

CV of Paolo Pistone

*Laboratoire de l'Informatique du Parallélisme,
Université Claude Bernard Lyon 1,
École Normale Supérieure de Lyon, 46 Allée d'Italie
69007 Lyon (France)*

paolo.pistone@ens-lyon.fr

February 14, 2024

PERSONAL INFORMATIONS

Name Paolo PISTONE
Date of birth September 23rd, 1987
Nationality Italian
Website <http://perso.ens-lyon.fr/paolo.pistone/>

CURRENT POSITION

Junior Professor Chaire Professeur Junior, Université Claude Bernard Lyon 1, Laboratoire de l'Informatique du Parallélisme, Lyon, France, since Dec. 2023.

PREVIOUS POSITIONS

Assistant Professor *Dipartimento di Informatica - Scienza e Ingegneria, Università di Bologna, Italy, Mar. 2023 - Nov. 2023*
[3 years non-tenured position (in italian: "Ricercatore a Tempo Determinato di Tipo A").]
Assistant Professor *Dipartimento di Matematica e Fisica, Università Roma Tre, Italy, Oct. 2022 - Feb. 2023*
[3 years non-tenured position (in italian: "Ricercatore a Tempo Determinato di Tipo A").]
Post-doc *Dipartimento di Informatica - Scienza e Ingegneria, within Ugo Dal Lago's ERC CoG 818616 DIAPASoN, Università di Bologna, Italy, 2019-Sept. 2022.*
Post-doc *WSI Institute for Computer Science, University of Tübingen, Germany, 2018-2019*
Post-doc *Dipartimento di Matematica e Fisica, Università Roma Tre, Italy, 2017-2018*
ATER *Institut de Mathématiques de Marseille, Aix-Marseille University, France, 2015-2016*
PhD Joint PhD at *Institut de Mathématiques de Marseille, Aix-Marseille University* and *Dipartimento di Filosofia, Roma Tre University, France/Italy, 2012-2015*

EDUCATION

PhD Joint PhD in Mathematics and Philosophy, Aix-Marseille University and Roma Tre University, France/Italy, 2012-2015
Master Master Degree in Philosophy, Roma Tre University, Italy, 2009-2011
Bachelor Bachelor Degree in Philosophy, Roma La Sapienza University, Italy, 2006-2009

PHD THESIS

Title	On proofs and types in second order logic
Co-supervisors	Jean-Yves Girard and Vito Michele Abrusci
Defense	March 27th, 2015 at Roma Tre University, Italy
Reviewers	Giuseppe Longo (CNRS), Thomas Streicher (Darmstadt University), Jean-Baptiste Joinet (Lyon 3 University)
Jury	Vito Michele Abrusci (Roma Tre University), Pierre-Louis Curien (CNRS, Paris 7 University), Jean-Yves Girard (Aix-Marseille University), Jean-Baptiste Joinet (Lyon 3 University), Simone Martini (Bologna University), Enrico Moriconi (Pisa University)

AWARDS

Award	“ <i>Prix de thèse d’Aix-Marseille Université</i> ”, award for best PhD thesis by Aix-Marseille University, 2016.
Award	“ <i>Premio tesi 3+2</i> ”, award for best Master Thesis in Logic by the Italian Association for Logic and Applications, 2012.

RESEARCH-RELATED ACTIVITIES

PC member	Conference <i>Computer Science Logic</i> (CSL), 2023 (main European conference on Logic in Computer Science); Workshop <i>Trends in Linear Logic and Applications</i> (TLA), 2019 and 2021; Workshop <i>Developments in Implicit Computational complexity & Foundational & Practical Aspects of Resource Analysis</i> (DICE/FOPARA), 2019.
Editor	<i>Mathematical Structures in Computer Science</i> (MSCS), Special Issue: Differences and Metrics in Programs Semantics: Advances in Quantitative Relational Reasoning, with U. Dal Lago and F. Gavazzo, in preparation.
Reviewer	Journals <i>Logical Methods in Computer Science</i> (LMCS), <i>Bulletin of Symbolic Logic</i> (BSL), <i>Journal of Philosophical Logic</i> (JPL), <i>TOPOI</i> and <i>Studia Logica</i> .
Subreviewer	Conferences <i>Logic In Computer Science</i> (LICS), <i>Computer Science Logic</i> (CSL), <i>Formal Structures of Computation and Deduction</i> (FSCD), <i>Foundations of Software Science and Computation Structures</i> (FoSSaCS), <i>International Colloquium on Automata, Languages and Programming</i> (ICALP), <i>International Conference on Types for Proofs and Programs</i> (TYPES), <i>Workshop on Logic, Language, Information and Computation</i> (WoLLIC).

