

Curriculum Vitae

NIKOLAOS GALATOS

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Education

Ph.D. in Mathematics, Vanderbilt University, Nashville, TN, USA, May 2003.
Advisor: Professor Constantine Tsinakis.

M.S. in Mathematics, Vanderbilt University, Nashville, TN, USA, May 2000.
Advisor: Professor Constantine Tsinakis.

Diploma (B.S.) in Mathematics, *summa cum laude*, Aristotle University,
Thessaloniki, Greece, June 1998.

Professional Experience

Professor, Department of Mathematics, University of Denver, since 2015.

Associate Professor, Department of Mathematics, University of Denver, 2010 - 2015.

Assistant Professor, Department of Mathematics, University of Denver, 2007 - 2010.

Assistant Professor, School of Information Science, Japan Advanced Institute of
Science and Technology (JAIST), 2005 - 2007.

Assistant Professor, Department of Mathematics, Vanderbilt University, 2004 - 2005.

Postdoctoral Researcher, School of Information Science, JAIST, 2003 - 2004.

Teaching Assistant, Department of Mathematics, Vanderbilt University, 1998 - 2003.

Teaching Experience

Instructor, Department of Mathematics, University of Denver, since 2007.

Courses taught: Algebraic Logic, Lattices and Order, Universal Algebra, Proof Theory,
Non-classical logics, Mathematical Logic, Symbolic Logic, Formal Concept Analysis,
Group Theory, Introduction to Abstract Algebra, Discrete Structures, Linear Algebra,
Games & Logic, Calculus, Business Calculus.

Instructor of summer school courses and tutorials on Algebraic Proof Theory (2010 and 2012), Lattice-ordered groups and GMV-algebras (2009), Universal Algebra (2014).

Co-organizer of reading departmental seminar on Non-classical logics, since 2015. (Online/international since 2000)

Postdoctoral mentor of Sara Ugolini (2018-2020).

Ph.D. Adviser of Riquelmi Cardona (graduated in 2015), Wesley Fussner (graduated in 2018), and Gavin St. John (graduated in 2019), Xiao Zhuang and Isis Gallardo.

Assisted with the supervision of Master's and Ph.D. students Luca Reggio (Univ. of Milan, supervisor Vincenzo Marra), Chris Taylor (Latrobe University, supervisor Tomasz Kowalski), Francesca Fondelli (University of Siena, supervisor Franco Montagna), Sopo Phhakadze and AnneMarie Borg (both at Vienna Technical Univ., supervisor Agata Ciabattoni), since 2014.

Assisting with the supervision of Master's and Ph.D. students, JAIST, 2005-2007.
Students: H. Takamura, H. Kihara, D. Souma.

Seminar organizer, School of Information Science, JAIST, 2005-2007.
Seminar title: Algebra and logic.

Instructor, Department of Mathematics, Vanderbilt University, 2004 - 2005.
Courses taught: Abstract Algebra, Introduction to Mathematical Logic.

Seminar presenter, School of Information Science, JAIST, 2003 - 2004.
Seminar title: Rule separation for FLe.

Instructor, Department of Mathematics, Vanderbilt University, 1999-2003.
Courses taught: Calculus I and II, Accelerated Calculus I and II.

Tutor of Mathematics for the Learning Center and the School of Engineering, Vanderbilt University, 2000, 2002.

Distinctions

Grants

Marie Curie Action (European Union) Research and Innovation Staff Exchange (RISE) grant: MOSAIC, (1M Euro, Participant) 2021-2024.

NSF grant for conference organization of BLAST (co-PI), 2017.

Marie Curie Action (European Union) Research and Innovation Staff Exchange (RISE) grant: SYSMICS (Syntax meets Semantics: Methods, Interactions and Connections in Substructural Logis), (504,000 Euro, Participant), 2015-2017.

Simons Foundation research grant (\$35,000 Principal Investigator), 2012-2017.

Research Grant from the Italian Higher Institute of Mathematics (\$2,000), 2014; (awarded but not used because of health reasons).

EMCL Scholar (European Union), for a research visit at Vienna University of Technology (12,000 Euro), 2013-2014.

NSF grant for conference organization of TACL (co-PI), 2013.

Faculty Research Fund, University of Denver (\$3,000), 2012.

Center for Teaching and Learning curriculum development grant: Non-classical logics and order theory, University of Denver (\$16,597), 2010.

International Scholar Grant (\$2,000), 2010-2011.

PROF grant, University of Denver (\$14,738), 2009.

Internationalization Grant, University of Denver (\$2,000), 2009.

Marsico First Year Seminar, curriculum development grant: Formal Concept Analysis, University of Denver (\$2,000), 2009.

NSF grant for conference organization (\$27,390, Principal Investigator), 2008.

Faculty Research Fund, University of Denver (\$1,500), 2008.

