

Marco Abbadini

POSTDOCTORAL RESEARCHER

Université catholique de Louvain (Belgium), Research Institute in Mathematics and Physics

✉ marco.abbadini@uclouvain.be | 🏠 <https://marcoabbadini-uni.github.io> | MathSciNet: 1352790

Highlights

My research develops **Stone-type categorical dualities** and representation theorems linking the algebraic semantics of logic with topological structures. I combine methods from universal algebra, topology and category theory to study structures arising from logic, including MV-algebras, lattice-ordered groups, hyperdoctrines.

SELECTED PUBLICATIONS

- Abbadini, Marra, Spada. Stone–Gelfand duality for metrically complete lattice-ordered groups. *Advances in Mathematics* (2025).
- Abbadini, Di Liberti. Duality for coalgebras for Vietoris and monadicity. *The Journal of Symbolic Logic* (2025).
- Abbadini, Aglianò, Fioravanti. Varieties of MV-monoids and positive MV-algebras. *Journal of Algebra* (2025).

MAJOR FUNDING & PROJECTS

- **Marie Skłodowska–Curie** Postdoctoral Fellowship (MSCA PF) (University of Birmingham, UK), 2023–2025.
Project: *DCPOS: Dualities via Compactness, Openness and their Symmetry*.
Supervisor: Achim Jung.
- **FSR Incoming** Postdoctoral Fellowship (Université catholique de Louvain, Belgium), 2025–2028.
Project: *CatCoD: Categorical Commutators and Dualities*.
Supervisor: Marino Gran.

HIGHLIGHTS

- **Publications:** 20 publications (18 journal articles, 1 book chapter, 1 proceedings paper).
- **Invited talks:** invited plenary talks at international conferences, such as *Topology, Algebra, and Categories in Logic 2026* and *BLAST 2023*.
- **Teaching:** teaching experience from first-year Bachelor’s to Master’s level; currently teaching as a course holder for *Categorical Dualities in Logic* (2025/26); Master’s thesis reader and co-supervision of BSc theses.
- **Awards:** AILA Paolo Gentilini Prize (2026), AILA Ada Lettieri Prize (2025), and special mention for the AILA–UMI Franco Montagna Prize (2023).
- **National qualifications:** Italian ASN (Seconda Fascia, 01/A1 Mathematical Logic, 2024); French MCF qualification (Mathematics & Computer Science, 2023).

Full publication list, talks, teaching and service appear in the following pages.

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Academic positions and education

ACADEMIC POSITIONS

FSR Incoming Postdoctoral Fellowship 2025.09.01 – present

UNIVERSITÉ CATHOLIQUE DE LOUVAIN (BELGIUM), RESEARCH INSTITUTE IN
MATHEMATICS AND PHYSICS.

- Project: *CatCoD: Categorical Commutators and Dualities*.
- Supervisor: Marino Gran.

Marie Skłodowska–Curie Postdoctoral Fellowship (MSCA PF) 2023.09.01 – 2025.08.31

UNIVERSITY OF BIRMINGHAM (UK), SCHOOL OF COMPUTER SCIENCE.

- Awarded after EU MSCA evaluation; funded by UK Research and Innovation under the Horizon Europe funding guarantee.
- Project: *DCPOS: Dualities via ComPactness, Openness and their Symmetry*.
- Supervisor: Achim Jung.

PostDoc 2020.12.01 – 2023.08.31

UNIVERSITY OF SALERNO (ITALY), DEPARTMENT OF MATHEMATICS.

- Project: *Łukasiewicz logic, MV-algebras and duality*.
- Supervisor: Luca Spada.

EDUCATION

PhD • Mathematics 2017.09.25 – 2021.04.09

UNIVERSITY OF MILAN (ITALY), DEPARTMENT OF MATHEMATICS.

- Thesis: *On the axiomatisability of the dual of compact ordered spaces*.
- Supervisor: Vincenzo Marra.
- Grade: Excellent with honours.
- Abstract published in the Bulletin of Symbolic Logic. DOI: 10.1017/bsl.2021.54.