SUPERVISION

<i>Abbreviations</i>	CS \mapsto Computer Science, Math \mapsto Mathematics, Phil \mapsto Philosophy
Master CS	Supervision of Valentin Mastracci’s Master thesis titled <i>Metric Semantics of Programs</i> , Università di Bologna/Université Paris Nord (Italy/France), 2022.
Bachelor Phil	Supervision of Björn Plaehn’s thesis titled <i>The Curry-Howard Correspondence for classical and intuitionistic logic. A study of the computational behavior of proofs</i> , Tübingen University, Germany, 2019.
Master Math	Collaboration with Michele Abrusci on the supervision of Tatiana Porzio’s MSc thesis, Università Roma Tre, Italy, 2017, titled <i>Logica Lineare e Geometria dell’Interazione</i> .

ORGANIZATION OF ACADEMIC EVENTS

- Research School [FoPSS 2023 \(Foundations of Programming and Software Systems\)](#), Bertinoro (Italy), with U. Dal Lago and F. Gavazzo, scheduled for February 2023.
- Workshop [Proofs, Computation and Meaning](#), with Luca Tranchini, Tübingen University, Germany. [*Event originally scheduled as an in-presence event at Tübingen on March 2020, but postponed to 2022 due to the Coronavirus pandemic and transformed into a series of on-line events, held between October and December 2022.*].
- Research School [Logic and Transdisciplinarity](#) (all videos and materials are available on the school website), within the thematic month “Logic and Interactions” at CIRM in Marseilles, with C. Retoré, G. Crocco, M. Quatrini and L. Tortora de Falco, France, February 2022.
- Working Group *Groupe de travail sur la syntaxe transcendentale*, sponsored by the GDRI-LL, with T. Seiller, at LIPN, Paris 13 University, France, May 2018.
- Workshop *Beyond Logic*, with M. Abrusci, J. Fichot and J.-B. Joinet, at Roma Tre University, Italy, May 2015.
- Workshop *“Proofs and Types”, 25 years later*, with M. Abrusci, at Roma Tre University, Italy, March 2015.

———— INVITED COMMUNICATIONS AT WORKSHOPS, CONFERENCES AND RESEARCH SCHOOLS

- Research School Proofs, arguments and dialogues: history, epistemology and logic of justification practices, Tübingen University, August 2022.
- Research School Computation et algorithmes : anciens et nouveaux enjeux pour la philosophie des mathématiques, Thematic School of the French national research group *PhilMath*, Château de Goutelas (France), June 2022.
- Workshop *Computability, Algorithms, Types and Proofs*, Université Lyon 3, France, November 2021.
- Conference *Annual Meeting of the Portuguese Mathematical Society (SPM)*, Lisbon University, Portugal, July 2021.
- Workshop *From proof to paradox*, Campinas University, Brasil, December 2019.
- Workshop *Studies in Mathematical Logic*, Sao Paulo University, Brasil, December 2019.
- Workshop *Le même et l'autre : identité, orthogonalité et types*, Lyon 3 University, France, November 2018.
- Workshop *Trends in Linear Logic and Applications (TLLA 2017)*, Oxford University, UK, September 2017.
- Conference *Beyond Logic*, ANR “Beyond Logic”, Chateau de Cerisy, France, May 2017.
- Workshop *Consequence and Paradox*, Tübingen University, Germany, March 2017.
- Workshop *Linear Logic and Philosophy*, Lyon 3 University, France, November 2016.
- Workshop *Logic, Philosophy and Computation of Proofs*, Keio University, Tokyo, Japan, November 2015.
- Workshop *Computing, Logic and Types*, Lyon 3 University, France, November 2015.
- Workshop *Modeling hypothetical reasoning: validity, inference and paradoxes*, IHPST, Paris 1 University, France, February 2015.
- Workshop *Ludics and Philosophy*, ANR LOCI, Casa San Bernardo (Rome), Italy, June 2014.
- Conference *Transcendental Syntax: the conditions of possibility of language*, PUC University, Paraty, Brasil, September 2012.
- Conference *Logic and interactions 2012*, CIRM Marseille, France, February 2012.

———— INVITED COMMUNICATIONS AT REGULAR SEMINARS

- Seminar SCOT Seminars (Semantic and Formal Approaches to Complexity), online, December 2022.

