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**Born** 25.8.1988

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## **Current positions**

2024–present Associate professor, Department of Philosophy of the University of Barcelona.  
Member of the Institute of Mathematics (IMUB) of the University of Barcelona.  
Coordinator for the University of Barcelona of the Master in Pure and Applied Logic.

## **Habilitations**

- *Habilitation for full professors in logic* (mathematics) in the Italian university system, 2024.
- *Habilitation for full professors in logic* (philosophy) in the Italian university system, 2024.
- *Habilitation for full professors* in the Catalan university system, 2023.
- *Certificado R3* of scientific excellence by the Ministry of Science and Innovation of Spain, 2023.

## **Academic degrees**

- *PhD in Pure and Applied Logic*, University of Barcelona, 2016.
- *Master in Philosophical Sciences*, University of the Studies of Milan, 2013.
- *Master in Pure and Applied Logic*, University of Barcelona, 2012.

## **Past employment**

2020–2023 Investigador Beatriz Galindo, Department of Philosophy of the University of Barcelona.  
2016–2019 Research Assistant, Institute of Computer Sciences of the Czech Academy of Science.  
2013–2016 PhD student, University of Barcelona.

## **Prizes and awards**

- *Ada Lettieri award* for best research paper or monograph in logic by the Italian Logic Association, 2021.
- *Josef Hlávka award* for scientific literature, 2019.
- *Award for best young researchers of Czech Academy of Sciences*, 2018.
- *Extraordinary prize for PhD theses* from the University of Barcelona, 2017.

## **Research interests**

- Mathematical Logic
- Algebraic Logic
- Intuitionistic and Modal Logic
- Universal Algebra
- Duality Theory

## **Basic scientometric data**

- 39 journal papers + 2 conference papers + 2 book chapter.

### Grants (principal investigator)

4. PI of the i+D+I research project *La forma del razonamiento: desde el clasico al nonclasico y al revés* PID2022-141529NB-C21, funded by the Spanish Ministry of Science, Innovation and Universities, 2023–2027.
3. Local PI of the Horizon 2020 Marie Skłodowska-Curie RISE project MOSAIC 101007627, funded by the European Union, 2021–2026.
2. PI of the i+D+I research project *The geometry of non-classical logics* PID2019-110843GA-I00, funded by the Spanish Ministry of Science, Innovation and Universities, 2020–2023.
1. co-PI of the research project *Enhancing human resources in theoretical computer science* PPLZ 100301751, co-funded by the European Union and the Czech Operational Programme Research, Development and Education, 2018–2020.

### Grants (team member)

10. *Research group in mathematical logic*, 2021SGR00348 funded by the Agency for Management of University and Research Grants of the Government of Catalonia, 2021–2025.
9. *Research group in non-classical logics* 2017SGR0095, funded by the Agency for Management of University and Research Grants of the Government of Catalonia, 2017–2021.
8. *Predicate graded logics and their applications in computer science* GA17-04630S, funded by the Czech Science Foundation, 2017–2019.
7. *Totally ordered monoids* 15-07724Y, funded by the Czech Science Foundation, 2015–2017.
6. Horizon 2020 Marie Skłodowska-Curie RISE project SYSMICS 689176, funded by the European Union, 2016–2018.
5. *Modelling vague quantifiers in mathematical fuzzy logic* I1897-N25 and GF15-34650L, co-funded by the Austrian Science Foundation and Czech Science Foundation, 2015–2018.
4. *Center of Excellence-Institute for Theoretical Computer Science (CE-ITI)* GBP202/12/G061, funded by the Czech Science Foundation, 2012–2018.
3. *An Order-Based Approach to Non-Classical Propositional and Predicate Logics* GA13-14654S, funded by the Czech Science Foundation, 2013–2016.
2. *Algebraic Logic and Non-Classical Logics* MTM2011-25747, funded by the Ministry of Science and Innovation of Spain, 2012–2015.
1. *Research group in non-classical logics* 2009SGR-1433, funded by the Agency for Management of University and Research Grants of the Government of Catalonia, 2014–2016.

### Committee membership

- Chair of the program committee *TACL* (Topology, Algebra and Categories in Logic), 2024.
- Member of the program committee of *TACL* 2026.
- Member of the program committee of *AiML* (Advances in Modal Logic), 2022, 2024, 2026.
- Member of the program committee of *LATD* (Logic, Algebra and Truth Degrees), 2022 and 2023.
- Member of the program committee of *Modal logics: proof theory and applications*, 2023.
- Member of the program committee of *PhDs in Logic*, 2022.
- Chair of program committee of the *Workshop on Admissible Rules and Unification*, 2019.
- Member of the organizing committee of the *Proof Society* meeting, 2023.
- Member of the organizing committee of *TACL*, 2017.