Publications

PUBLICATIONS IN INTERNATIONAL PEER-REVIEWED JOURNALS

1. M. Abbadini, L. Spada.
The unification type of Łukasiewicz logic with a bounded number of variables.
The Journal of Symbolic Logic. In press. DOI: 10.1017/jsl.2025.10149.
2. M. Abbadini, G. Bezhanishvili, L. Carai.
On the lack of colimits in various categories arising in pointfree topology and algebraic logic.
Theory and Applications of Categories. (2026) 45(20):759–778. URL: <http://www.tac.mta.ca/tac/volumes/45/20/45-20abs.html>.
3. M. Abbadini, V. Marra, L. Spada.
Stone–Gelfand duality for metrically complete lattice-ordered groups.
Advances in Mathematics. (2025) 461:110067. DOI: 10.1016/j.aim.2024.110067.
4. M. Abbadini, I. Di Liberti.
Duality for coalgebras for Vietoris and monadicity.
The Journal of Symbolic Logic. (2025) 90(3):1022–1055. DOI: 10.1017/jsl.2024.14.
5. M. Abbadini, P. Aglianò, S. Fioravanti.
Varieties of MV-monoids and positive MV-algebras.
Journal of Algebra. (2025) 677:690–744. DOI: 10.1016/j.jalgebra.2025.04.027.
6. M. Abbadini, F. Guffanti.
Quantifier-free formulas and quantifier alternation depth in doctrines.
Journal of Pure and Applied Algebra. (2025) 229(8):108004. DOI: 10.1016/j.jpaa.2025.108004.
7. M. Abbadini, D. Hofmann.
Barr-coexactness for metric compact Hausdorff spaces.
Theory and Applications of Categories. (2025) 44(6):196–226. URL: <http://www.tac.mta.ca/tac/volumes/44/6/44-06abs.html>.
8. M. Abbadini, G. Bezhanishvili, L. Carai.
Vietoris endofunctor for closed relations and its de Vries dual.
Topology Proceedings. (2024) 64:213–250. URL: <http://topology.nipissingu.ca/tp/reprints/v64>.
9. M. Abbadini, G. Bezhanishvili, L. Carai.
MacNeille completions of subordination algebras.
Cahiers de Topologie et Géométrie Différentielle Catégoriques. (2024) 65(2):151–199. URL: <https://cahierstgdc.com/wp-content/uploads/2024/04/ABBADINI-A1-LXV-2.pdf>.

10. M. Abbadini, G. Bezhanishvili, L. Carai.
A generalization of de Vries duality to closed relations between compact Hausdorff spaces.
Topology and its Applications. (2023) 337:108641. DOI: 10.1016/j.topol.2023.108641.
11. M. Abbadini, L. Reggio.
Barr-exact categories and soft sheaf representations.
Journal of Pure and Applied Algebra. (2023) 227(12):107413. DOI: 10.1016/j.jpaa.2023.107413.
12. M. Abbadini, P. Jipsen, T. Kroupa, S. Vannucci.
A finite axiomatization of positive MV-algebras.
Algebra Universalis. (2022) 83:28. DOI: 10.1007/s00012-022-00776-3.
13. M. Abbadini, L. Spada.
Are locally finite MV-algebras a variety?
Journal of Pure and Applied Algebra. (2022) 226(4):106858. DOI: 10.1016/j.jpaa.2021.106858.
14. M. Abbadini.
Equivalence à la Mundici for commutative lattice-ordered monoids.
Algebra Universalis. (2021) 82:45. DOI: 10.1007/s00012-021-00736-3.
15. M. Abbadini, L. Reggio.
On the axiomatisability of the dual of compact ordered spaces.
Applied Categorical Structures. (2020) 28(6):921–934. DOI: 10.1007/s10485-020-09604-y.
16. M. Abbadini.
Operations that preserve integrability, and truncated Riesz spaces.
Forum Mathematicum. (2020) 32(6):1487–1513. DOI: 10.1515/forum-2018-0244.
17. M. Abbadini.
Dedekind σ -complete ℓ -groups and Riesz spaces as varieties.
Positivity. (2020) 24(4):1081–1100. DOI: 10.1007/s11117-019-00718-9.
18. M. Abbadini.
The dual of compact ordered spaces is a variety.
Theory and Applications of Categories. (2019) 34:1401–1439. URL: <http://www.tac.mta.ca/tac/volumes/34/44/34-44abs.html>.