International Small Grant, University of Denver (\$500), 2008.

Research grant from the Japan Society for the Promotion of Science (1,000,000 Yen = \$10,000), 2007.

Travel grant from the COE program of JAIST (200,000 Yen = \$2,000), 2006.

Travel grant from the Japan Association for Mathematical Sciences (100,000 Yen = \$1,000), 2006.

Research grant from JAIST (400,000 Yen = \$4,000), 2006.

Travel grant from the Ogasawara foundation (240,000 Yen = \$2,400), 2006.

Research grant from the Japan Society for the Promotion of Science (1,100,000 Yen = \$11,000), 2006.

Inoue Foundation for Science Postdoctoral Research Fellowship, 2003-2004.

Dissertation Enhancement Grant, Vanderbilt University, 2002.

Korgialenios Foundation Grant for Postgraduate Studies, 2000-2003.

University Graduate Fellowship, Vanderbilt University, 1998-2002.

Graduate Teaching Assistantship, Vanderbilt University, 1998-2003.

Avramidis Foundation Grant for Excellence in Mathematics, 1996-1998.

Honors and Awards

The Bjarni Jónsson Prize for Research, Vanderbilt University, 2003.

The B.F. Bryant Prize for Excellence in Teaching, Vanderbilt University, 2002.

Summer Research Award, Vanderbilt University, 2002.

Award for mentoring Teaching Assistants in the Department of Mathematics of Vanderbilt University, 2001, 2002, 2003.

Award for the highest cumulative GPA of the decade 1990-1999, Department of Mathematics, Aristotle University, 1999.

Awards and prizes for the highest GPA of the year from the Greek Government Fellowships Foundation (IKY), for each of the years 1995-1998.

Award and prize for the highest score among all applicants to the Department of Mathematics of Aristotle University in the national entrance examination of 1994, from the Greek State Scholarships Foundation (IKY), 1994.

Publications

Book

1. *Residuated Lattices: an algebraic glimpse at substructural logics*, with P. Jipsen, T. Kowalski and H. Ono, *Studies in Logic and the Foundations of Mathematics*, Elsevier, pp. 509+, 2007.

Research articles

2. *The undecidability of the word problem for distributive residuated lattices*, *Ordered Algebraic Structures* (J. Martinez, ed.), Kluwer Academic Publishers, Dordrecht (2002), 231-243.
3. *Cancellative residuated lattices*, with P. Bahls, J. Cole, P. Jipsen and C. Tsınakis, *Algebra Universalis* 50(1) (2003), 83-106.
4. *Equational bases for joins of residuated-lattice varieties*, *Studia Logica* 76(2) (2004), 227-240.
5. *Adding involution to residuated structures*, with J. Raftery, *Studia Logica* 77(2) (2004), 181-207.
6. *Minimal varieties of residuated lattices*, *Algebra Universalis* 52(2) (2005), 215-239.
7. *Generalized MV-algebras*, with C. Tsınakis, *Journal of Algebra* 283(1) (2005), 254-291.
8. *Algebraization, parametrized local deduction theorem and interpolation for substructural logics over FL*, with H. Ono, *Studia Logica* 83 (2006), 279-308.
9. *Glivenko theorems and other translations for substructural logics over FL*, with H. Ono, *Journal of Symbolic Logic* 71(4) (2006), 1353-1384.
10. *Irreducible residuated semilattices and finitely based varieties*, with J. Olson and J. Raftery, *Reports on Mathematical Logic* 43 (2008), 85-108.
11. *From axioms to analytic rules in nonclassical logics*, with A. Ciabattoni and K. Terui, *Proceedings of LICS'08*, 229-240, 2008.

