

CURRICULUM VITAE

Antonio Ledda

15 luglio 2024

Contacts

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Personal data

- **Date of birth:** Cagliari, January 11, 1978.
- **Researcher unique identifier:** ORCID 0000-0003-2569-7214
- **Nationality:** Italian
- **URL for web site:** <http://people.unica.it/antonioledda>

Research interests

- Universal algebra;
- Algebraic logic;
- Non-classical logics.

Education

- 1996, **Maturità Classica**, Grade: 60/60, Liceo statale G. M. Dettori, Cagliari.
- 1996-2000, **Master Degree**, Grade: 110/110 cum laude, Università di Cagliari.
- 2004-2007, **Ph.D. in Logic**, Grade: Excellent, Università di Cagliari. Thesis title *Logical and Algebraic Structures from Quantum Computation*.

Employment

- 2006, **Visiting Researcher**, *Institut de Investigació en Intel·ligència Artificial, Consejo Superior de Investigaciones Científicas (CSIC)*, Campus de la UAB, E-08193 Bellaterra, Spagna.
- 2007-2008, **Post-doc**, Università di Cagliari. Project title: *Media Asset Management and Distributed Knowledge*, project number 1216/07, D.R. dell'Università di Cagliari.
- 2008-2009, **Researcher**, *Research Center for Integrated Science, Japan Advanced Institute of Science and Technology*, Asahidai 1-1, Nomi, Ishikawa 923-1292, Giappone.
- 2009-2010, **Post-doc**, Università di Cagliari. Project title: *Logiche Sottostrutturali e Computazione Quantistica*, funds: *Master and Back 2008, RAS*.
- 2010-2011, **Researcher**, *Dipartimento di Filosofia e Teoria delle Scienze Umane, Università degli Studi di Cagliari*, programme “Giovani Ricercatori”. Project title: *L’approccio Logico-Algebrico alla Computazione Quantistica: aspetti teorici e possibili implementazioni*; PO Sardegna FSE 2007-2013, L.R.7/2007 “Promozione della ricerca scientifica e dell’innovazione tecnologica”.
- March 2011 – October 2014, **Assistant professor**, Università di Cagliari, Dipartimento di Filosofia.
- 2013: **National Scientific Qualification** for the position of Associate Professor in Logic and Philosophy of Science.
- 2014: **National Scientific Qualification** for the position of Associate Professor in Mathematical Logic.
- October 2014 – September 2019, **Associate professor**, Università di Cagliari, Dipartimento di Pedagogia, Psicologia, Filosofia.
- 2017: **National Scientific Qualification** for the position of Full Professor in Logic and Philosophy of Science.
- 2019, Fall-Semester, **Visiting associate professor**, Vanderbilt University, Nashville, Department of Mathematics.
- October 2019 – Present, **Full professor**, Università di Cagliari, Dipartimento di Pedagogia, Psicologia, Filosofia.

Services

- 2015- present, Giunta del Dipartimento di Pedagogia, Psicologia, Filosofia;

- 2015- present, Commissione Qualità, Dipartimento di Pedagogia, Psicologia, Filosofia;
- 2015- present, Commissione Autovalutazione, Dipartimento di Pedagogia, Psicologia, Filosofia;
- 2015- present, Responsabile IRIS, Dipartimento di Pedagogia, Psicologia, Filosofia;
- 2015- present, Responsabile Clusters della Ricerca, Dipartimento di Pedagogia, Psicologia, Filosofia;
- 2015- present, Commissione Test d'Ingresso, Corso di Laurea in Filosofia e Teorie della Comunicazione;
- 2015- present, Commissione Test d'Ingresso, Corso di Laurea in Scienze dell'Educazione;
- 2015- present, referente Erasmus, Corso di Laurea in Filosofia e Teorie della Comunicazione;
- 2015- present, referente Erasmus, Facoltà di Studi Umanistici;
- 2018- present, Commissione Pratiche Studenti, Corso di Laurea in Scienze della Comunicazione.
- 2022- present, member of the committee for the National Scientific Qualification (ASN), Ministero dell'Università e della Ricerca.