PEER-REVIEWED BOOK CHAPTERS

19. M. Abbadini, D. Mundici.
Unital Specker ℓ -groups and boolean multispaces.
In ***volume dedicated to Hilary Priestley*** (title to be announced). Outstanding Contributions to Logic, Springer (to appear). Edited by B. Davey, L. M. Cabrer, A. Palmigiano. Preprint at arXiv:2508.21500.

PROCEEDINGS IN INTERNATIONAL PEER-REVIEWED CONFERENCES

20. M. Abbadini, F. Di Stefano, L. Spada.
Unification in Łukasiewicz logic with a finite number of variables.

In *Information Processing and Management of Uncertainty in Knowledge-Based Systems*. (2020) 1239:622–633. Springer International Publishing. DOI: 10.1007/978-3-030-50153-2_46.

PREPRINTS

21. M. Abbadini, A. Jung.
On the symmetry behind duality.
Under review. Preprint at arXiv:2507.18245.
22. M. Abbadini, A. Přenosil.
Duality for finitely valued algebras.
Under review. Preprint at arXiv:2505.11490.
23. M. Abbadini, F. Guffanti.
Freely adding one layer of quantifiers to a Boolean doctrine.
Under review. Preprint at arXiv:2410.16328.

Talks

INVITED PLENARY TALKS AT INTERNATIONAL CONFERENCES

1. Topology, Algebra, and Categories in Logic. Kraków (Poland). (2026.07.27 – 2026.07.31)
TBA.
2. Boolean Algebras, Lattices, Universal Algebra, Set Theory, Topology. University of North Carolina at Charlotte (USA). (2023.05.17)
Positive MV-algebras.

INVITED TALKS AT SPECIAL/THEMATIC SESSIONS IN INTERNATIONAL CONFERENCES

3. Conference on Theoretical and Computational Algebra 2026. University of Minho, Guimarães (Portugal).
Invited to the Thematic Session on Duality theory. (2026.06.29)
Adding quantifiers via Stone duality.
4. Association for Symbolic Logic North American Annual Meeting. Iowa State University (USA). Invited to the Special Session on Algebraic Logic. (2024.05.15)
A duality for metrically complete lattice-ordered groups.

INVITED TALKS AT INTERNATIONAL WORKSHOPS

5. International Workshop on Topological Methods in Logic. Ivane Javakhishvili State University (Georgia). (2025.06.25)
The unification type of Łukasiewicz logic with a bounded number of variables.
6. Third Algebra Week (2023). University of Siena (Italy). (2023.07.05)
Positive subreducts of MV-algebras.
7. Duality, Order, (Co)algebras, Topology and Related topics. Online. (2021.07.07)
Unital commutative distributive ℓ -monoids and their unit intervals.

8. Third Algebra Week (2020). University of Siena (Italy). (2020.05) (Cancelled due to COVID-19 pandemic.)
Equivalence à la Mundici for lattice-ordered monoids.

INVITED TALKS AT NATIONAL CONFERENCES

9. Meeting of the Italian Association of Logic and its Applications. Rome (Italy). (2026.09.14 – 2026.09.18)
TBA.

INVITED TALKS AT NATIONAL WORKSHOPS

10. Southern and Midlands Logic Seminar. University of Birmingham (UK). (2023.12.13)
Natural dualities.

INVITED TALKS AT LOCAL WORKSHOPS

11. Workshop on Categorical-Algebraic Structures. Stellenbosch University (South Africa). (2026.04.30)
Ideals and slices over the initial algebra.