12. *Equivalence of closure operators: an order-theoretic and categorical perspective*, with C. Tsinakis, *Journal of Symbolic Logic* 74(3) (2009), 780-810.
13. *A survey of GBL-algebras (invited book chapter)*, with P. Jipsen, *Tributes vol.10* College Publications (2009), 303-328.
14. *Cut elimination and strong separation for substructural logics: an algebraic approach*, with H. Ono, *Annals of Pure and Applied Logic* 161 (2010), no. 9, 1097-1133.
15. *Generalized ordinal sums and translations*, *Logic Journal of the IGPL* (2011), 19 (3), 455-466.
16. *MacNeille completions of FL-algebras*, with A. Ciabattoni and K. Terui, *Algebra Universalis* 66(4) (2011), 405-420.
17. *Algebraic proof theory for substructural logics: cut-elimination and completions*, with A. Ciabattoni and K. Terui, *Annals of Pure and Applied Logic* 163(3) (2012), 266-290.
18. *A category equivalence for odd Sugihara monoids and its applications*, with J. Raftery, *Journal of Pure and Applied Algebra* 216(10) (2012), 2177-2192.
19. *Periodic lattice-ordered pregroups are distributive*, with P. Jipsen, *Algebra Universalis* 68(1-2) (2012), 145-150.
20. *Residuated frames with applications to decidability*, with P. Jipsen, *Transactions of the AMS* 365(3) (2013), 1219-1249.
21. *Relation algebras as expanded FL-algebras*, with P. Jipsen, *Algebra Universalis* 69(1) (2013), 1-12.
22. *Cayley's and Holland's Theorems for Idempotent Semirings and Their Applications to Residuated Lattices*, with R. Horcik, *Semigroup Forum* 87(3) (2013), 569-589.
23. *Idempotent residuated structures: some category equivalences and their applications*, with J. Raftery, *Transactions of the AMS* 367(5) (2015), 3189-3223.
24. *The finite embeddability property for non-commutative knotted extensions of RL*, with Riquelmi Cardona, *Internat. J. of Algebra and Computation* 25(3) (2015), 349-379.
25. *Proof Theory for lattice-ordered groups*, with G. Metcalfe, *Annals of Pure and Applied Logic*, 167(8) (2016), 707-724.
26. *Modules over Quantaloids: Applications to the Isomorphism Problem in Algebraic Logic and pi-institutions*, with Jose Gil-Ferez, *Journal of Pure and Applied Algebra* 221(1) (2017), 1-24.
27. *Algebraic proof theory for substructural logics: hypersequents*, with A. Ciabattoni and K. Terui, *Annals of Pure and Applied Logic* 168(3) (2017), 693-737.

28. *Canonical formulas for k -potent commutative integral residuated lattices*, with N. Bezhanishvili and L. Spada, *Algebra Universalis* 77(3) (2017), 321-343.
29. *Distributive residuated frames and generalized bunched implication algebras*, with P. Jipsen, *Algebra Universalis* 78(3) (2017), 303-336.
30. *The FEP for some varieties of fully-distributive knotted residuated lattices*, with R. Cardona, *Algebra Universalis* 78(3) (2017), 363-376.
31. *Categories of models of R -mingle*, with W. Fussner, *Annals of Pure and Applied Logic* 170(10) (2019), 1188-1242.
32. *The structure of generalized BI-algebras and weakening relation algebras*, with P. Jipsen, *Algebra Universalis* 81(3) (2020) paper #35, 35pp.
33. *Weakening relation algebras and FL2 algebras*, with P. Jipsen, *Lecture Notes in Computer Science* 12062 (2020), 117-133.
34. *Lattice-ordered pregroups are semi-distributive*, with P. Jipsen, M. Kinyon, and A. Prenosil, *Algebra Universalis* 82(1) (2021), paper #16, 6pp.
35. *Theorems of alternatives for substructural logics*, with A. Colacito and G. Metcalfe, *Outstanding Contributions to Logic, 21: Arnon Avron on semantics and Proof theory of nonclassical logics*, 2021, 91--105.
36. *Densification via polynomial extensions*, with R. Horcik, *Journal of Pure and Applied Algebra* 222(3) (2022), paper #106852, 26pp.
37. *From distributive l -monoids to l -groups, and back again*, with A. Colacito, G. Metcalfe, S. Santchi, *Journal of Algebra* 601 (2022), 129–148.
38. *Twist structures and Nelson conuclei*, with M. Busaniche and M. Marcos, *Studia Logica* 110(4) (2022), 949-987.
39. *Most simple extensions of FLe are undecidable*, with G. St. John, *Journal of Symbolic Logic* 87(3) (2022), 1156-1200.
40. *Gluing in residuated lattices*, with S. Ugolini, to appear in *Order*.
41. *Complemented MacNeille completions and algebras of fractions*, with A. Prenosil, to appear in the *Journal of Algebra*.
 - *Amalgamation in conic idempotent residuated lattices*, with W. Fussner, submitted.
 - *Skew reflections*, with D. Castano, in progress.
 - *Almost minimal varieties of commutative integral residuated lattices*, with P. Agliano and M. Marcos, in progress.
 - *Decidability of lattice equations*, to be resubmitted.
 - *Matrices over residuated lattices*, with D. Castano, in progress.
 - *Nuclei and conuclei on residuated lattices*, with G. Frosoni, in progress.
 - *Conservativity via residuated frames*, with A. Ciabattini and R. Ramanayake, in progress.