Seminar	Mathematical Logic Seminar, Lisbon University, Portugal, January 2022.
Seminar	Mathematical Foundations Seminar, University of Bath, UK, May 2021.
Seminar	Séminaire de l'équipe MAREL, Université de Montpellier, France, March 2021.
Seminar	Gruppo di Logica di Verona, Università di Verona, Italy, January 2021.
Seminar	Chocola seminar, LIP, ENS Lyon, France, November 2020.
Seminar	WSI Colloquium, Tübingen University, Germany, July 2019.
Seminar	Seminar of the PPS team, IRIF, Paris 7, France, March 2019
Seminar	Chocola seminar, LIP, ENS Lyon, France, December 2018
Seminar	Parsifal seminar, LIX, Palaiseau, France, November 2018
Seminar	Seminar of the LIMD team, Université de Savoie, Chambéry, France, November 2018
Seminar	Logic Seminars of the Department, Lisbon University, Portugal, September 2018
Seminar	Logic and Verification team, LIPN, Paris 13 University, France, June 2018
Seminar	Logik und Sprachetheorie group seminar, Tübingen University, Germany, October 2017.
Seminar	Logic seminar, Keyo University, Tokyo, Japan, November 2015.
Seminar	Logik und Sprachetheorie group seminar, Tübingen University, Germany, July 2015.

OTHER COMMUNICATIONS (WORKSHOPS AND CONFERENCES)

Conference	<i>Logic in Computer Science (LICS 2022)</i> , Technion University, Haifa (Israel), August 2022
Conference	<i>Formal Structures in Computation and Deduction (FSCD 2022)</i> , Technion University, Haifa (Israel), August 2022
Workshop	<i>Second Order Quantifier Elimination (SOQE 2021)</i> , Zoom Meeting, November 2021
Conference	<i>Formal Structures in Computation and Deduction (FSCD 2021)</i> , Zoom Meeting, July 2021
Conference	<i>Logic in Computer Science (LICS 2021)</i> , Zoom Meeting, June 2021
Workshop	<i>REPAS 2021</i> , Zoom Meeting, March 2021
Workshop	<i>PIHOC-PPS-DIAPASoN 2021</i> , Zoom Meeting, February 2021
Conference	<i>Computer Science Logic 2021 (CSL2021)</i> , Zoom Meeting (originally to be held in Lubjana). January 2021, to come.
Workshop	<i>Linearity/Trends in Linear Logic and Applications 2020</i> , workshop affiliated to <i>FSCD 2020</i> , Zoom Meeting, (originally to be held in Paris), June 2020.
Workshop	<i>PIHOC-PPS-DIAPASoN</i> , IRIF, Université Paris 7, France, February 2020.
Workshop	<i>International Research Network in Linear Logic (IRN-LL)</i> , Università Roma Tre, Italy, September 2019
Conference	<i>XXI Congresso dell'Unione Matematica Italiana</i> , Università di Pavia, Italy, September 2019
Conference	<i>Third Proof-Theoretic Semantics conference</i> , Tübingen University, Germany, March 2019
Workshop	<i>Joint workshop GDRI-Crecogi-Elica</i> , IRIF, Université Paris 7, France, October 2018.
Workshop	<i>Joint workshop Linearity/Trends in Linear Logic and Applications 2018</i> , workshop affiliated to <i>FSCD 2018</i> , Oxford University, UK, July 2018.
Workshop	<i>2nd Meeting of the Groupe De Recherche Internationale en Logique Linéaire</i> , Roma Tre University, Italy, June 2018
Conference	<i>Formal Structures of Computation and Deduction (FSCD 2017)</i> , Oxford University, UK, September 2017.
Workshop	<i>Parametricity, Logical Relations and Realizability</i> , workshop affiliated to <i>CSL 2016</i> , Aix-Marseille University, France, September 2016

Conference	<i>Congress of Logic, Methodology and Philosophy of Science</i> , Helsinki University, Finland, August 2015.
Conference	<i>Logic Colloquium</i> , Helsinki University, Finland, August 2015
Conference	<i>Conference on hypothetical reasoning</i> , Tübingen University, Germany, August 2014.
Conference	<i>Logic Colloquium</i> , Vienna University of Technology, Austria, July 2014
Conference	<i>Triennial Conference of the Italian Society for Logic and Philosophy of Science</i> , Roma Tre University, Italy, June 2014
Workshop	<i>PhDs in Logic VI</i> , Utrecht University, Netherlands, April 2014
Conference	<i>XXV Meeting of the Italian Association for Logic and Applications</i> , SNS Pisa, Italy, April 2014
Conference	<i>Mid-term Postgraduate Conference in Logic and Philosophy of Science</i> , Urbino University, Italy, May 2013
Conference	<i>Philosophy of mathematics: from logic to practice</i> , SNS Pisa, Italy, September 2012