CONTRIBUTED TALKS AT INTERNATIONAL PEER-REVIEWED CONFERENCES

12. Peripatetic Seminar on Sheaves and Logic. University of Nottingham (UK). (2026.03.29)
The doctrinal Herbrand's theorem and its Stone dual.
13. ItaCa Workshop. University of Milan (Italy). (2025.12.22)
The doctrinal Herbrand's theorem and its Stone dual.
14. Australasian Association for Logic Conference. University of Queensland (Australia, online). (2025.11.03)
Natural duality for finitely valued algebras.
15. Category Theory Octoberfest. Online. (2025.10.25)
On the category of metric compact Hausdorff spaces.
16. Logic, Algebra and Truth Degrees. University of Siena (Italy). (2025.07.25)
The algebraic structure of spaces of integrable functions.
17. Logic Colloquium. TU Wien (Austria). (2025.07.07)
An algebraic version of Herbrand's theorem.
18. Workshop on General Algebra. Bern (Switzerland). (2025.06.21)
The algebraic structure of spaces of integrable functions.
19. Peripatetic Seminar on Sheaves and Logic. Tallinn University of Technology (Estonia). (2025.05.03)
Barr-coexactness of metric compact Hausdorff spaces.
20. Summer Conference on Topology and its Applications. University of Coimbra (Portugal). (2024.07.09)
Vietoris endofunctor for closed relations and its de Vries dual.
21. Topology, Algebra, and Categories in Logic. University of Barcelona (Spain). (2024.07.04)
Vietoris endofunctor for closed relations and its de Vries dual.
22. Workshop on General Algebra. South-West University "Neofit Rilsk" (Bulgaria). (2024.02.10)
Natural dualities with an infinite dualizing object.

23. Modalities in Substructural Logics: Theory, Methods and Applications. Vienna (Austria). (2023.09.29)
Stone duality for finitely valued algebras with a near-unanimity term.
24. Peripatetic Seminar on Sheaves and Logic. University of Palermo (Italy). (2023.09.17)
Soft sheaf representations in Barr-exact categories.
25. Logic, Algebra and Truth Degrees. Ivane Javakhishvili State University (Georgia). (2023.09.11)
Free extensions.
26. Logic Colloquium. University of Milan (Italy). (2023.06.08)
Jónsson-Tarski duality beyond dimension 0.
27. ItaCa Workshop. University of Pisa (Italy). (2022.12.21)
Comonadicity over Set of coalgebras of Vietoris functors.
28. Topology, Algebra and Categories in Logic. University of Coimbra (Portugal). (2022.06.24)
An approach à la de Vries for compact Hausdorff spaces and closed relations.
29. Category Theory. University of Genoa (Italy). (2021.09.01)
The opposite of the category of compact ordered spaces is monadic over the category of sets.
30. Boolean Algebras, Lattices, Universal Algebra, Set Theory, Topology. New Mexico State University (USA, online). (2021.06.13)
The opposite of the category of compact ordered spaces as an infinitary variety.
31. Workshop on General Algebra. University of Siena (Italy). (2020.02.21)
Priestley duality above dimension zero: algebraic axiomatisability of the dual of compact ordered spaces.
32. Topology, Algebra, and Categories in Logic. University of Nice (France). (2019.06.20)
Norm-complete Abelian ℓ -groups: equational axiomatization.
33. PhDs in Logic. University of Bern (Switzerland). (2019.04.25)
Stone-Gelfand duality for groups.
34. Boolean Algebras, Lattices, Universal Algebra, Set Theory, Topology. University of Denver (USA). (2018.08.10)
Operations that preserve integrability, and truncated Riesz spaces.

CONTRIBUTED TALKS AT NATIONAL PEER-REVIEWED CONFERENCES

35. Meeting of the Italian Association of Logic and its Applications. University of Udine (Italy). (2024.09.04)
Vietoris endofunctor for closed relations and its de Vries dual.
36. Meeting of the Italian Association of Logic and its Applications. Vanvitelli University (Italy). (2023.09.13)
Duality for metrically complete Abelian ℓ -groups.