- *From display logic to nested sequents: taming display logic via algebraic proof theory*, with A. Ciabattini and R. Ramanayake, in progress.
- *Conservativity and nested calculi for superintuitionistic logics*, with T. Lyon, in progress.
- *Varieties of MTL algebras*, with P. Agliano, in progress.
- *Non-associative residuated lattices*, in progress.
- *Applications of residuated frames to amalgamation and interpolation*, with K. Terui, in progress.
- *Decidability for lattice-ordered pregroups*, with R. Ball and P. Jipsen, in progress.
- *Algebraic proof theory for substructural logics: involutive and distributive extensions*, with A. Ciabattini and K. Terui, in progress.
- *Abelian lattice-ordered groups*, with P. Jipsen and V. Marra, in limbo.
- *Monoid reducts of residuated lattices*, with S. Seif, in limbo.
- *Lower-set quantales*, with S. Han, in limbo.

Edited volumes

- Special issue: Recent developments related to residuated lattices and substructural logics, with P. Jipsen and H. Ono, *Studia Logica* 100(6) (2012).
- Outstanding contributions: Hiroakira Ono on Substructural Logics, volume 23, with K. Terui, *Trends in Logic*, Springer, 2022.

Non-refereed conference proceedings.

- *Involutive commutative distributive residuated lattices*, proceedings of the 37th Mathematical Logic Group Meeting, Shizuoka, 2003.
- *Extensions of Glivenko's theorem to non-commutative substructural logics*, proceedings of the 39th Mathematical Logic Group Meeting, Gamagori, 2005.

Theses

- *Varieties of residuated lattices*, Ph.D. thesis, Department of Mathematics, Vanderbilt University, 2003.
- *Selected topics on residuated lattices*, Qualifying paper, Department of Mathematics, Vanderbilt University, 2000.

Educational publication

- *From here to infinity: a foundation for Calculus*, with J. Staples et al., Thomson Learning Custom Publishing, 2001.

Conference presentations and Colloquium Talks

Heyting residuated lattices and weakening relations (invited talk), AMS sectional meeting, El Paso, Texas, September 2022.

Idempotent residuated chains, BLAST, Chapman, August 2022.

Generalized bunched implication logic, PLS, Volos, July 2022.

Lattice-ordered groups and monoids, TACL, Coimbra, June 2022.

Theorems of the alternatives (invited talk), Seminario de Logica algebraica, Argentina, online, April 2022.

The structure of idempotent residuated chains (invited talk), Ordered Algebras and Logic, Les Diablerets, Switzerland. March 2022.

Interpolation and Beth definability for conic idempotent Full Lambek calculus (invited talk), CLAM Latin American Congress of Mathematicians, Special Session on Logic, Montevideo, Uruguay, September 2021.

Lattice-ordered groups and monoids (invited talk), ACaCS conference on semigroups Nis, Serbia, September 2021.

Twist structures and Nelson conuclei, BLAST online at NMSU, Las Cruces NM, June 2021.

Almost minimal varieties of commutative integral residuated lattices, NMSU Algebra and Logic seminar, May 2021.

Nelson conucleus algebras as semantics for paraconsistent logics and their twist-product representation, Alophis online seminar, Cagliari, Italy, May 2021.

Distributive lattice-ordered monoids, Algebra and Coalgebra online seminar, Amsterdam, May 2021.

Amalgamation for conic idempotent residuated lattices, Algebra and Logic online seminar, Boulder, CO, April 2021.

Strong amalgamation for a variety of idempotent semiconic residuated lattices, Nonclassical Logic Webinar, Zoom, July 2020.

Lattice-ordered groups and their subreducts, Shanks Workshop on Ordered Algebras and Logic, Vanderbilt University, Nashville, March 2020.

Inverse-free subreducts of lattice-ordered groups, Special AMS session on Algebras and Algorithms, Joint Mathematical Meetings, Denver, January 2020.

Heyting residuated lattices, Algebra and Logic seminar, Vanderbilt University, Nashville, November 2019.

GBI-algebras and weakening relations (invited talk), Logic Workshop, Amsterdam, Holland, October 2019.

Undecidability for some varieties of commutative residuated lattices, TACL, Nice, France, June 2019.

Generalized bunch implication algebras, BLAST, UC Boulder, May 2019.

Decidability and undecidability for residuated lattices, Algebra and Logic Seminar, Vanderbilt University, April 2019.

Skew reflections, ASL winter meeting, Denver, February, 2019.

Is there a useful duality for residuate lattices?(invited workshop talk), SYSMICS, Chapman University, Orange, September 2018.

Embedding lattice-ordered bi-monoids in involutive commutative residuated lattices (invited talk), LATD, Bern, Switzerland, August 2018.

Skew rotations, AbubL, Cagliari, Italy, June 2018.

Undecidability for some varieties of commutative residuated lattices (invited talk), BLAST, Vanderbilt University, Nashville, August 2017.

Generalized bunched implication algebras, TACL, Prague, June 2017.

Residuated frames and applications (invited talk), WoLC'16, Guanzhou, China, December 2016.

The FEP for residuated lattices via local finiteness of the monoid reducts, Lattices Algebras and Truth Degrees, Wits University, South Africa, June 2016.