TEACHING EXPERIENCE

<i>Abbreviations</i>	CS \mapsto Computer Science, Math \mapsto Mathematics, Phil \mapsto Philosophy, Gen \mapsto Genomics, Comm \mapsto Communication Sciences.
Master Info	<i>Introduction to Quantum Computing</i> (40 hrs) Università di Bologna, Italy, 2023.
Master Math	<i>Computational Methods in Biology</i> (60 hrs) Università Roma Tre, Italy, 2023.
Bachelor Math	<i>Algorithms and Data Structures</i> (30 hrs tutorials) Università Roma Tre, Italy, 2022.
Bachelor Gen	<i>Networks, Security and Databases</i> (24 hrs), Università di Bologna, Italy, 2022
Bachelor Gen	<i>Networks, Security and Databases</i> (24 hrs), Università di Bologna, Italy, 2021
Master CS	<i>Logical Foundations of Computer Science</i> (10 hrs tutorials), Università di Bologna, Italy, 2020
Bachelor Gen	<i>Networks, Security and Databases</i> (24 hrs), Università di Bologna, Italy, 2020
Master CS	<i>From Denotational Semantics to Linear Logic</i> (30 hrs + 30 hrs tutorials), Tübingen University, Germany, 2019
Master CS	<i>Introduction to Denotational Semantics</i> (30 hrs), Tübingen University, Germany, 2018-2019
Master Math	<i>Theoretical Computer Science and Computation Models</i> (12 hrs tutorials), Roma Tre University, Italy, 2017-2018
Bachelor Comm	<i>Logic and Communication</i> (18 hrs tutorials), Roma Tre University, Italy, 2017
Master Math	<i>Theoretical Computer Science and Computation Models</i> (12 hrs tutorials), Roma Tre University, Italy, 2017
Master Math	<i>Lectures on Second Order Logic</i> (12 hrs), Aix-Marseille University, France, 2016
Master Phil	<i>Logic and Mathematics</i> (18 hrs), Aix-Marseille University, France, 2016
Master CS	<i>Logic and Computation Theory</i> (12 hrs), Aix-Marseille University, France, 2016
Master Phil	<i>Existence Postulates in Mathematics</i> (18 hrs), Aix-Marseille University, France, 2016
Bachelor CS	<i>Logic and Computability</i> (40 hrs tutorials), Aix-Marseille University, France, 2016
Bachelor Math	<i>Linear Algebra 2</i> (30 hrs), Aix-Marseille University, France, 2015-2016
Master Phil	<i>Introduction to Mathematics</i> (12 hrs), Aix-Marseille University, France, 2015-2016

SCIENCE OUTREACH

Conference	European Researchers Night , Roma Tre University, Italy, 2022
------------	---

Theatre	Tournée de π in Paris (Théâtre des Variétés), Marseille (Théâtre du Silo) and Lyon (Transbordeurs), France, 2017.
Conference	European Researchers Night , Roma Tre University, Italy, 2017
Conference	European Researchers Night , Roma Tre University, Italy, 2016
Conference	<i>Treize minutes Marseille - Jeunes Chercheurs</i> , (video), in Marseille (Alcazar Library), France, 2016
Theatre	<i>Journée de π</i> in Marseille (Théâtre de la Criée), France, 2016
Stage	<i>Stages Hyppocampe</i> , Aix-Marseille University, France, 2016 [3-day stage for high school students who experience doing research in an academic laboratory, under the supervision of a researcher.]
Theatre	<i>Journée de π</i> in Marseille (MuCEM), France, 2016