### Postdoc supervision

2. A. Přenosil. Beatriu de Pinos fellow, 2023–2026.
1. L. Carai. Juan de la Cierva fellow, 2022–2023.

### Current PhD students

4. F. Manfucci (co-supervised with T. Flaminio). An algebraic approach to conditional logic.
3. M. Kurtzhals (co-supervised with L. Carai). Definability in logic and algebra.
2. V. Giustarini (co-supervised with S. Ugolini). Substructural logics and residuated structures.
1. M. Martins (co-supervised with J. Gispert). Bi-intuitionistic logics of trees.

### Former PhD students

2. D. Fornasiero (co-supervised with J. Gispert). Relational methods in algebraic logic. University of Barcelona, 2025. Available [here](#).
1. J.J. Wannenburg (co-supervised with J.G. Raftery). Varieties of De Morgan monoids. University of Pretoria, 2020. Available [here](#).

### Current Master's students

2. P. Rodriguez. Axiomatizing the class of finite Gödel algebras.
1. M. Ramirez. Finite basis theorems for quasivarieties.

### Former Master's students

15. I.M. Liberal (co-supervised with R. Horčík). Reiterman's theorem for pseudovarieties. University of Barcelona, 2024. Available [here](#).
14. I. Hortelano (co-supervised with S. Ugolini). Inconsistency Lemmas and The Inconsistency by Cases Property. University of Barcelona, 2024. Available [here](#).
13. M. Muñoz. Meet-irreducible elements in the poset of all logics. University of Barcelona, 2024. Available [here](#).
12. M. Kurtzhals (co-supervised with L. Carai). Epimorphism Surjectivity in Logic and Algebra. University of Barcelona, 2024. Available [here](#).
11. S. Cristancho (co-supervised with A. Vidal). Unification in intuitionistic logic. University of Barcelona, 2023. Available [here](#).
10. S. Lemal (co-supervised with N. Bezhanishvili). Hereditary structural completeness of weakly transitive modal logics. ILLC, University of Amsterdam, 2023. Available [here](#).
9. R. Almeida (co-supervised with N. Bezhanishvili). Polyatomic Logics and Generalised Blok-Esakia Theory with Applications to Orthologic and KTB. ILLC, University of Amsterdam, 2022. Available [here](#).
8. A. Chernev (co-supervised with N. Bezhanishvili). Degrees of FMP in extensions of bi-intuitionistic logic. ILLC, University of Amsterdam, 2022. Available [here](#).
7. J. Carr (co-supervised with N. Bezhanishvili). Hereditary Structural Completeness over K4 revisited. ILLC, University of Amsterdam, 2021. Available [here](#).
6. A. Dmitrieva (co-supervised with N. Bezhanishvili). Positive modal logic beyond distributivity. ILLC, University of Amsterdam, 2021. Available [here](#).
5. L. Tasiou (co-supervised with N. Bezhanishvili). Profinite bi-Heyting algebras. University of Amsterdam, 2021. Available [here](#).
4. D. Fornasiero (co-supervised with N. Bezhanishvili). Representable Forests and Diamond Systems. ILLC, University of Amsterdam, 2021. Available [here](#).
3. M. Martins (co-supervised with N. Bezhanishvili). Bi-Gödel algebras and co-trees. University of Amsterdam, 2021. Available [here](#).

2. J. Herrera Hernández (co-supervised with R. Jansana). Inconsistency lemmas: an algebraic approach. University of Barcelona, 2020. Available [here](#).
1. T. Benjamins (co-supervised with N. Bezhanishvili). Locally finite varieties of Heyting algebras of width 2. ILLC, University of Amsterdam, 2020. Available [here](#).