Canonical formulas for k -potent commutative residuated lattices, Order Algebras and Logic, Vanderbilt University, Nashville, February 2016.

The FEP for some noncommutative varieties of fully distributive residuated lattices, TACL 2015, Ischia, Italy, June 2015.

Densification via polynomials (invited talk), Shanks workshop in ordered algebras and logic, March 2015.

From display logic to nested sequents via residuated frames (invited talk), Vienna Summer of Logic, GetFun, July 2014.

Embeddings into BiFL-algebras and conservativity, Vienna Summer of Logic, LATD, July 2014.

Proof theory for lattice-ordered groups (invited talk), Brazilian Logic Conference, Petropolis, Brazi, April 2014.

A survey of residuated frames with connections to semirings and to display logic, Prague seminar of substructural logics, March 2014.

The finite embeddability property for non-commutative knotted extension of RL, Colloquium talk at the Institute of CS, Czech Academy of Sciences, March 2014.

Developments on higher levels of the substructural hierarchy, BLAST, Chapman University, Orange, August 2013.

Cayley and Holland Theorems for Residuated Lattices, TACL, Nashville, July 2013.

Hyper-residuated frames (invited talk), ALCOP, Utrecht, Holland. April, 2013.

Distributive integral residuated lattices have the FEP (invited talk), Special Session on Algebras, Lattice and Varieties, AMS Sectional meeting, Boulder, April 2013.

The finite embeddability property for varieties of distributive, integral residuated lattices, Logic, Algebra and Truth Degrees, Kanazawa, Japan, September 2012.

Rediscovering Structural Proof Theory: an algebraic account (invited seminar talk), Multi-dimension seminar, Japan Advanced Institute of Science and Technology, September 2012.

A category equivalence of varieties and the Beth definability property (invited talk), 15th Latin American Symposium on Mathematical Logic, Bogota, Colombia, June 2012.

Algebraic proof theory (invited summer school week-long tutorial), Summer School of the 15th Latin American Symposium on Mathematical Logic, Bogota, Colombia, June 2012.

Modules over quantaloids and the isomorphism problem in abstract algebraic logic (invited talk), Symposium on Fuzzy Mathematics, Kent State University and Youngstown State University, Ohio, October 2011.

Residuated lattices in algebra and logic (invited colloquium talk), Colloquium, Department of Mathematical Sciences, Kent State University, Ohio, October 2011.

Relativizing the substructural hierarchy (invited plenary talk), Topology, Algebra and Categories in Logic, Marseilles, France, July 2011.

Interpolation and Amalgamation for Substructural Logics and Residuated Lattices, 8th Panhellenic Logic Symposium, Ioannina, Greece, July 2011.

Beth definability for relevance logic with mingle (invited plenary talk), Second International Conference on Order, Algebra, and Logics: honoring R. McKenzie, H. Ono, and A. Wroński, Krakow, Poland, June 2011.

Holland-Type Embeddings for Residuated Lattices (invited talk), Algebra and Proof Theory amplified by Frames and Category Theory, Vanderbilt University, Nashville, March 2011.

Remarks on l -groups and abelian l -groups: preliminary report (invited talk), l -Groups and MV-Algebras: Interaction and Impact on Algebras of Logic, Buenos Aires, Argentina, October 2010.

Tutorial on Algebraic Proof Theory (week-long invited tutorial), University of Milan, Italy, July 2010.

Dedekind-MacNeille completions of residuated lattices, BLAST 2010 conference on Algebraic Logic, Set Theory and Universal Algebra, University of Colorado, Boulder, June 2010.

The Isomorphism Problem for modules over quantaloids, World Congress and School on Universal Logic III, Lisbon, Portugal, April 2010.

Residuated lattices with applications to logic (invited talk), 31st Linz Seminar on Fuzzy Set Theory. (Topic: Lattice-Based Logic and its Applications.) Linz, Austria, February 2010.

Applications of residuated frames to algebra and logic, BLAST 2009 conference on Algebraic Logic, Set Theory and Universal Algebra, New Mexico State University, Las Cruces, August 2009.

Algebraic Proof Theory (invited plenary talk), 7th Panhellenic Logic Symposium, Patras, Greece, July 2009.

Cut elimination for distributive substructural logics, Topology, Algebra and Categories in Logic, Amsterdam, July 2009.

Sequents, Hypersequents and beyond (invited talk), *Gentzen systems and Beyond workshop associated with the TABLEAUX 2009 conference*, Oslo, July 2009.

Non-associative residuated lattices, 2nd Mile High Conference on Nonassociative Mathematics, University of Denver, June 2009.

An N_2 -variety of residuated lattices that is not closed under completions (invited talk), and 12th Annual ORD/OAL, Bowling Green State University, June 2009.

