstandard methods in number theory*
- Irving Reiner Memorial Award in Algebra- University of Illinois at Urbana-Champaign, 2008
- Scott Dissertation Completion Fellowship, 2008-2009
- Arnold O. Beckman Research Award Research Assistantship- Spring, Summer and Fall 2008
- University of Illinois at Urbana-Champaign Incomplete List of Teachers Ranked Excellent by Their Students, Fall 2006 (Top 10%), Spring 2007
- National Science Foundation VIGRE Fellowship- University of Illinois at Urbana-Champaign, 2004-2005, 2005-2006
- Daus Prize in Mathematics- UCLA, June 2004

EDITORIAL WORK

Journal of Logic and Analysis: March 2022-present

TEACHING

University of California, Irvine

Fall 2021:

- Mathematical Logic (280A)

Spring 2021:

- Model Theory (282C)
- Introduction to Topology (141)

Winter 2021:

- Model Theory (282B)

Fall 2020:

- Model Theory (282A)

Spring 2020

- Introduction to Topology (141)

Winter 2020:

- Topics in Logic (285A)

Fall 2019:

- Introduction to Group Theory (120A)
- Linear Algebra (121A)

Spring 2019:

- Introduction to Linear Algebra (3A)
- Mathematical Logic (280C)

Winter 2019:

- Mathematical Logic (280B)

Spring 2018:

- Model Theory (282C)

Fall 2017:

- Linear Algebra (121A)
- Model Theory (282A)

Spring 2017:

- Introduction to Graduate Analysis (205C)

Winter 2017:

- Introduction to Graduate Analysis (205B)

Fall 2016:

- Introduction to Graduate Analysis (205A)

University of Illinois at Chicago

Model Theory I (506), Model Theory II (507), Mathematical Logic (502), Advanced Topics in Logic: Model Theory for Metric Structures, Applied Nonstandard Analysis (512), Abstract Algebra (330), Calculus I (180), Calculus III (210)

University of California, Los Angeles

Mathematical Logic (114L), Computability Theory (114C), Abstract Algebra (110A), Real Analysis (131A), Linear Algebra (115A), Ordinary Differential Equations (135),

Differential Equations (33B), Probability Theory for Life Science (3C), Participating Seminars in Logic (Nonstandard methods in functional analysis, Model theory for metric structures-290 D)

PROFESSIONAL SERVICES

Reviewing for *AMS Mathematical Reviews* and *Zentralblatt*

Refereeing for *Advances in Mathematics*, *Annals of Mathematics*, *Annales Mathématiques du Québec*, *Annals of Pure and Applied Logic*, *Archive for Mathematical Logic*, *Bulletin of the London Mathematics Society*, *Discrete analysis*, *Examples and counterexamples*, *Expositiones Mathematicae*, *Fundamenta Mathematicae*, *Houston Journal of Mathematics*, *Indiana Journal of Mathematics*, *International Math Research Notices*, *Israel Journal of Mathematics*, *Journal de l'Ecole Polytechnique-Mathematiques*, *Journal of the American Mathematics Society*, *Journal of the Institute of Mathematics of Jussieu*, *Journal of the American Mathematical Society*, *Journal of Logic and Analysis*, *Journal of Mathematical Logic*, *Journal of Symbolic Logic*, *Korean Journal of Mathematics*, *Lecture Notes in Mathematics*, *Logica Universalis*, *Mathematical Logic Quarterly*, *Model Theory*, *New Zealand Journal of Mathematics*, *Notre Dame Journal of Formal Logic*, *Notices of the AMS*, *Proceedings of the National Academy of Sciences*, *Quantum Information Processing*, *Random Structures and Algorithms*, *Theoretical Computer Science*, *Transactions of the American Mathematical Society*

Chair of the Local Organizing Committee for the 2023 North American Annual Meeting of the Association of Symbolic Logic.

Co-organizer of California Model Theory Day Conference, May 2020.

Co-organizer of Special Session in Applications of Ultrafilter and Nonstandard Methods, AMS Spring 2019 Central and Western Joint Sectional Meeting, University of Hawaii.

Co-organizer of Special Session in Model Theory, AMS Fall 2017 Western Sectional Meeting, UC Riverside.

Member of the Program Committee for the Association of Symbolic Logic Winter Meeting.

Organizer of UIC Logic Seminar, Fall and Spring 2013

Organizer of UIC Model Theory Seminar, Spring 2015 and Spring 2016

Co-organizer of UIC Department Colloquium, AY 2013-2014 and 2014-2015

Co-organizer of Midwest Model Theory Day, Fall 2013, Fall 2014, Fall 2015, and Spring 2016

Co-organizer of Notre Dame Center for Mathematics Model Theory Meeting, May-June 2016

Co-organizer of Special Session in Model Theory, AMS Fall 2015 Central Sectional Meeting, Loyola University Chicago

Co-organizer of Special Session in Model Theory, AMS Spring 2012 Western Sectional Meeting, University of Hawaii

NSF RTG Grant Undergraduate Outreach Talks on Nonstandard Analysis at Loyola Marymount University and Claremont McKenna College-October 2011

Organizer of Caltech-UCLA Logic Seminar-Winter and Spring 2011

Co-organizer of 10th Annual Graduate Student Conference in Logic, April 2009

Organizer of Model Theory Seminar- University of Illinois at Urbana-Champaign, Fall 2005

MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS

Association for Symbolic Logic

American Mathematical Society