

Francesco Antonio Genco

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Research

Postdoctoral researcher (2022 – present day)

One-year post-doc at LUCI, Dipartimento di Filosofia, Università di Milano on the project BRIO (PRIN project n. 2020SSKZ7R) led by Giuseppe Primiero.

Postdoctoral researcher (2019 – 2022)

Three-year post-doc at IHPST (UMR 8590), Université Paris 1 Panthéon-Sorbonne and CNRS on the project *Insights from Bolzano* (IBS) ANR-18-CE27-0012-01 led by Francesca Poggiolesi.

Education

PhD (2014 – 2019)

TU Wien (Vienna, Austria), Doctoral College Logical Methods in Computer Science, Institute of Logic and Computation, Theory and Logic Group, E192-05
Supervisor: Agata Ciabattoni

Master of Arts in Philosophy (2010 – 2013)

University of Bologna, Department of Philosophy and Communication Sciences
Final degree mark: cum laude
Thesis supervisor: Giovanna Corsi

Bachelor of Arts in Philosophy (2007 – 2010)

University of Bologna, Department of Philosophy and Communication Sciences
Final degree mark: cum laude
Thesis supervisor: Maurizio Matteuzzi

Publications

- [P.15] **Low-Level Analysis of Trust in Probabilistic and Opaque Programs** (Francesco A. Genco). *The Reasoner*, vol. 17, n. 4, July 2023.
- [P.15] **What Stands Between Grounding Rules and Logical Rules Is the Excluded Middle** (Francesco A. Genco). *Review of Symbolic Logic*, to appear.
- [P.14] **Formal Explanations as Logical Derivations** (Francesco A. Genco). *Journal of Applied Non-Classical Logics*, vol. 31, num. 3-4. 2021.
- [P.13] **Defining Formal Explanation in Classical Logic by Substructural Derivability** (Francesco A. Genco and Francesca Poggiolesi). *Computability in Europe*. 2021.
- [P.12] **Conceptual (and Hence Mathematical) Explanation, Conceptual Grounding and Proof** (Francesca Poggiolesi and Francesco A. Genco). *Erkenntnis*. 2021.
- [P.11] **Grounding, Quantifiers, and Paradoxes** (Francesco A. Genco, Lorenzo Rossi and Francesca Poggiolesi). *Journal of Philosophical Logic*, vol. 50, pp. 1417–1448. 2021.
- [P.10] **A typed parallel λ -calculus via 1-depth intermediate proofs** (Federico Aschieri, Agata Ciabattoni and Francesco A. Genco). *LPAR*. 2020.
- [P.9] **On the Concurrent Computational Content of Intermediate Logics** (Federico Aschieri, Agata Ciabattoni and Francesco A. Genco). *Theoretical Computer Science*. 2020.
- [P.8] **Par Means Parallel: Multiplicative Linear Logic Proofs as Concurrent Functional Programs** (Federico Aschieri and Francesco A. Genco). *Proc. ACM Program. Lang.* 4, *POPL*. Article 18. 2020.
- [P.7] **Intermediate Logics and Concurrent λ -Calculi: A Proof-Theoretical Approach** (Francesco A. Genco). PhD thesis. Institute of Logic and Computation, Faculty of Informatics, TU Wien. 2019.
- [P.6] **Classical proofs as parallel programs** (Federico Aschieri, Agata Ciabattoni and Francesco A. Genco). *Proceedings Ninth International Symposium on Games, Automata, Logics and Formal Verification, GandALF 2018, Saarbrücken, Germany, 26-28 September 2018*. pp. 43–57. 2018.
- [P.5] **Hypersequents and systems of rules: Embeddings and applications** (Agata Ciabattoni and Francesco A. Genco). *ACM Trans. Comput. Log. (TOCL)*, vol. 19, num. 2. 2018.