MV-algebras and l -groups as residuated lattices (invited week-long series of lectures), *Workshop on lattice-ordered groups and MV-algebras*, Bowling Green State University, June 2009.

Skew Relation Algebras (invited talk), Ordered Groups in Logic, Vanderbilt University, March 2009.

Generalized ordinal sums and translations (selected 40-min talk), Logic, Algebra and Truth Degrees, Siena, Italy, September 2008.

Residuated Lattices – a tutorial (invited 3-hour tutorial), Summer school on General Algebra and Ordered Sets, Trest, Czech Republic, September 2008.

The finite embeddability property for subvarieties of integral residuated lattices, BLAST 2008 conference on Algebraic Logic, Set Theory and Universal Algebra, University of Denver, August 2008.

On the substructural hierarchy (invited plenary talk), International Conference on Residuated Structures: Algebra and Logic, Buenos Aires, Argentina, April 2008.

Axiomatizations for intersections of substructural logics (invited 50-min talk), Shanks workshop on Proof Theory and Algebra, Vanderbilt University, March 2008.

Structural rules in FL: expressive power and cut elimination, Algebraic and Topological Methods in Non-classical Logics III, University of Oxford, UK, August 2007.

The variety of involutive residuated lattices is generated by its finite members (invited plenary talk), International conference on Order, Algebra and Logics, Vanderbilt University, USA, June 2007.

Algebraic cut elimination (invited seminar talk), Logic Summer School, Australian National University, Canberra, Australia, December 2006.

Residuated frames (invited 50-min talk), Workshop on Algebra and Substructural Logics III, Krakow, Poland, November 2006.

Cut elimination for substructural logics from a semantical perspective, Colloquium talk, Vienna University of Technology, Austria, November 2006.

Semantics for substructural logics, Colloquium talk, University of Milan, Italy, October 2006.

Decidability for involutive residuated lattices, Colloquium talk, University of Szeged, Hungary, October 2006.

Glivenko theorems for substructural logics, Logic Colloquium 2006, Association for Symbolic Logic European Summer Meeting, Nijmegen, Netherlands, July 2006.

Lack of structural rules and algebraic semantics, Ordered structures in many-valued logics, Massa Lubrense, Sorrento, Italy, May 2006.

Algebraic methods in substructural logics, Logic Colloquium 2005, Association for Symbolic Logic European Summer Meeting, Athens, Greece, June 2005.

Equivalence of consequence relations: an order-theoretic and categorical perspective, Algebraic and topological methods in non-classical logics, Barcelona, Spain, June 2005.

Non-associative residuated lattices, American Mathematical Society 2004 Southeastern Section Meeting, special session: "Universal Algebra and Lattice Theory," Nashville, October 2004.

Translations in substructural logics, Logic Colloquium 2004, Association for Symbolic Logic European Summer Meeting, Torino, Italy, July 2004.

Non-associative substructural logics: algebraization, cut elimination and separation, Conference on Residuated Structures and Many-Valued Logics, Patras University, Greece, June 2004.

Residuated lattices – an introduction, Colloquium talk, Department of Mathematics, Aristotle University of Thessaloniki, Greece, May 2004.

Involutive commutative distributive residuated lattices, 37th Mathematical Logic Group meeting, Shizuoka, Japan, December 2003.

The join of finitely many varieties of residuated lattices (invited talk), Annual Meeting of the Association for Symbolic Logic, special session: “Algebraic Logic and Universal Algebra,” University of Illinois at Chicago, June 2003.

Decision problems for commutative distributive residuated lattices, Colloquium talk, University of Saskatoon, Canada, May 2003.

Generalized MV-algebras, Conference on Ordered Algebraic Structures, Vanderbilt University, March 2003.

A Priestley duality for bounded distributive residuated lattices, Annual meeting of the American Mathematical Society, special session: “The Many Lives of Lattice Theory and the Theory of Ordered Sets, with Connections to Combinatorics,” Baltimore, January 2003.

A categorical equivalence for integral GMV-algebras, Workshop on Algebra and Substructural Logics II, Japan Advanced Institute of Science and Technology, November 2002.

Continuum many idempotent minimal residuated-lattice varieties, International Conference on Modern Algebra in conjunction with the 17th annual Shanks Lectures, Vanderbilt University, May 2002.

Varieties of residuated lattices generated by positive universal classes, Conference on Ordered Algebraic Structures, Vanderbilt University, March 2002.

The undecidability of the word problem for the variety of distributive residuated lattices, Conference on Lattice-Ordered Groups and f-Rings, University of Florida, March 2001.

The subvariety lattice of residuated lattices, Workshop on Ordered Algebraic Structures, Vanderbilt University, March 2000.

Citations (based on MathSciNet)

Total number of citations: 798, by 335 authors.