Teaching

Supervision of graduate students and postdoctoral fellows

Period: 2011 – 2019

Facoltà di Studi Umanistici/ Dipartimento di Pedagogia, Psicologia, Filosofia, Università di Cagliari.

- Coadvisor: Stefano Bonzio, march 2016.
- Ph.D. Davide Fazio february 2020.

Undergraduate Courses (selection):

- 2019: General Algebra, Xi'An Northwest University.
- 2018-2019: Mathematical Logic, hours: 60, Vanderbilt University.
- 2018-present: Logic and argumentation, hours: 60, Università di Cagliari.
- 2014-present: Logic and information theory, hours: 60, Università di Cagliari.
- 2012-2018: Logic, hours: 48, Università di Cagliari.

- 2011-2012: Logic and argumentation, hours: 60, Università di Cagliari.

Graduate Courses (selection):

- 2014-2015: Set Theory, hours: 40, Università di Cagliari.
- 2013-2014: Algebraic methods in logic, hours: 40, Università di Cagliari.
- 2013-2014: Lattice theory, hours: 40, Università di Cagliari.
- 2012-2013: Logic and methodology of sciences, hours: 30, Università di Cagliari.
- 2012-2013: Introduction to algebraic logic, hours: 40, Università di Cagliari.
- 2012-2013: Modal logic, hours: 40, Università di Cagliari.

Research activities

Publications

- [1] Ledda A., *La fenomenologia tra essenza ed esistenza*, Carocci Editore, Roma, 2002.
- [2] Ledda A., König M., Paoli F., Giuntini R., “MV algebras and quantum computation”, *Studia Logica*, 82, 2, 2006, pp. 245-270.
- [3] Giuntini R., Ledda A., Paoli F., “Expanding quasi-MV algebras by a quantum operator”, *Studia Logica*, 87, 2007, pp. 99-128.
- [4] Ledda A., *Logical and algebraic structures from quantum computation*, Ph.D. Thesis, University of Cagliari, 2008.
- [5] Bou F., Paoli F., Ledda A., Freytes H., “On some properties of quasi-MV algebras and $\sqrt{}$ quasi-MV algebras. Part II”, *Soft Computing*, 12, 4, 2008, pp. 341-352.
- [6] Paoli F., Ledda A., Giuntini R., Freytes H., “On some properties of quasi-MV algebras and $\sqrt{}$ quasi-MV algebras. Part I”, *Reports on Mathematical Logic*, 44, 2009, pp. 31-63.
- [7] Dalla Chiara M. L., Giuntini R., Freytes H., Ledda A., Sergioli G., “The algebraic structure of an approximately universal system of quantum computational gates”, *Foundations of Physics*, 39, 6, 2009, pp 559-572.
- [8] Freytes H., Ledda A., “Categories of semigroups in quantum computational structures”, *Mathematica Slovaca*, 59, 4, 2009, pp. 413-432.
- [9] Giuntini R., Freytes H., Ledda A., Paoli F., “A discriminator variety of Gödel algebras with operators arising in quantum computation”, *Fuzzy Sets and Systems*, 160, 2009, pp. 1082-1098.