- [P.4] **Gödel logic: From natural deduction to parallel computation** (Federico Aschieri, Agata Ciabattoni and Francesco A. Genco). *32nd Annual ACM/IEEE Symposium on Logic in Computer Science, LICS 2017, Reykjavik, Iceland, June 20-23, 2017*. pp. 1–12. IEEE Computer Society, 2017.
- [P.3] **Understanding prescriptive texts: rules and logic elaborated by Mīmāṃsā school** (Agata Ciabattoni, Elisa Freschi, Francesco A. Genco and Björn Lellmann). *Journal of World Philosophies*, vol. 2, num. 1, pp. 47–66. 2017.
- [P.2] **Embedding formalisms: hypersequents and two-level systems of rules** (Agata Ciabattoni and Francesco A. Genco). *Advances in Modal Logic*, vol. 11, pp. 197–216. 2016.
- [P.1] **Mīmāṃsā deontic logic: proof theory and applications** (Agata Ciabattoni, Elisa Freschi, Francesco A. Genco and Björn Lellmann). In Hans De Nivelle, editor, *Automated Reasoning with Analytic Tableaux and Related Methods, 24th International Conference, TABLEAUX 2015, Wrocław, Poland, September 21–24, 2015. Proceedings*, volume 9323 of *Lecture notes in Computer Science*, pp. 323–338. Springer, 2015.

Selected talks

- [T.22] **Testing & Trusting: A Typed Calculus for Reasoning about Probabilistic Processes**. Given at *The Eleventh Workshop on Combining Probability and Logic (PROGIC 2023)*, 30 august – 1 September 2023, Utrecht, the Netherlands.
- [T.21] **Probabilistic computation and trust through the lens of typed λ -calculus**. Given at the *Logic Colloquium 2023*, University of Milan, Italy.
- [T.21] **Normalisation: Origins, Application, and Techniques**. Lecture at the *Outils logiques, mathématiques et informatiques pour philosophes* lecture series, 6 May 2022, IHPST, Paris 1 Panthéon–Sorbonne University, France.
- [T.21] **Formal explanations, Grounding, and Logical Proofs**. Given at the *PhilMath* seminar, 17 January 2022, IHPST, Paris 1 Panthéon–Sorbonne University, France.
- [T.20] **Grounding Quantified Sentences: A Bolzanian Solution to the Paradoxes of Grounding**. Given at the *Explanatory Inference* seminar, 3 December 2021, UCL University, Louvain-La-Neuve, Belgium.
- [T.19] **Formal explanation, classical logic, and intuitionistic logic**. Given at the conference *LOGICA 2021*, 28 September 2021, Hejnice monastery, Czechia.

- [T.18] **A Solution to the Paradoxes of Grounding Inspired by Bolzano.** Given at the *10th European Congress of Analytic Philosophy (ECAP 10)*, 24 August 2020, University of Utrecht, Utrecht, Netherlands.
- [T.17] **A Parallel Computational Interpretation of Multiplicative Classical Linear Logic.** Given at the seminar of the *Mathematical Foundations of Computation* group, 23 June 2020, University of Bath, Bath, United Kingdom.
- [T.16] **A Parallel Computational Interpretation of Multiplicative Classical Linear Logic.** Given at the seminar of the *Partout* group, 4 May 2020, LIX, INRIA Saclay, Palaiseau, France.
- [T.15] **La spiegazione formale e le sue fondazioni** (Formal Explanation and its Foundations). Given at the seminar *Ecosofia (Ubi minor)*, 16 April 2020, Università di Bologna, Bologna, Italy.
- [T.14] **Proofs-as-Programs Correspondences: Constructivity and Non-Constructivity, Determinism and Non-Determinism.** Given at the seminar *Histoire et Philosophie de l'Informatique 2020*, 29 January 2020, IHPST, Université Paris 1 Panthéon-Sorbonne, Paris, France.
- [T.13] **Intermediate logic proofs as concurrent programs.** Given at the workshop *Syntax meets Semantics 2019 (SYSMICS 2019)*, 21 January 2019, University of Amsterdam, Amsterdam, Netherlands.
- [T.12] **Intermediate logic proofs as concurrent programs.** Given at the workshop *The Fine Structure of Formal Proof Systems and their Computational Interpretations* (3rd FISP Meeting), 7 December 2018, TU Wien, Vienna, Austria.
- [T.11] **Classical proofs as parallel programs.** Given at the *Ninth International Symposium on Games, Automata, Logics and Formal Verification (GandALF 2018)*, 26 September 2018, Saarbrücken, Germany.
- [T.10] **Typing parallelism and communication through hypersequents.** Given for the *Groupe de travail «Réalisation et théorie des types»*, 6 December 2017, IRIF laboratory, Université Paris Diderot, Paris, France.
- [T.9] **From hypersequents to parallel computation via systems of rules.** Given at the *Parsifal Seminar*, 29 November 2017, Parsifal group, Laboratoire d'Informatique (LIX), Inria Saclay - Île-de-France, France.
- [T.8] **Gödel logic: From natural deduction to parallel computation.** Given at the conference *LICS 2017*, 21 June 2017, Reykjavik, Iceland.
- [T.7] **From hypersequents to parallel computation.** Given at the Melbourne Logic Seminar, 24 February 2017, University of Melbourne, Australia.