Citations per publication: 19 (without book citations: 12.1 per paper)

h-index: 13 (at least h publications with at least h citations each)

Research and educational activities

Journals

- Editor for Algebra Universalis, since May 2019.
- Guest editor for special volume in Trends in Logic, 2021.

- Guest editor for a special issue of *Studia Logica*, 2012.
- Editorial board of *Soft Computing*: 2006-2010.
- Referee for the journals
 1. *Proceedings of the AMS*
 2. *Journal of Symbolic Logic*
 3. *Annals of Pure and Applied Logic*
 4. *Studia Logica*
 5. *Notre Dame Journal of Formal Logic*
 6. *Archive for Mathematical Logic*
 7. *Reports on Mathematical Logic*
 8. *Journal of Logic and Computation*
 9. *Journal of Philosophical Logic*
 10. *Logic Journal of the Interest Group in Pure and Applied Logics*
 11. *Mathematical Logic Quarterly*
 12. *Journal of Applied Logic*
 13. *Reviews of Symbolic Logic*
 14. *Journal of Pure and Applied Algebra*
 15. *Algebra Universalis*
 16. *Order*
 17. *Semigroup Forum*
 18. *Discussiones Mathematicae: General Algebra and Applications*
 19. *Theoretical Computer Science*
 20. *Lecture Notes in Computer Science*
 21. *Transactions on Computational Logic*
 22. *British Journal of Mathematics and CS*
 23. *Information Sciences*
 24. *Soft Computing*
 25. *Fuzzy Sets and Systems*
 26. *Czechoslovak Mathematical Journal*
 27. *Mathematica Slovaca*
 28. *Mathematica Bohemica*

Research funding panels

- US National Science Foundation
- Czech Academy of Sciences
- Hungarian Academy of Sciences

Research visits/hosting

- University of Bern, August, 2022.
- Research host for Peter Jipsen, January, 2020.

- Chapman University, December 2019.
- Vanderbilt University, November 2019.
- Research host for Peter Jipsen, August, 2019.
- University of Bern, August, 2019.
- Research host for Peter Jipsen, May, 2019.
- Research host for Tim Lyon, September 2018.
- Research host for George Metcalfe, July-August 2018.
- Research host for Almudena Colacito, July-August 2018.
- Research host for Sara Ugolini, January-March 2018.
- Research host for Diego Castano, September-December 2017.
- Research host for Adam Prenosil, August 2017.
- Research host for Peter Jipsen, March 2016.
- Research host for Julia Ilin, February 2016.
- Research host for Sara Ugolini, January 2017.
- Research host for Peter Jipsen, October 2016.
- Research host for Julia Ilin, August 2016.
- Research host for Peter Jipsen, August 2016.
- Research host for Zuzana Hanikova, August 2016.
- Research host for Giulia Frosoni, April-May, 2016.
- Research host for Luca Spada, April 2016.
- Research host for Julia Ilin, March 2016.
- Research host for P. Jipsen, August, 2015.
- Research host for S. Han, October 2014-September 2015.
- University of Bern, August, 2014.
- Czech Academy of Sciences, Prague, March, May 2014.
- Vienna University of Technology, Austria, December 2013- February 2014.
- Chapman University, California, June 2013.
- Vienna University of Technology, Austria, August, 2012.
- University of Bern, July-August, 2012.
- Vienna University of Technology, Austria, July, 2011.
- Czech Academy of Sciences, Prague, July 2011.

- Research host for J. Raftery, March-May, 2011.
- Research host for R. Horcik, August 2010.
- University of Milan, Italy, July 2010.
- Vienna University of Technology, Austria, February 2010.
- Research host for P. Jipsen, December 2009.
- Research host for K. Terui, December 2009.
- University of Barcelona, Spain, December 2009.
- Research host for Jose Gil-Ferez, May-June 2009.
- Research host for P. Jipsen, December 2008.
- Czech Academy of Sciences, Prague, September 2008.
- National Institute of Informatics, Tokyo, Japan, February 2007.
- Vienna University of Technology, Austria, November 2006.
- University of Szeged, Hungary, October 2006.
- University of Sienna, Italy, October 2006.
- University of Milan, Italy, October 2006.
- Chapman University, California, August 2006.
- University of Saskatoon, Canada, May 2003.

Conference Organization

- Program committee member for LATD, Tbilisi, 2023.
- Program committee member for AiML, Rennes, 2022.
- Co-organizer Spring Western Sectional AMS meeting, special session on Algebraic Logic, 2022.
- Program committee member for LATD, Tbilisi, 2020.
- Co-Chair of BLAST, Denver, August 2018.
- Program committee member for TACL, Prague, 2017.
- Co-organizer of special session of AMS Sectional meeting, University of Denver, October, 2016.
- Program committee member for LATD (Logic, Algebra and Truth Degrees), South Africa, 2016.
- Program committee for the 22nd WOLLIC (Workshop on Logic, Language, Information and Computation), Indiana University, 2015.
- Committee member of BLAST 2015, University of North Texas, June 2015.