- [10] Sergioli G., Ledda A., Paoli F., Giuntini R., Kowalski T., Montagna F., Freytes H., Marini C., “Two cooperative versions of the Guessing Secrets problem”, *Information Sciences*, 179, 2009, pp. 3645-3658.
- [11] Giuntini R., Ledda A., Paoli F., “Categorical equivalences for $\sqrt[n]$ quasi-MV algebras”, *Journal of Logic and Computation*, 20, 4, 2010, pp. 795-810.
- [12] Bou F., Paoli F., Ledda A., Spinks M., Giuntini R., “The logic of quasi MV algebras”, *Journal of Logic and Computation*, 2010, 20, 2, pp. 619-643.
- [13] Dalla Chiara M. L., Giuntini R., Ledda A., Leporini R., Sergioli G., “Entanglement as a semantic resource”, *Foundations of Physics*, 40, 2010, pp. 1494-1518.
- [14] Kowalski T., Paoli F., Ledda A., Giuntini R., “The lattice of subvarieties of $\sqrt[n]$ quasi-MV algebras”, *Studia Logica*, 95, 2010, pp. 33-57.
- [15] Ledda A., Sergioli G., “Towards quantum computational logics”, *International Journal of Theoretical Physics*, 49, 12, 2010, pp. 3158-3165.
- [16] Freytes H., Ledda A., Sergioli G., “Continuous functions as quantum operations: a probabilistic approximation”, *Logic and Philosophy of Science*, VIII, 1, 2010, pp. 83-100.
- [17] Giuntini R., Ledda A., Sergioli G., Paoli F., “Some generalisations of fuzzy structures arising in quantum computational logic”, *International Journal of General Systems*, 40, 1, 2011, pp. 61-83.
- [18] Alizadeh M., Ledda A., Freytes H., “Completion and amalgamation of bounded distributive quasi lattices”, *Logic Journal of the IGPL*, 19, 1, 2011, pp. 110-120.
- [19] Ledda A., Kowalski T., Paoli F., “On certain quasivarieties of quasi-MV algebras”, *Studia Logica*, 98, 2011, pp. 149-174.
- [20] Paoli F., Ledda A., Spinks M., Freytes H., Giuntini R., “Logics from $\sqrt[n]$ quasi-MV algebras”, *International Journal of Theoretical Physics*, 50, 2011, pp. 3882-3902.
- [21] Salibra A., Ledda A., Paoli F., Kowalski T., “Boolean-like algebras”, *Algebra Universalis*, 69, 2, 2012, pp. 113–138.
- [22] Dalla Chiara M. L., Giuntini R., Ledda A., Sergioli G., “The Toffoli-Hadamard gate system: an algebraic approach”, *Journal of Philosophical Logic*, 42, 3, 2013, pp. 467–481.
- [23] Freytes H., Ledda A., Sergioli G., Giuntini R., “Probabilistic logics in quantum computation”, in Andersen et al (Eds.) *New challenges to the philosophy of science*, 2013, ISBN 978-94-007-5844-5, 2013, pp. 49-57.
- [24] Jipsen P., Ledda A., Paoli F., “On some properties of quasi-MV algebras, IV”, *Reports on Mathematical logic*, 48, 2013, pp. 3-36.