TALKS AT LOCAL SEMINARS

37. University of KwaZulu-Natal (Durban, South Africa). (2026.05.21)
On the symmetry between openness and compactness.
38. Université catholique de Louvain (Belgium). (2025.10.29)
Bridging Ordered Groups and Topology: Representation Theorems and Categorical Dualities.

39. University of Birmingham (UK). (2025.06.05)
On de Groot and Lawson self-dualities.
40. University of Birmingham (UK). (2025.05.08)
Freely adding a layer of Heyting implication to a distributive lattice.
41. University of Salerno (Italy). (2025.04.24)
An algebraic version of Herbrand's theorem.
42. Université catholique de Louvain (Belgium). (2025.01.07)
Coalgebraic flavour of metric compact Hausdorff spaces.
43. University of Milan (Italy). (2024.10.31)
Quantifier-free fragments and quantifier alternation depth in doctrines.
44. University of Manchester (UK). (2024.10.09)
Quantifier-free fragments and quantifier alternation depth in doctrines.
45. University of Padua (Italy). (2024.05.02)
Quantifier alternation depth in universal Boolean doctrines.
46. University of Birmingham (UK). (2023.11.23)
An abstraction of the unit interval with Euclidean topology and denominators.
47. Université catholique de Louvain (Belgium). (2023.11.13)
Soft sheaf representations in Barr-exact categories.
48. University of Bern (Switzerland). (2023.04.20)
Positive MV-algebras.
49. University of the Witwatersrand (South Africa). (2023.03.30)
Unique embeddability property.
50. Paris-Saclay University (France, online). (2023.01.04)
An abstraction of the unit interval with denominators.
51. University of Padua (Italy, online). (2022.12.05)
Dualities for compact Hausdorff spaces.
52. Université Paris Cité (France). (2022.11.25)
A generalization of de Vries duality to closed relations between compact Hausdorff spaces.
53. University of Amsterdam (Netherlands). (2022.05.11)
A generalization of de Vries duality to closed relations between compact Hausdorff spaces.
54. New Mexico State University (USA, online). (2022.03.14)
Free extension for universal algebras.
55. University of Caserta (Italy). (2022.02.14)
Positive MV-algebras.
56. University of Denver (USA, online). (2021.05.05)
Is the category of locally finite MV-algebras equivalent to an equational class?

57. University of Denver (USA, online). (2020.05.08)
Equivalence à la Mundici for lattice-ordered monoids.
58. University of Salerno (Italy). (2020.01.23)
Equivalence à la Mundici for lattice-ordered monoids.
59. University of Nice (France). (2019.10.03)
On concrete dual adjunctions.
60. Czech Academy of Sciences (Czech Republic). (2019.02.06)
The dual of compact ordered spaces is a variety.
61. University of Salerno (Italy). (2018.12.13)
Archimedean Cauchy-complete MV-algebras form a variety.
62. University of Milan (Italy). (2018.07.06)
Operations that preserve integrability: characterization and related algebraic structures.

OTHER TALKS AND POSTERS

63. Autumn school “Proof and Computation”, Fischbachau (Germany). 5-minute lightning talk. (2024.09.19)
Algebras of logic, step-by-step.
64. Congresso dell’Unione Matematica Italiana, University of Pavia (Italy). Poster. (2019.09.02)
Dualità di Stone-Gelfand per i gruppi.

Supervision and teaching

SUPERVISION

- 2026 – present **Master’s thesis reader (*lecteur de mémoire*).** *Université catholique de Louvain (Belgium), School of Mathematics.*
- Role: member of the thesis reading committee, assessing the written mémoire and participating in the thesis evaluation.
 - Student: Piero Possidente (University of Turin; Erasmus thesis at Université catholique de Louvain).
- 2025.09.01 – present **Member of PhD support committee (*comité d’accompagnement*).** *Université catholique de Louvain (Belgium), Research Institute in Mathematics and Physics.*
- Role: advise and support the PhD student and take part in the confirmation review in the second year of the PhD programme.
 - PhD Student: François Cayphas.
- 2022.10.24 **Co-supervision of Bachelor’s thesis.** *University of Salerno (Italy), Department of Mathematics.*
- Thesis: *Universal constructions in Algebra and in Category Theory.*
 - Student: Chiara Carratù.