## Journal papers

- 39 D. Fornasiero and T. Moraschini. Trees and spectra of Heyting algebras. *Indagationes Mathematicae*, 2025.
38. L. Carai and T. Moraschini. On the universal theory of the free pseudocomplemented distributive lattice. *Journal of Algebra*, 682(15):634–671, 2025.
37. L. Carai, M. Kurtzhals, and T. Moraschini. Epimorphisms between finitely generated algebras. Published online in *Indagationes Mathematicae*, 2025.
36. M. Martins and T. Moraschini. Local tabularity is decidable for bi-intermediate logics of trees and of co-trees. *Annals of Pure and Applied Logic*, 176(5), 2025.
35. G. Bezhanishvili, N. Bezhanishvili, and T. Moraschini. Degrees of the finite model property: the antidichotomy theorem. Published online in the *Journal of Mathematical Logic*, 2025.
34. T. Hyttinen, M. Martins, T. Moraschini, and D. Quadrellaro. Strictly n-finite varieties of Heyting algebras. Published online in the *Journal of Symbolic Logic*, 2024.
33. N. Bezhanishvili, M. Martins, and T. Moraschini. Bi-intermediate logics of trees and co-trees. *Annals of Pure and Applied Logic*, 175(10), 2024.
32. N. Bezhanishvili, A. Dmitrieva, J. de Groot, and T. Moraschini. Positive Modal Logic Beyond Distributivity. *Annals of Pure and Applied Logic*, 175(2), 2024.
31. T. Moraschini, K. Yamamoto, and J.J. Wannenburg. Elementary equivalence in positive logic via prime products. Published online in the *Journal of Symbolic Logic*, 2023.
30. D. Fornasiero and T. Moraschini. Intuitionistic Sahlqvist theory for deductive systems. *Journal of Symbolic Logic*, 89(4):1522–1580, 2024.
29. N. Bezhanishvili and T. Moraschini. Hereditarily structurally complete intermediate logics: Citkin’s theorem via Esakia duality. *Studia Logica*, 111:147–186, 2023.
28. T. Lavička, T. Moraschini and J.G. Raftery. The algebraic significance of weak excluded middle laws. *Mathematical Logic Quarterly*, 63(3):261–299, 2022.
27. J. Gispert, Z. Haniková, T. Moraschini and M. Stronkowski. Structural completeness in many-valued logics with rational constants. *Notre Dame Journal of Formal Logic*, 63(3):261–299, 2022.
26. G. Bezhanishvili, N. Bezhanishvili, T. Moraschini, and M. Stronkowski. Profiniteness and representability of spectra of Heyting algebras. *Advances in Mathematics*, 391, 2021.
25. T. Moraschini. On equational completeness theorems. *Journal of Symbolic Logic*, 87(4):1522–1575, 2022.
24. R. Jansana and T. Moraschini. The poset of all logics I: Interpretations and lattice structure. *Journal of Symbolic Logic*, 86(3):935–964, 2021.
23. R. Jansana and T. Moraschini. The poset of all logics II: Leibniz classes and hierarchy. *Journal of Symbolic Logic*, 88(1):324–362, 2023.
22. R. Jansana and T. Moraschini. The poset of all logics III: finitely presentable logics. *Studia Logica*, 109:539–580, 2021.
21. T. Moraschini and J.J. Wannenburg. Epimorphisms in varieties of Heyting algebras. *Annals of Pure and Applied Logic*, 171(9), 2020.
20. S. Bonzio, T. Moraschini, and M. Pra Baldi. Logics of left variable inclusion and Płonka sums of matrices. *Archive for Mathematical Logic*, 60:49–76, 2021.
19. T. Moraschini, J.G. Raftery, and J.J. Wannenburg. Epimorphisms in varieties of square-increasing residuated structures. *Algebra Universalis*, 82(6), 2021.
18. T. Moraschini, J.G. Raftery, and J.J. Wannenburg. Singly generated quasivarieties and residuated structures. *Mathematical Logic Quarterly*, 66(2):150–172, 2020.
17. T. Moraschini, J.G. Raftery, and J.J. Wannenburg. Varieties of De Morgan monoids: covers of atoms.

- Review of Symbolic Logic*, 13(2):338–374, 2020.
16. T. Moraschini. Varieties of positive modal algebras and structural completeness. *Review of Symbolic Logic*, 12(3):557–599, 2019.
  15. T. Moraschini and J.G. Raftery. On prevarieties of logic. *Algebra Universalis*, 80(37), 2019.
  14. T. Moraschini, J.G. Raftery, and J.J. Wannenburg. Epimorphisms, definability and cardinalities. *Studia Logica*, 108:255–275, 2020.
  13. T. Moraschini. On the complexity of the Leibniz hierarchy. *Annals of Pure and Applied Logic*, 170(7):805–824, 2019.
  12. P. Cintula, J. Gil-Férez, T. Moraschini, and F. Paoli. An abstract approach to multiset consequence relations. *Review of Symbolic Logic*, 12(2):331–371, 2019.
  11. T. Moraschini, J.G. Raftery, and J.J. Wannenburg. Varieties of De Morgan monoids: minimality and irreducible algebras. *Journal of Pure and Applied Algebra*, 223(7):2780–2803, 2019.
  10. T. Moraschini. A logical and algebraic characterization of adjunctions between generalized quasi-varieties. *Journal of Symbolic Logic*, 83(3):899–919, 2018.
  9. T. Moraschini. A Study of the Truth Predicates of Matrix Semantics. *Review of Symbolic Logic*, 11(4):780–804, 2018.
  8. T. Moraschini. A computational glimpse to the Leibniz and Frege hierarchies. *Annals of Pure and Applied Logic*, 169(1):1–20, 2018.
  7. G. Bezhanishvili, T. Moraschini, and J.G. Raftery. Epimorphisms in Varieties of Residuated Structures. *Journal of Algebra*, 492:185–211, 2017.
  6. T. Moraschini. The Semantic Isomorphism Theorem in Abstract Algebraic Logic. *Annals of Pure and Applied Logic*, 167(2):1298–1331, 2016.
  5. T. Moraschini. On Everywhere Strongly Logifiable Algebras. *Reports on Mathematical Logic*, 50:83–107, 2015.
  4. J.M. Font and T. Moraschini. M-Sets and the Representation Problem. *Studia Logica*, 103(3):21–51, 2015.
  3. J.M. Font and T. Moraschini. A Note on Congruences of Semilattices with Sectionally Finite Height. *Algebra Universalis*, 72(3):287–293, 2014.
  2. J.M. Font and T. Moraschini. Logics of Varieties, Logics of Semilattices, and Conjunction. *Logic Journal of the IGPL*, 22:818–843, 2014.
  1. T. Moraschini. An Algebraic Study of Exactness in Partial Contexts. *International Journal of Approximate Reasoning*, 55:457–468, 2014.