- [25] Ledda A., Paoli F., Salibra A., “On semi-Boolean-like algebras”, *Acta Universitatis Palackianae Olomucensis. Facultas Rerum Naturalium. Mathematica*, 52, 1, 2013, pp. 101-120.
- [26] Kowalski T., Paoli F., Ledda A., “On independent varieties and some related notions”, *Algebra Universalis*, 70, 2, 2013, pp. 107-136.
- [27] Ledda A., Paoli F., Tsinakis C., “Lattice-theoretic properties of algebras of logic”, *Journal of Pure and Applied Algebra*, 218, 10, 2014, pp. 1932–1952.
- [28] Ledda A., “Logiche sottostrutturali”, *Aphex*, 9, 2014, ISSN 2036-9972.
- [29] Ledda A., Paoli F., Tsinakis C., “Semi-linear varieties of lattice-ordered algebras”, in F. Montagna (Ed.), *Petr Hajek on Mathematical Fuzzy Logic*, Springer Verlag, ISBN 978-3-319-06232-7, 2014, pp. 209-223.
- [30] Paoli F., Ledda A., Kowalski T., Spinks M., “Quasi-discriminator varieties”, *International Journal of Algebra and Computation*, 24, 3, 2014, pp. 375–411.
- [31] Chajda I., Ledda A., Paoli F., “Compatible idempotent terms in universal algebra”, *Acta Univ. Palack. Olom., Mathematica*, 53, 2014, pp. 35-51.
- [32] Freytes Hector, Ledda A., “A categorical equivalence for bounded distributive quasi lattices satisfying $x \vee 0 = 0 \Rightarrow x = 0$ ”, *Mathematica Slovaca*, 5, 64, 2014, pp. 1-24.
- [33] Kowalski T., Ledda A., Paoli F., “Quasi-subtractive varieties: open filters, congruences, and the commutator”, *Logic Journal Of The IGPL*, 22, 6, 2014, pp. 844-871.
- [34] Ervas F., Ledda A., “Metaphors in quaternio terminorum comprehension”, *Isonomia*, 4, 2014, ISSN 2037-4348, pp. 179-202.
- [35] Gil-Férez J., Ledda A., Tsinakis C., “The failure of amalgamation property for semilinear varieties of residuated lattices”, *Mathematica Slovaca*, 65, 4, 2015, pp. 818–828.
- [36] Chajda I., Gil-Férez J., Kolařík M., Giuntini R., Ledda A., Paoli F., “On some properties of directoids”, *Soft Computing*, 19, 4, 2015, pp. 955–964.
- [37] Ervas F., Gola E., Ledda A., Sergioli G., “Lexical ambiguity in elementary inferences”, *Discipline Filosofiche*, 22, 1, 2015, pp. 1–24.
- [38] Gil-Férez J., Ledda A., Paoli F., Tsinakis C., “Projectable ℓ -groups and algebras of logic: Categorical and algebraic connections”, *Journal of Pure and Applied Algebra*, 220, 2016, pp. 3514-3532.
- [39] Ervas F., Ledda A., Pierro A., “Does Expertise Favor the Detection of the Metaphoric Fallacy?”, in L. Bonelli, F. Paglieri, S. Felletti (Edts.), *The Psychology of Argument*, College Publications, London, 2016, pp. 223-244.

- [40] Giuntini R., Ledda A., Paoli F., “A new view of effects in a Hilbert space”, *Studia Logica*, 104, 6, 2016, pp. 1145-1177.
- [41] Sergioli G., Ledda A., “A note on many valued quantum computational logics”, *Soft Computing*, 21, 2016, pp. 1391-1400.
- [42] Bonzio S., Chajda I., Ledda A., “Representing quantum structures as near semi rings”, *Logic Journal of the IGPL*, 4, 6, 2016, pp. 719-742.
- [43] Giunti M., Ledda A., Sergioli G., *I modelli nelle teorie scientifiche*, Carocci, Roma, 2016.
- [44] Salibra A., Ledda A., Paoli F., “Factor varieties”, *Soft Computing*, 21, 2017, pp. 1443-1454.
- [45] Bonzio S., Chajda I., Ledda A., “Orthogonal relational systems”, *Soft Computing*, 20, 11, 2017, pp. 4403-4411.
- [46] Sergioli G., Ledda A., “Binary gates in three valued quantum computational logics”, in D. Aerts, C. de Ronde, H. Freytes, R. Giuntini (Edts.), *Probing the Meaning and Structure of Quantum Mechanics: Superpositions, Semantics, Dynamics and Identity*, World Scientific, Singapore, 2016, pp. 76-90.
- [47] Gil F erez J., Ledda A., Tsinakis C., “Hulls of Ordered Algebras: Projectability, Strong Projectability and Lateral Completeness”, *Journal of Algebra*, 483, 2017, pp. 429-474.
- [48] Giuntini R., Ledda A., Paoli F., “On some properties of PBZ* lattices”, *International Journal of Theoretical Physics*, 56, 12, 2017, pp. 3895-3911.
- [49] Chajda I., Fazio D., Ledda A., “On the structure theory of Łukasiewicz Near Semirings”, *Logic Journal of the IGPL*, 1, 23, 2017, pp. 14-28.
- [50] Ledda A., “Stone-Type Representations and Dualities for Varieties of Bisemilattices”, *Studia Logica*, 106, 2, 2018, pp. 417-448.
- [51] Salibra A., Ledda A., Paoli F., “Boolean Product Representations of Algebras via Binary Polynomials”, J. Czelakowski (Ed.), *Don Pigozzi on Abstract Algebraic Logic, Universal Algebra and Computer Science, Outstanding Contributions to Logic*, Springer Verlag, 2018.
- [52] Ervas F., Ledda A., Ojha A., Pierro G. A., Indurkha B. “Creative argumentation: When and why people commit the metaphoric fallacy”, *Frontiers in Psychology*, 2018, <https://doi.org/10.3389/fpsyg.2018.01815>.
- [53] Ledda A., Paoli F., Tsinakis C., “The Archimedean Property: New Horizons and Perspectives”, *Algebra Universalis*, 24 November 2018, 79, 91, 2018, <https://doi.org/10.1007/s00012-018-0573-1>, issn: 1420-8911.