- Committee member of BLAST 2014, New Mexico State University, Las Cruces, January 2015.
- Program committee member for LATD (Logic, Algebra and Truth Degrees), Vienna Summer of Logic, July 2014.
- Co-Chair of the Program Committee for TACL (Topology, Algebra and Categories in Logic), 2013.
- Program committee member for ALCOP (Algebra and Coalgebra Meet Proof Theory), April 2012.
- Program committee member for TACL (Topology, Algebra and Categories in Logic), July 2009.
- Committee member of BLAST 2009, New Mexico State University, Las Cruces, August 2009.
- Co-chair of BLAST 2008 conference in Algebraic Logic, Set Theory and Universal Algebra, University of Denver, August 2008.
- Co-organizer of the Workshop in Algebra and Logic, JAIST, March 2007.

Advising/mentoring

- Ph.D. supervisor for Xiao Zhang, Isis Gallardo, current.
- Ph.D. thesis examiner for Frederik Lauridsen, Amsterdam, Holland, October 2019.
- Postdoctoral mentor for Sara Ugolini, September 2018-June 2020.
- Ph.D. supervisor for Gavin St John. *Decidability and Undecidability in substructural logics*. Graduated (PhD), May 2019.
- Ph.D. supervisor for Wesley D. Fussner. *Duality theory for Sugihara monoids*. Graduated (PhD), December 2018.
- Ph.D. thesis examiner of Karel Chvalovsky, Charles University, Czech Republic, May 2015.
- Ph.D. supervisor for Riquelmi Cardona. *The Finite Model Property for Substructural Logics with Exchange*. Graduated (PhD) in 2015.
- Ph.D. committee member for Wilmari Morton, Univ. of Johannesburg, May 2013.
- Ph.D. committee member for Jenya Kirstein, University of Denver, May 2012.
- Ph.D. committee member for Topaz Dent, UC Boulder, 2011.
- Ph.D. committee member for Jose Jil-Ferez, University of Barcelona, 2009.
- Ph.D. committee member for Dan Daly, University of Denver, 2009.
- Ph.D. thesis examiner of Ai-ni Hsieh, University of Natal, South Africa, 2009.
- First-year seminar mentor DU, 2009.

- Academic adviser for mathematics majors at DU, 2009.
- Ph.D. committee member for Aditya Nagrath, University of Denver, 2008.
- Master's thesis examiner of Ai-ni Hsieh, University of Natal, South Africa, 2005.
- Assisting in the supervision of graduate students at JAIST, 2003-2004 and 2005-2007. (Students: Hitoshi Takamura, Hitoshi Kihara, Daisuke Souma.)
- Mentor for new Teaching Assistants in the Department of Mathematics of Vanderbilt University, 2000-2003.
- Founder, organizer and presenter at the Undergraduate Seminar in Mathematics of Vanderbilt University, 2000-2003.

PhD students

- Riquelmi Cardona, Professor of Mathematics, University of El Salvador.
- Wesley Fussner, Postdoctoral Fellow, University of Bern.
- Gavin St. John, Postdoctoral Fellow, University of Salerno.

Educational presentations

- Short presentation on Peer Grading, Center for Innovative Teaching of Natural Sciences and Mathematics, University of Denver, May 2020.
- Short presentation on Remote Learning, Center for Innovative Teaching of Natural Sciences and Mathematics, University of Denver, May 2020.
- Presentation on Online Teaching and Use of Technology, Office of Teaching and Learning, University of Denver, 2012.

Memberships and Service

- Member of the NSM Tenure and Promotion committee, 2018-present.
- Director of Graduate Studies for the department, 2015-2018.
- Director of Graduate Studies for the department, 2012-2013.
- Member of the NSM Faculty committee, 2011-2013.
- Co-organizer of the departmental Teaching Excellence Initiative seminar, 2011-2013.
- Associate member of the Consortium of Order, Algebra and Logic, since 2008
- Founding member of the BLAST committee and conference series.
- Mathjobs group master for the departmental search committee, 2009, 2011.
- Member of the departmental Graduate Committee, since 2009.
- Honors Council representative, since 2014.

- Library liaison for the Department of Mathematics, University of Denver, since 2008-2011.
- Member of the review committee for the PROF awards (Professional Research Opportunities for Faculty), University of Denver, 2008.
- Member of the committee for the revision of the course offerings of the Department of Mathematics, University of Denver, 2008.
- Member of
 - American Mathematical Society (since 1998-2011, 2019-present),
 - Association of Symbolic Logic (2005-2011),
 - Mathematical Association of America (2004-2007).
 - Mathematical Fuzzy Logic (since 2008).