Curriculum Vitae et Studiorum
Laura Giordano

Laura Giordano has received the degree in Computer Science from the University of Torino in 1987 and the PhD in Computer Science from the same University in 1993. From 1990 to 1998 she has been researcher at the Dipartimento di Informatica, Università di Torino. Since October 1998 she is associate professor at the Università del Piemonte Orientale. In 2017 she achieved an habilitation as Full Professor in Computer Science (Italian ASN 2016-2018, primo quadrimestre, settore 01/B1 INFORMATICA).

From 1997 to 2012 and since 2018 she has been member of the board of GULP, the Italian Association for Logic Programming . She is an Associate Editor of the Journal of Artificial Intelligence Research (JAIR), a member of the board of editorial advisors of the journal Theory and Practice of Logic Programming (TPLP) and a member of the Steering Committee of the International Workshop of Nonmonotonic Reasoning.

She has published over 150 papers on international journals and conference proceedings. Her research activity is in the fields of Knowledge Representation and Reasoning (KRR) and of Logics for AI. Her research interests include: Computational Logic, Answer Set Programming, Description Logics, Nonmonotonic and Common Sense Reasoning, Conditional and preferential Logics, Belief Revision, Reasoning about Actions, Change and Causality, Business Processes Verification, AI and Law, Logics for Access Control, Multiagent Verification, Preferential and Conditional Logics for Explainable AI.

She is regularly PC-member and senior PC member in some major AI, KR and Computational Logic conferences and workshops. She has been PC co-chair of NMR 2022, the 20th International Workshop on Non-Monotonic Reasoning, August 7-10, 2022, Haifa, Israel. She is PC co-chair of DL 2024, the 37th Int. Workshop of Description Logics, Bergen, June 18-21, 2024.

She has been advisor, external reviewer or member of the examination committee of several PhD thesis in AI and computational logic. In 2010, 2011, 2014-2018 she has been member of the board of the PhD Program in Computer Science of the University of Turin.
She has been local coordinator in the projects: PRIN'03 ("Logic-based development and verification of multi-agent systems"), Prin'05 ("Logical formalisms and reasoning techniques for service specification, verification and composition"), PRIN08: "LoDeN: Logiche Descrittive Nonmonotone: Complessità e implementazioni", in the project GALILEO 2006, in the project of Regione Piemonte “ICT4LAW: ICT Converging on Law: Next Generation Services for Citizens, Enterprises, Public Administration and Policymakers” (2009-2013). Responsabile nel progetto INDAM-GNCS 2015 “Logiche Descrittive e Ragionamento Non Monotono". She has been secondary proposer of COST Action 17124 DigForASP - DIGital FORensics: evidence Analysis via intelligent Systems and Practices (started in September 2018).
She has participated to the INDAM-GNCS Project 2022 ``LESLIE: LogichE non-claSsiche per tooL Intelligenti ed Explainable”.

Recent invited talks and seminars:
- March 2023: talk "Towards a *relevant-like* version of multi-preferential conditionals with typicality" at the ``Workshop on conditionals: Inferentialism and Connexivity" (Torino, 9 Marzo 2023), Center for Logic, Language, and Cognition (LLC), Universit\`a di Torino;
- November 2020: invited seminar on ``Defeasible reasoning in description logics" from preferential to multipreferential approaches", LLC, Universit\`a di Torino;
- Febbraio 2018: Survey talk on "Reasoning about exceptions in DL ontologies" at the Dagstuhl Perspectives Workshop 19072 on ``The Role of Non-monontonic Reasoning in Future Development of Artificial Intelligence";
- Settembre 2017: invited talk ``Reasoning about exceptions in ontologies: a preferential approach in Description Logics" at CILC 2017/ICTCS 2017;
- Aprile 2016: invited talk ``Reasoning about typicality in preferential DLs " at the Workshops DL 2016 e NMR 2016.

Selected Publications

[1] L. Giordano, A. Martelli, and G.F. Rossi. Extending Horn clause logic with implication goals. *Theoretical Computer Science*, 95:43–74, 1992. Elsevier Science, Amsterdam.

[2] L. Giordano and A. Martelli. Structuring logic programs: a modal approach. *J.of Logic Programming*, 21(2):59–94, 1994. Elsevier Science, Amsterdam.

[3] L. Giordano and A. Martelli. On cumulative defaults logics. *Artificial Intelligence*, 66:161–179, 1994. Elsevier Science, Amsterdam.