- [54] Ledda A., Paoli F., Pra Baldi M., “Algebraic Analysis of Demodalised Analytic Implication”, *Journal of Philosophical Logic*, 13 February 2019, Online First, DOI: <https://doi.org/10.1007/s10992-019-09502-2>, issn: 1573-0433.
- [55] Chajda I., Fazio D., Ledda A., “A semiring-like representation of lattice pseudoeffect algebras”, *Soft Computing*, 2019, 23, 5, pp. 1465-1475.
- [56] Chajda I., Fazio D., Ledda A., “The generalized orthomodularity property: configurations and pastings”, *Journal of Logic and Computation*, 2020, 30, 5, pp. 991-1022.
- [57] Fazio D., Ledda A., Paoli F., “Residuated structures and orthomodular lattices”, *Studia Logica*, 2021, 109, 6, pp. 1201-1239.
- [58] Fazio D., Ledda A., Pra Baldi M., *Percorsi di Logica*, Mimesis, 2022 Isbn: 9788857586304.
- [59] Fazio D., Ledda A., Paoli F., “On Finch’s conditions for the completion of orthomodular posets”, *Foundations of Science*, 2023, 28, pp. 419-440.
- [60] Salibra A., Bucciarelli A., Ledda A., Paoli F., “Classical Logic with n Truth Values as a Symmetric Many Valued Logic”, *Foundations of Science*, 28, 2023, pp. 115-142.
- [61] Fazio D., Ledda A., Paoli F., St John G., “A substructural Gentzen calculus for orthomodular quantum logic”, *Review of Symbolic Logic*, 2022, 1-22. doi:10.1017/S1755020322000016.
- [62] Chajda I., Fazio D., Länger H., Ledda A., Paseka J., “Algebraic properties of paraorthomodular posets”, *Logic Journal of the IGPL*, 30, 2022, pp. 840-869.
- [63] Chajda I., Emir K., Fazio D., Länger H., Ledda A., Paseka J., “An algebraic analysis of implication in non-distributive logics”, *Journal of Logic and Computation*, 33, 1, 2023, pp. 47-89,
- [64] Bucciarelli A., Ledda A., Paoli F., Salibra A., “Boolean-like algebras of finite dimension: from Boolean products to semiring products”, *Outstanding Contributions to Logic - “Janusz Czelakowski on Logical Consequence”*, Springer 2024.
- [65] Chajda I., Fazio D., Länger H., Ledda A., Paseka J., “Implication in sharply paraorthomodular and relatively paraorthomodular posets”, *Outstanding Contributions to Logic - “Janusz Czelakowski on Logical Consequence”*, Springer 2024.
- [66] Fazio D., Ledda A., Paoli F., “Intuitionistic logic as a connexive logic”, *Studia Logica*, 112, 2024, pp. 95-139.

- [67] Giuntini R., Ledda A., Vergottini G., “Generalizing orthomodularity to unsharp contexts: properties, blocks, residuation”, *Logic Journal of the IGPL*, <https://doi.org/10.1093/jigpal/jzae076>.
- [68] Ledda A., Vergottini G., “A survey on unsharp orthomodular lattices”, *Journal of Algebraic Hyperstructures and Logical Algebras* 5, 1, 2024, pp. 19-35.