- 2021.09.28 **Co-supervision of Bachelor's thesis.** *University of Salerno (Italy), Department of Mathematics.*
- Thesis: *Lawvere's theories: an algebraic approach to Universal Algebra.*
 - Student: Maria Bevilacqua.

TEACHING

- 2025/26, Spr. **Course holder.** *Université catholique de Louvain (Belgium), School of Mathematics.*
- Course: *Categorical Dualities in Logic.*
 - Level: MSc in Mathematics.
 - Tasks: lectures, office hours, preparation and assessment of oral examinations.
 - 22.5 h.
- 2022/23, Fall **Teaching assistant.** *University of Salerno (Italy), Department of Chemistry and Biology.*
- Course: *Mathematical Methods for Environmental Sciences.*
 - Level: BSc in Environmental Sciences.
 - Tasks: exercise classes.
 - 20 h.
- 2022/23, Fall **Teaching assistant.** *University of Salerno (Italy), Department of Mathematics.*
- Course: *Mathematical Logic.*
 - Level: BSc in Mathematics.
 - Tasks: exercise classes.
 - 20 h.
- 2021/22, Fall **Adjunct professor.** *University of Salerno (Italy), Department of Chemistry and Biology.*
- Course: *Mathematics 1.*
 - Level: BSc in Environmental Sciences.
 - Co-taught with Serafina Lapenta.
 - Tasks: classes, office hours, preparation and evaluation of written exams, conducting oral examinations.
 - 16 h.
- 2021/22, Fall **Teaching assistant.** *University of Salerno (Italy), Department of Mathematics.*
- Course: *Mathematical Logic.*
 - Level: BSc in Mathematics.
 - Tasks: exercise classes.
 - 20 h.
- 2019/20, Fall **Teaching assistant.** *University of Milan (Italy), Department of Mathematics.*
- Course: *Algebra 2.*
 - Level: BSc in Mathematics.
 - Tasks: exercise classes, office hours, exam assistant.
 - 35 h.

Additionally, I completed the Italian **teacher-training program “24 CFU”**: 24 ECTS (university credits), covering didactic methods and technologies, educational psychology and pedagogy (University of Milan, 2019/20).

STUDENT-ORIENTED SEMINARS AND MINI-COURSES

Seminar for PhD students and postdoctoral researchers in Computer Science.

University of Birmingham (UK), School of Computer Science. (2025.02.25)

The algebras of classical first-order logic.

Seminar for PhD students and postdoctoral researchers in Computer Science.

University of Birmingham (UK), School of Computer Science. (2025.02.11)

The sequent calculus whose semantics admits the empty structure.

Mini-course (3h total) for PhD students and postdoctoral researchers in Computer Science.

University of Birmingham (UK), School of Computer Science. (2024.10.17 and 2024.10.24)

Stone duality.

Seminar for graduate students in Mathematics.

New Mexico State University (USA), online. (2022.03.24)

Lawvere's algebraic theories.

Seminar for Bachelor students in Mathematics.

University of Salerno (Italy). (2021.05.28)

The algebraic approach to Constraint Satisfaction Problems (CSP).

Seminar for Bachelor students in Mathematics.

University of Milan (Italy). (2019.12.05)

The Rubik's Cube. Ideas to create a solution strategy.

Outreach

Outreach blog post on *Maddmaths!* (Italian outreach platform in mathematics) about Stone duality and its recent developments. M. Abbadini, *Attraverso lo specchio*. Link. (2025.05.06)

Organizer and volunteer in educational events for the general public, illustrating through games the mathematical mechanisms of gambling and the systematic disadvantage for the player. *Slotmob* (2015.06.05) and *Apericena d'azzardo* (2014.04.11).