[4] L. Giordano and A. Martelli. A logical characterization for truth maintenance systems with dependency-directed backtracking. *Computational Intelligence*, 11(1):11–46, 1995. Blackwell Publishers, Cambridge (MA).

[5] L. Giordano, A. Martelli, and M.L. Sapino. Extending negation as failure by abduction: a 3-valued stable model semantics. *Journal of Logic Programming*, 26(1):31–67, 1996. Elsevier Science, Amsterdam.

[6] L. Giordano, A. Martelli, and G.F. Rossi. Structured prolog: A language for structured logic programming. *Software - Concepts and Tools*, 15:125–145, 1994. Springer, Berlin.

[7] D.M. Gabbay, L. Giordano, A. Martelli, and N. Olivetti. A language for handling hypothetical updates and inconsistency. *Logic Journal of the IGPL*, 4(3):385–416, 1996. Oxford University Press, Oxford.

[8] L. Giordano and N. Olivetti. Combining negation as failure and embedded implications in logic programs. *Journal of Logic Programming*, 36(2):91–147, 1998. Elsevier Science, Amsterdam.

[9] M. Baldoni, L. Giordano, and A. Martelli. A modal extension of logic programming: Modularity, beliefs and hypothetical reasoning. *Journal of Logic and Computation*, 8(5):597–635, 1998. Oxford University Press, Oxford.

[10] D.M. Gabbay, L. Giordano, A. Martelli, N. Olivetti, and M.L. Sapino. Conditional reasoning in logic programming. *Journal of Logic Programming* 44(1–3):37–74, 2000. Elsevier Science, Amsterdam.

[11] L. Giordano, A. Martelli, and Camilla Schwind. Ramification and causality in a modal action logic. *Journal of Logic and Computation*, 10(5):625–662, 2000. Oxford University Press, Oxford.

[12] L.Giordano, A.Martelli, and C.Schwind. Reasoning about actions in dynamic linear time temporal logic. *Logic Journal of the IGPL*, 9(2):289–303, 2001. Oxford University Press, Oxford.

[13] L.Giordano, V.Gliozzi, and N.Olivetti. Iterated belief revision and conditional logic. *Studia Logica (Special Issue on Belief Revision)*, 70(1):23–47, 2002. Springer, The Netherlands.

[14] M. Baldoni, L. Giordano, A. Martelli, and V. Patti. Programming rational agents in a modal action logic. *Annals of Mathematics and Artificial Intelligence, (Special issue on Logic-Based Agent Implementation)*, 41(2-4):207–257, 2004. Springer, The Netherlands.

[15] L. Giordano and C. Schwind. Conditional logic of actions and causation. *Artificial Intelligence*, 157(1-2):239–279, 2004. Elsevier Science, Amsterdam.

[16] L.Giordano, V.Gliozzi, and N.Olivetti. Weak AGM postulates and Strong Ramsey test: a logical formalization. *Artificial Intelligence*, 168:1–37, 2005. Elsevier Science, Amsterdam.

[17] L. Giordano and A. Martelli. Tableau-based automata construction for dynamic linear time temporal logic. *Annals of Mathematics and Artificial Intelligence*, 46(3):289–315, 2006. Springer, The Netherlands.

[18] Laura Giordano, Alberto Martelli, and Camilla Schwind. Specialization of interaction protocols in a temporal action logic. *Electr. Notes Theor. Comput. Sci.*, 157(4):3–22, 2006. Elsevier Science, Amsterdam.

[19] L.Giordano, A. Martelli, and C. Schwind. Specifying and verifying interaction protocols in a temporal action logic. *Journal of Applied Logic (Special Issue on Logic-Based Agent Verification)*, 5(2):214–234, 2007. Elsevier Science, Amsterdam.

[20] Laura Giordano, Valentina Gliozzi, Nicola Olivetti, and Gian Luca Pozzato. Analytic tableaux calculi for KLM logics of nonmonotonic reasoning. *ACM Trans. Comput. Log.*, 10(3), 2009. ACM, Inc.

[21] Laura Giordano, Valentina Gliozzi, Nicola Olivetti, and Camilla Schwind. Tableau calculus for preference-based conditional logics: PCL and its extensions. *ACM Trans. Comput. Log.*, 10(3), 2009. ACM, Inc.

[22] L. Giordano, V. Gliozzi, N. Olivetti, and G. L. Pozzato. ALC+T: a preferential extension of description logics. *Fundamenta Informaticae*, 96:341–372, 2009. IOS Press, Amsterdam.