Edited Volumes

- [69] Felling L., Ledda A., Paoli F., Rossanese E., *New Directions in Logic and the Philosophy of Science*, College Publications, London, 2016.
- [70] Ervas F., Ledda A., Paoli F., Sergioli G., Special Issue on *Logical Pluralism and Translation*, *Topoi - An International Review of Philosophy*, 38, Springer, Verlag, 2019. DOI: <https://doi.org/10.1007/s11245-018-9583-z>.
- [71] Fazio D., Ledda A., Paoli F., *Algebraic Perspectives on Substructural Logics*, Trends in Logic, Springer, Verlag, 2021.

Bibliometrical Indexes

Scopus metrics:

Query date: 18.03.2021

Author ID:57202723510. H-index: 9.

Invited researcher (selection)

- 2008, Universidad de Buenos Aires;
- 2011, Universitat de Barcelona;
- 2012, La Trobe University, Melbourne;
- 2013, Université Paris VII-Diderot, Parigi;
- 2013, Università Ca'Foscari, Venezia;
- 2014, Vanderbilt University, Nashville;
- 2014, Università degli Studi di Torino.
- 2015, Vanderbilt University, Nashville;
- 2016, Vanderbilt University, Nashville;
- 2016, marzo, Université Paris VII-Diderot, Parigi;
- 2016, dicembre, Université Paris VII-Diderot, Parigi.
- 2017, febbraio, Università di Bologna;

- 2017, marzo, Scuola Superiore, Università di Catania;
- 2017, aprile, Palacký University Olomouc, Olomouc;
- 2017, agosto-settembre, Vanderbilt University, Nashville;
- 2019, maggio, Technical University, Berlin;
- 2019, October, Shaanxi Normal University, Xi'an, China.

Talks as invited speaker (selection)

1. *Abstract logics from quantum computation*, Seminarios de lógicas no clásicas. Universitat de Barcelona, may 2006.
2. *Logical and algebraic structures from quantum computation*, Japan Advanced Institute of Science and Technology Research Reports, Nomi, Ishikawa, Japan, November 2008-August 2009.
3. *A duality for preordered structures (I)*, Algebra and Substructural Logics Take 4, Nomi, Ishikawa, Japan, June 2010.
4. *On independent varieties and related notions*, Barcelona logic workshop, Barcelona, February 2012.
5. *On independent varieties*, Bochum international meeting on non classical logics, Bochum, April 2012.
6. *The amalgamation property in residuated lattices: negative results*, La Trobe University, Melbourne, September 2012.
7. *On the amalgamation property*, Université Paris XIII-Diderot, Paris, July 2013.
8. *Skew products of varieties*, Università Ca'Foscari, Venezia, December 2013.
9. *Residuated lattices and the amalgamation property*, Shanks Lectures, Vanderbilt University, Nashville, February 2014.
10. *Uno sguardo alle logiche sottostrutturali*, Università degli Studi di Torino, Torino, May 2014.
11. *Interpolazione e amalgamazione nei reticoli residuati*, Università degli Studi di Milano, Milano, July 2014.
12. *Lattice-theoretical properties of algebras of logic*, Algebra and Substructural Logics 5, La Trobe University, Melbourne, December 2014.
13. *Vagueness, uncertainty and fuzzyness in quantum computational logics*, University of Sydney, Sydney, December 2014.
14. *What's special about Boolean algebras*, Shanks Lectures, Vanderbilt University, Nashville, March 2015.

15. *Archimedean residuated lattices*, Shanks Lectures, Vanderbilt University, Nashville, February 2016.
16. *New horizons for the Archimedean property*, Fuzzy logic meets quantum logic, University of Bucharest, Bucharest, September 2017.
17. *Generalized ortomodularity, effect algebras, orthoalgebras, pastings, completions* 16th International Congress on Logic, Methodology and Philosophy of Science and Technology, Prague, August 2019.
18. *On the Archimedean property*, Xi'an Northwest University, Xi'an, October 2019.
19. *Algebraic Analysis of Demodalised Analytic Implication*, Torun University, September 2020.
20. *On Containment Logics*, Xi'an Northwest University, Xi'an, October 2020.