## Conference papers

2. R. Horčík, T. Moraschini, and A. Vidal. An algebraic approach to the valued constraint satisfaction problem. *Proceedings of CSL (Computer Science in Logic)*, 2017.
1. J. M. Font and T. Moraschini. On the logics associated with a given variety of algebras. *Proceedings of Trends in Logic XIII*, 67–80, 2014.

## Book chapters

2. T. Moraschini. A gentle introduction to the Leibniz hierarchy. In J. Malinowski and R. Palczewski, editors, *Janusz Czelakowski on Logical Consequence*. Outstanding Contributions to Logic. Springer-Verlag, 2023.
1. H. Albuquerque, J. M. Font, R. Jansana, and T. Moraschini. Assertion logics, truth-equational logics, and the hierarchies of abstract algebraic logic. In J. Czelakowski, editor, *Don Pigozzi on Abstract Algebraic Logic and Universal Algebra*, Outstanding Contributions to Logic, Springer-Verlag, 16:53–79, 2018.

### Invited conference talks

12. The representations problem for spectra of Heyting algebras. *North American Meeting of the Association for Symbolic Logic*, Ames, Iowa, 2024.
11. Universal classes and decidability. Spring meeting of the *Swiss Graduate Society for Logic and Philosophy of Science*, Bern, Switzerland, 2024.
10. Profiniteness and spectra of Heyting algebras. *XXVII Meeting of the Italian Association for Logic and its Applications*, Caserta, Italy, 2022.
9. Sahlqvist correspondence for deductive systems. Algebraic Logic special session of the *Western Sectional Meeting of the American Mathematical Society*, Denver, Colorado, 2022.
8. Plonka sums and logics of variable inclusion. *Trends in Logic*, Cagliari, Italy, 2022.
7. Profiniteness and spectra of Heyting algebras. Algebraic Logic special session of the *North American Meeting of the Association for Symbolic Logic*, South Bend, Indiana, USA, 2021.
6. On equational completeness theorems. *virtUMA* (virtual meeting of the Argentinian Mathematical Society), Argentina, 2020.
5. The poset of all logics. *TACL* (Topology, Algebra and Categories in Logic), Nice, France, 2019.
4. On interpretations between propositional logics. *BLAST* (Boolean Algebras, Lattices, Algebraic Logic and Quantum Logic, Universal Algebra, and Set Theory), Boulder, Colorado, USA, 2019.
3. Relational semantics, ordered algebras, and quantifiers for deductive systems. *LATD* (Logic, Algebra and Truth Degrees), Bern, Switzerland, 2018.
2. An introduction to abstract algebraic logic. *TACL summer school* (Topology, Algebra and Categories in Logic), Prague, Czech Republic, 2017.
1. Classifying Strongly Finite Logics in the Leibniz Hierarchy. *SLALM* (Latin American Symposium of Mathematical Logic), Buenos Aires, Argentina, 2014.

### Invited workshop talks

4. Intuitionistic Sahlqvist theory for deductive systems. *Logic at the Interface: Modal Logic and AI*, Montpellier, France, 2024.
3. The relevance principle meets structural completeness. *New Directions in Relevance Logic*, online, 2022.
2. On equational completeness theorems. *Duality, Order, (Co)algebras, Topology, and Related topics*, Cagliari, Italy, 2021.
1. Varieties of De Morgan monoids and axiomatic extensions of Relevance Logic. *First Algebra Week*, Siena, Italy, 2018.