Grants and awards

GRANTS AND FELLOWSHIPS

2025–2028 **FSR Incoming Postdoctoral Fellowship.** Awarded by Université catholique de Louvain (Belgium). 3 years.

2023–2025 **Marie Skłodowska–Curie Postdoctoral Fellowship (MSCA PF).** (220,908.48€; 187,096.00£.) Awarded after EU MSCA evaluation; funded by UK Research and Innovation under the Horizon Europe funding guarantee. Host institution: University of Birmingham (UK), School of Computer Science. Scientific Area: Mathematics. Grant EP/Y015029/1. Project “DCPOS”.

NATIONAL QUALIFICATIONS

- 2024 **Italian national qualification** (Abilitazione Scientifica Nazionale, Seconda Fascia, Competition Sector 01/A1 – Mathematical Logic and Complementary Mathematics).
- 2023 **French national qualification** as maître de conférences (associate professor) in Mathematics.
- 2023 **French national qualification** as maître de conférences (associate professor) in Computer Science.

AWARDS AND SCHOLARSHIPS

- 2026 **Winner of one of the two “Paolo Gentilini Prizes”**. Awarded by the Italian Association for Logic and its Applications (AILA) to a young researcher in recognition of distinguished contributions to mathematical logic.
- 2025 **Winner of the “Ada Lettieri Prize”**. Awarded by the Italian Association for Logic and its Applications (AILA) for the paper “Stone-Gelfand duality for metrically complete lattice-ordered groups”.
- 2023 **Special mention for the “AILA–UMI Franco Montagna Prize” for PhD theses in mathematical logic and its applications**. Awarded by the Italian Association for Logic and its Applications (AILA) and the Italian Mathematical Union (UMI) for the PhD thesis “On the axiomatisability of the dual of compact ordered spaces”.
- 2023 **Scholarship to conduct one month of research abroad**. Awarded by the Italian National Institute of High Mathematics ‘Francesco Severi’ (INDAM). Declined, as a Marie Skłodowska–Curie Postdoctoral Fellowship was awarded for the same period.
- 2017–2020 **PhD scholarship**. Three years, fully funded.
- 2016/17, Fall **Erasmus scholarship**.
- 2015/16, Spr. **Erasmus scholarship**.
- 2012.09.11 **INDAM merit award for outstanding first-year mathematics students**. Awarded by the Italian National Institute of High Mathematics ‘Francesco Severi’ (INDAM).

Participation in research projects

DCPOS: Dualities via ComPactness, Openness and their Symmetry

2023.09 – 2025.08

UNIVERSITY OF BIRMINGHAM (UK)

Role: *Experienced Researcher*.

Marie Skłodowska–Curie Postdoctoral Fellowship (MSCA PF), funded by UK Research and Innovation under the Horizon Europe funding guarantee. Grant EP/Y015029/1.

MOSAIC: Modalities in Substructural Logics: Theory, Methods and Applications

2021.12 – 2023.09

UNIVERSITY OF SALERNO (ITALY)

Role: *Team member*.

Rise-MSCA-2020, funded by the European Union. Project 101007627.

Theory and applications of resource sensitive logics

2019.12 – 2022.12

UNIVERSITY OF SALERNO (ITALY)

Role: *Team member*.

PRIN, funded by the Italian Ministry of University and Research. Project 20173WKCM5.

Organisation of conferences and seminars

International conference “Peripatetic Seminar on Sheaves and Logic 113”

2026.09.26 – 2026.09.27

UNIVERSITÉ CATHOLIQUE DE LOUVAIN (BELGIUM)

Role: *member of the organizing committee*.

International conference.

International workshop “6th Workshop on Categorical Algebra: recent developments and future perspectives”

2026.07.01 – 2026.07.04

MOUNTAIN UNIVERSITY OF THE UNIVERSITY OF MILAN (UNIMONT)

Role: *member of the organizing committee*.

International workshop.