Talks in international conferences (selection)

1. *MV algebras and quantum computation*, Algebraic and Topological Methods in non Classical Logics II, Barcelona, June 2005.
2. *On some properties of quasi MV-algebras and \sqrt{I} quasi-Mv algebras*, Ordered Structures in Many Valued Logic, Massa Lubrense, June 2006.
3. *When vagueness meets uncertainty*, Prague International Colloquium on Uncertainty: Reasoning about Probability and Vagueness, Prague, September 2006.
4. *Linear Heyting quantum computational structures*, International conference on Order, Algebra and Logic, Nashville, June 2007.
5. *Quantum computational structures*, First Sardinian-Catalan workshop on Algebraic and Fuzzy Logic, Cagliari, October 2007.
6. *Sheaves over Priestley spaces: a duality for bounded distributive q -lattices*, International Conference on Residuated Structures: Algebra and Logic, Buenos Aires, April 2008.
7. *Continuous t -norm as quantum gates: a probabilistic approach*, ManyVal 08, Milano, May 2008.
8. *Logical and algebraic structures from quantum computation*, 9th Biennial IQSA Meeting: Quantum Structures, Brussels-Gdansk, July 2008.
9. *Logics of \sqrt{I} quasi-MV algebras*, Logic, Algebra and Truth Degrees, Siena, September 2008.
10. *Completion and amalgamation of preordered structures*, UNILOG 2010, Lisbon, Portugal, April 2010.

11. *The algebraic structure of an approximately universal quantum system*, SILFS biannual meeting, Bergamo, December 2010.
12. *Quasi-discriminator varieties II*, International Conference on Order Algebra and Logic, Kraków, June 2011.
13. *On independent varieties, II*, Logic algebra and truth degrees, Kanazawa, September 2012.
14. *Boolean like algebras*, General Algebra and its Applications, Melbourne, July 2013.
15. *On boolean like algebras*, Topology, Algebra, and Categories in Logic, Nashville, July 2013.
16. *Quantum structures as near semirings*, International Quantum Structures Biannual Meeting, Leicester University, UK, July 2016.

Organisation of scientific meetings

1. *La Conoscenza Come Rete di Modelli*, Alghero 20-23 September 2004;
2. *Quantum Computation and Quantum Information*, Alghero 24-28 September 2004;
3. *First Sardinian-Catalan Workshop on Algebraic and Fuzzy Logic*, Cagliari, 1-5 October 2007;
4. *Cagliari-Oloumuc Conference on Algebraic Logic*, Cagliari, 14-16 May 2012;
5. *Quantum Structures 2012*, Biennial Conference of the International Quantum Structures Association, Cagliari, 23-27 June 2012.
6. *Language, Logic and Mind, 3rd SIFA Graduate Conference*, Biennial SIFA meeting, Cagliari, 16-18 September 2013.
7. *Quantum Mechanics and Quantum Information: New Logical and Philosophical Approaches*, Cagliari, 23-25 July 2014.
8. *Cagliari Summer of Logic*, Cagliari, May 15 – July 19 July 2015.
9. *II International Workshop Quantum Mechanics and Quantum Information: Physical, Philosophical and Logical Perspectives*, Brussels Free University, 23-24 July 2015.
10. *Syntax Meets Semantics*, Universitat De Barcelona, Barcelona, 5-9 September 2016.
11. *Algebra and Substructural Logics, Take 6 (ASubL6)*, Cagliari, 11-13 June 2018.

12. *International Conference of Fuzzy Logic and Uncertainty Mathematical Theory*, Xi'an, 18-21 October 2019.
13. *International Conference on Intelligence Science, Fuzzy Logic & Soft Computing*, Tianyuan Mathematical Center in Northwest China, Xi'an, 17-19 October 2020.
14. *New trends in Logic and the Philosophy of Science*, Bologna 19-20 October 2022.
15. *Trends in Logic 22*, Cagliari 18-20 July 2022.
16. *Second workshop on Relating Logics*, Cagliari 21-23 July 2022.