[23] Alessio Bottrighi, Laura Giordano, Gianpaolo Molino, Stefania Montani, Paolo Terenziani, and Mauro Torchio. Adopting model checking techniques for clinical guidelines verification. *Artificial Intelligence in Medicine*, 48(1):1–19, 2010. Elsevier Science, Amsterdam.

[24] Laura Giordano, Alberto Martelli, and Daniele Theseider Dupré. Reasoning about actions with temporal answer sets. *Theory and Practice of Logic Programming, TPLP*, 13(2):201–225, 2013. Cambridge University Press.

[25] Laura Giordano, Alberto Martelli, Matteo Spiotta, and Daniele Theseider Dupré. Business process verification with constraint temporal answer set programming. *Theory and Practice of Logic Programming,TPLP*, 13(4-5):641–655, 2013. Cambridge University Press.

[26] Laura Giordano, Valentina Gliozzi, Nicola Olivetti, and Gian Luca Pozzato. A NonMonotonic Description Logic for Reasoning About Typicality. *Artificial Intelligence*, 195:165 – 202, 2013. Elsevier Science, Amsterdam.

[27] Valerio Genovese, Laura Giordano, Valentina Gliozzi, and Gian Luca Pozzato. Logics in access control: a conditional approach. *J. Log. Comput.*, 24(4):705–762, 2014. Oxford University Press, Oxford.

[28] L. Giordano, V. Gliozzi, N. Olivetti, and G. L. Pozzato. Semantic characterization of rational closure: From propositional logic to description logics. *Artificial Intelligence*, 226:1–33, 2015. Elsevier, Amsterdam.

[29] Laura Giordano, Alberto Martelli, and Daniele Theseider Dupré. Achieving completeness in the verification of action theories by bounded model checking in ASP. *J. Log. Comput.*, 25(6):1307–1330, 2015. Oxford University Press, Oxford.

[30] Laura Giordano and Daniele Theseider Dupré. ASP for minimal entailment in a rational extension of SROEL, *Theory and Practice of Logic Programming, TPLP*, vol. 16, n. 5-6, 738-754, 2016.

[31] L. Giordano, V. Gliozzi, N. Olivetti, and G. L. Pozzato. Towards a Rational Closure for Expressive Description Logics: the case of $\mathcal{SHIQ}$. *Fundamenta Informaticae*, 152(1–2):95–122, 2018. IOS Press, Amsterdam.

[32] L. Giordano and Daniele Theseider Dupré. Defeasible Reasoning in $\mathcal{SROEL}$: from Rational Entailment to Rational Closure. *Fundamenta Informaticae*, 161(1–2):135–161, 2018. IOS Press, Amsterdam.

[33] Laura Giordano and Alberto Policriti. Adding the power-set to description logics, *Theor. Comput. Sci.*, vol. 813, 155–174, 2020.

[34] Laura Giordano and Daniele Theseider Dupré. An ASP approach for reasoning in a concept-aware multipreferential lightweight DL, *Theory and Practice of Logic Programming, TPLP*, 20(5): 751-766 (2020).

[35] L. Giordano and V. Gliozzi. Reasoning about exceptions in ontologies: from the lexicographic closure to the skeptical closure. *Fundamenta Informaticae*,176(3-4): 235-269 (2020), IOS Press, Amsterdam.

[36] L. Giordano and V. Gliozzi. A reconstruction of multipreference closure. *Artificial Intelligence*, vol. 290, January 2021, Elsevier, Amsterdam.

[37] Laura Giordano, Valentina Gliozzi, and Daniele Theseider Dupré. A conditional, a fuzzy and a probabilistic interpretation of self-organizing maps. *J. Log. Comput.*, 32(2):178–205, 2022. Oxford University Press, Oxford.

[38] Laura Giordano and Daniele Theseider Dupré. An ASP approach for reasoning on neural networks under a finitely many-valued semantics for weighted conditional knowledge bases, *Theory and Practice of Logic Programming, TPLP*, 22(4): 589-605 (2022). Cambridge University Press.

[39] Mario Alviano, Francesco Bartoli, Marco Botta, Roberto Esposito, Laura Giordano and Daniele Theseider Dupré. A preferential interpretation of MultiLayer Perceptrons in a conditional logic with typicality, *Int. J. Approx. Reason.*, vol. 164, year 2024, https://doi.org/10.1016/j.ijar.2023.109065, Elsevier, Amsterdam.