- [T.6] **From hypersequents to parallel computation.** Given at the Logic Seminar of the ANU College of Engineering and Computer Science, 8 February 2017, Australian National University, Canberra, Australia.
- [T.5] **Hypersequents and systems of rules: An embedding.** Given at the meeting *Syntax Meets Semantics 2016*, 7 September 2016, University of Barcelona, Spain.
- [T.4] **Embedding formalisms: Hypersequents and two-level systems of rules.** Given at the conference *Advances in Modal Logic*, 2 September 2016, Budapest, Hungary.
- [T.3] **Hypersequents and systems of rules: an embedding.** Given at the *3rd Postgraduate Conference SILFS*, 30 May 2016, University of Urbino, Italy.
- [T.2] **Mīmāṃsā deontic logic.** Given at the conference *Automated Reasoning with Analytic Tableaux and Related Methods (TABLEAUX 2015)*, 22 September 2015, University of Wrocław, Poland.
- [T.1] **Mīmāṃsā deontic logic: proof theory and applications.** Given at the affiliated meeting *Proof Theory of Modal and Non-Classical Logics* of the conference *15th Congress of Logic, Methodology and Philosophy of Science (CLMPS 2015)*. 7 August 2015, University of Helsinki, Finland.

Teaching and mentoring

- **Adjunct Professor.** *AI, Ethics and Law* - 6 cfu. Master's degree, 2023–2024, Univ. of Milan and Bicocca University
- **Course tutor.** *Logica* - 12 cfu (Logic). Bachelor's degree, 2022–2023, Univ. of Bologna
- **Adjunct Professor.** *Logique des modalités* (Modal Logic). Master's degree (M1), 2021–2022, Univ. Paris 1
- **Adjunct Professor.** *Théorie de la démonstration* (Proof Theory). Master's degree (M1), 2021–2022, Univ. Paris 1
- **Adjunct Professor.** *Logique des modalités* (Modal Logic). Master's degree (M1), 2020–2021, Univ. Paris 1
- **Adjunct Professor.** *Logique des modalités* (Modal Logic). Master's degree (M1), 2019–2020, Univ. Paris 1
- **Course tutor.** *Logic and Computability*. Master's degree, Winter semester 2018, TU Wien
- I helped with the supervision of the **Master's thesis** of Sanja Pavlović, *Proof theory for modal logics: Embedding between hypersequent calculi and systems of rules*

Event Organisation

- **Logic Colloquium 2023 (Conference)**
Milan, Italy. June 5–9, 2023.
- **Mathematical explanation: Ideas, models and perspectives (Conference)**
Paris, France. May 9–11, 2022.
- **Explanation between Logic and Philosophy (Conference)**
Paris, France. September 20–22, 2021.
- **Second SYSMICS Meeting**
Substructural logics: semantics, proof theory, and applications.
Vienna, Austria. February 26–28, 2018.
- **ALCOP VII (Conference)**
Algebra and Coalgebra meet Proof Theory.
Vienna, Austria. April 7–9, 2016.

Research visits

- **PPS - IRIF lab, Paris Diderot University (Paris 7)**
Collaboration with Michel Parigot (October–December 2017)
The λ -calculus and computational interpretations of classical logic
- **Australian National University (ANU) Canberra**
Collaboration with Rajeev Goré (November 2016–February 2017)
Proof-theory for non-classical logics and formalization in Coq

Peer Reviewing

- **Journal of Philosophical Logic**
- **International Conference on Automated Reasoning with Analytic Tableaux and Related Methods (TABLEAUX)**
- **Synthese Series, Springer**
- **Studia Logica (STUD)**
- **Advances in Modal Logic (AiML)**
- **Logic Journal of the IGPL**

- **Logic in Computer Science (LICS)**
- **Mathematical Foundations of Computer Science (MFCS)**
- **Formal Structures for Computation and Deduction (FSCD)**
- **International Workshop on Classical Logic and Computation (CL&C)**
- **Student session of the ESSLLI summer school**

Scholarships

- **Logic Mentoring Workshop Scholarship for LICS 2017**

Work Experience

- **CINECA (November 2011 – February 2012)**
Internship at the Information and knowledge management department of CINECA computing centre.