Reviewer for

- *Asian European Journal of Mathematics*,
- *Brill*,
- *Foundations of Physics*,
- *Fuzzy Sets and Systems*,
- *Information Sciences*,
- *International Journal of Approximate Reasoning*,
- *International Journal of General Systems*,
- *International Journal of Theoretical Physics*,
- *Journal of Algebra*,
- *Journal of Logic and Computation*,
- *Journal of The Australian Mathematical Society*,
- *Logic and Philosophy of Science*,
- *Logic Journal of the IGPL*,
- *Notre Dame Journal of Formal Logic*,
- *Proceedings of the American Mathematical Society*,
- *Revista de la Unión Matemática Argentina*,
- *Soft Computing*,
- *Studia Logica*.
- American Mathematical Society,
- Czech Academy of Sciences,

- Ministero Italiano dell'Università e della Ricerca (MIUR);
- Università dell'Insubria,
- National Center For Scientific and Technical Information of Kazakhstan-
United Nations Industrial Development Organization,
- National Research, Development and Innovation Office of Hungary.
- The Cognitive Science Society,
- Zentralblatt MATH-section.

Grants and prizes

- PRIN 2007, project title: “Media Asset Management and Distributed Knowledge”, project number 1216/07, Role: Post-doc Fellowship.
- FIRB 2012, project title: “Structures and Dynamics of Knowledge and Cognition”, project number RBFR126ZA6 005, Role: Principal Investigator (Cagliari unit).
- PRIN 2013, project title: “From Models to Logic: Structures Logification and the Equivalence between Logics”, project number 20122T3PTZ, Role: Member.
- Progetto Ricerca di Base 2013, project title: “Modelling the uncertainty: Quantum Theory and Imaging Processing”, project number F71J12001020002, L.R. 7/2007, CRP-59872, Role: Member.
- Award from Regione Autonoma della Sardegna, 2010, for the project FIRB 2008, project title: “Algebraic and modal aspects of quantum theory”. Euros: 10.000.
- Award from Regione Autonoma della Sardegna, 2013, for the project FIRB 2012, euro 10.000, project title: “Structures and Dynamics of Knowledge and Cognition”. Euros: 10.000.
- 2015: RISE – Call: H2020-MSCA-RISE-2015, project title “Syntax Meets Semantics: Methods, Interactions, and Connections in Substructural logics”, call: Marie Skłodowska-Curie Research and Innovation Staff Exchange (RISE), Horizon 2020, project number 689176, Role: Principal investigator (Cagliari unit).
- Award from Regione Autonoma della Sardegna, 2016, for the project RISE 2015, project title: “Syntax Meets Semantics: Methods, Interactions, and Connections in Substructural logics”. Euros: 5.400 euro.
- 2016: Progetto Ricerca di Base 2016, project title: “Science and its logics, the representation’s dilemma”, Fondazione Banco di Sardegna & Regione Autonoma della Sardegna, CUP: F72F16003220002, Euros: 92.704.

- 2016: L. R. 7/2007, n.7 annualità 2015 – Capitale Umano ad Alta Qualificazione, project title: “Le proprietà d’ordine in matematica e fisica”, CUP: F72F16002920002, Euros: 50.000.
- 2018: L. R. 7/2007, n.7 annualità 2017 – Bando Ricerca di Base 2017, project title: “Per un’estensione semantica della Logica Computazionale Quantistica-Impatto teorico e ricadute implementative”, RASSR40341, Role: member.
- PRIN 2017, project title: “Logic and cognition. Theory, experiments, and applications”, project number: 2013YP4N3, euro 735.000, Role: Principal investigator (Cagliari Unit).

Affiliations

International Quantum Structures Association (IQSA),

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In fede,

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