Series of seminars in logic

2023.04.17 – 2023.06.17

UNIVERSITY OF SALERNO (ITALY), DEPARTMENT OF MATHEMATICS

Role: *organizer*.

6 seminars + 1 final workshop.

International conference “LATD 2022 and MOSAIC 2022 Kick Off Meeting”

2022.09.05 – 2022.09.10

PAESTUM (ITALY)

Role: *member of the organizing committee*.

International conference (84 participants).

Workshop “PhD²ays 2020”

2020.12.09 – 2020.12.11

UNIVERSITY OF MILAN (ITALY), ONLINE

Role: *member of the organizing committee*.

Local workshop, in which PhD students present their research to postgraduate students (~ 35 participants).

Visits

LONG SECONDMENTS (≥ 1 MONTH)

- 2026 **University of Cape Town (South Africa)**. Visiting G. Janelidze. 1 month.
- 2023 **University of the Witwatersrand (South Africa)**. Visiting C. van Alten. 1 month.
- 2022 **Chapman University (USA)**. Visiting M. A. Moshier. 2 months.

SHORT RESEARCH VISITS (< 1 MONTH)

- 2025 **Czech Academy of Sciences (Czech Republic)**. Visiting A. Přenosil and W. Poiger. 5 days.
- 2025 **Université catholique de Louvain (Belgium)**. Visiting M. Gran. 4 days.
- 2024 **University of Aveiro (Portugal)**. Visiting D. Hofmann. 5 days.
- 2024 **University of Luxembourg (Luxembourg)**. Visiting F. Guffanti. 3 days.
- 2024 **Université catholique de Louvain (Belgium)**. Visiting M. Gran. 2 days.
- 2023 **University of Bern (Switzerland)**. Visiting G. Metcalfe. 3 days.
- 2023 **University of Aveiro (Portugal)**. Visiting D. Hofmann. 8 days.
- 2022 **Université Paris Cité (France)**. Visiting S. van Gool. 3 days.
- 2022 **Oxford University (UK)**. Visiting L. Reggio. 5 days.
- 2020 **University of Salerno (Italy)**. Visiting L. Spada. 4 days.
- 2019 **University of Nice (France)**. Visiting W. Fussner. 3 days.
- 2019 **Czech Academy of Sciences (Czech Republic)**. Visiting L. Reggio. 4 days.
- 2018 **University of Salerno (Italy)**. Visiting L. Spada. 6 days.

VISITS HOSTED

- 2025 **L. Spada**. At Université catholique de Louvain (Belgium). 4 days.
- 2025 **R. N. Almeida**. At the University of Birmingham (UK). 2 weeks.

- 2024 **S. van Gool.** At the University of Birmingham (UK). 5 days.
- 2023 **A. Přenosil.** At the University of Salerno (Italy). 5 days.
- 2023 **F. Guffanti.** At the University of Salerno (Italy). 2 days.

Schools and courses

- 2024.09 **Proof and Computation** Autumn School. Fischbachau (Germany).
- 2024.06 **Topology, Algebra, and Categories in Logic** Summer School. Barcelona (Spain).
- 2024.04 **Midlands Graduate School.** Leicester (UK).
- 2023/24, Spr. **Advanced Functional Programming.** Course (with Agda). University of Birmingham (UK).
- 2023/24, Fall **Functional Programming.** Course (with Haskell). University of Birmingham (UK).
- 2023/24, Fall **An introduction to the theory of profinite groups.** Course. University of Salerno (Italy).
- 2022.06 **Topology, Algebra, and Categories in Logic** Summer School. Praia de Mira (Portugal).
- 2019.06 **Topology, Algebra, and Categories in Logic** Summer School. Île de Porquerolles (France).

Professional memberships

Member of the Italian Association for Logic and its Applications (AILA).

Languages

- Italian** C2. (Mother tongue.)
- English** C1.
- French** B2. (B2 course completed at Université catholique de Louvain, 2025/26. Now enrolled in the C1 course.)
- Spanish** B2.
- German** A2. (2016/10/12: B2 certificate issued by University of Stuttgart, Germany.)