PUBLICATIONS IN INTERNATIONAL PEER-REVIEWED JOURNALS, CONFERENCES, WORKSHOPS AND COLLECTIONS

Journal	Pistone, Tranchini L, Petrolo, M., The naturality of natural deduction (II): On Atomic Polymorphism and Generalized Propositional Connectives, <i>Studia Logica</i> (2021), https://doi.org/10.1007/s11225-021-09964-z , 2021
Journal	Pistone, On completeness and parametricity in the realizability semantics of System F, <i>Logical Methods in Computer Science</i> , 15(4), pp. 6:1-6:54, 2019.
Journal	Tranchini L., Pistone, Petrolo M., The naturality of natural deduction. <i>Studia Logica</i> , vol. 107, Issue 1, pp. 195-231, 2019.
Journal	Pistone, Polymorphism and the obstinate circularity of second order logic, a victims' tale. <i>The Bulletin of Symbolic Logic</i> , vol. 4 Issue 2, pp. 1-52, 2018.
Journal	Pistone, Petrolo M., On paradoxes in normal form. <i>Topoi</i> , 38(3), pp. 605-617, 2018.
Conference	Dal Lago U., Honsell F., Lenisa M., Pistone, On Quantitative Algebraic Higher-Order Theories, <i>Proceedings FSCD 2022</i> , LIPIcs vol. 228, pp. 4:1-4:18, 2022;
Conference	Antonelli M., Dal Lago U., Pistone, Curry and Howard Meet Borel, <i>Proceedings LICS 2022</i> , IEEE Computer Society, pp. 1-13, 2022;
Conference	Pistone, Tranchini L., What's Decidable about (Atomic) Polymorphism?, <i>Proceedings FSCD 2021</i> , LIPIcs vol. 195, pp. 27:1-27:23, 2021;
Conference	Antonelli M., Dal Lago U., Pistone, On Measure Quantifiers in First-Order Arithmetic, <i>Proceedings CiE 2021</i> , LNCS vol. 12813, pp. 12-24, 2021;
Conference	Pistone, On Generalized Metrics for the Simply Typed λ -Calculus, <i>Proceedings LICS 2021</i> , IEEE Computer Society, pp. 1-14, 2021
Conference	Pistone, Tranchini, L. The Yoneda Reduction of Polymorphic Types, <i>Computer Science Logic 2021 (CSL2021)</i> , LIPIcs, Volume 183, Paper No. 35, pp. 35:1–35:22, 2021.
Conference	Geoffroy, G., Pistone A Partial Metric Semantics of Higher-Order Types and Approximate Program Transformations, <i>Computer Science Logic 2021 (CSL2021)</i> , LIPIcs, Volume 183, Paper No. 23, pp. 35:1–35:18, 2021.
Conference	Pistone, On dinaturality, typability and $\beta\eta$ -stable models, <i>Proceedings FSCD 2017</i> , LIPIcs vol. 84, pp. 29:1–29:17, 2017;
Conference	Aubert C., Bagnol M. Pistone and Seiller T., Logic Programming and Logarithmic Space, in <i>Proceedings APLAS 2014</i> , vol. 8858 of Lecture Notes in Computer Science, pp. 39-57, Springer, 2014.
Workshop	Antonelli M., Dal Lago U., Pistone, On Counting Propositional Logic and Wagner's Hierarchy, <i>Proceedings ICTCS 2021 (Italian Conference in Theoretical Computer Science)</i> , CEUR Workshop Proceedings, pp. 107-121, 2021

- Workshop Pistone, Tranchini, L. The Yoneda Reduction of Polymorphic Types (Abstract), *Proceedings SOQE 2021 (Second Order Quantifier Elimination)*, CEUR Workshop Proceedings, pp. 92-97, 2021;
- Workshop Pistone, Proof nets, coends and the Yoneda isomorphism, In *Proceedings Linearity-TLLA 2018*, arXiv:1904.06159; EPTCS 292, pp. 148-167, 2019.
- Chapter Pistone, A new conjecture about identity of proofs, to appear in Antonio Piccolomini d’Aragona (eds.), *Perspectives on Deduction*, Synthèse Library, Studies in Epistemology, Logic, Methodology and Philosophy of Science.
- Chapter Pistone, Tranchini L., Intensional harmony as isomorphism, to appear in Thomas Piecha and Kai Wehmeier (eds.), *Peter Schroeder-Heister on Proof-Theoretic Semantics*, Outstanding Contributions to Logic, Springer.
- Chapter Pistone, Petrolo M., A normal paradox, in Arazim P. and Lávička T., editors, *The Logica Yearbook 2016*, p.173-184, College Publications, London, 2017.
- Chapter Pistone, On the “no-deadlock criterion”: from Herbrand’s theorem to Geometry of Interaction, in *New Developments in Logic and Philosophy of Science*, SILFS series, College Publications, 2016.
- Chapter Pistone, Rule-following and the limits of formalization: Wittgenstein’s considerations through the lens of logic, in *From Logic to Practice, Italian Studies in the Philosophy of Mathematics*, volume 308 of Boston Studies in the Philosophy and History of Science, Springer, 2015.
- Chapter V.M. Abrusci, Pistone, On transcendental syntax: a Kantian program for logic?, in *Second Pisa Colloquium in Logic, Epistemology and Philosophy of Language*, ETS, Pisa, 2014.

———— PUBLICATIONS IN ITALIAN JOURNALS AND VOLUMES

- Chapter V.M. Abrusci, Pistone, Le direzioni della ricerca logica in Italia: la logica lineare e i suoi sviluppi, in Hykel Hosni, Gabriele Lolli, Carlo Toffalori, editors, *Le direzioni della ricerca logica in Italia 2*, p. 1-47, Edizioni ETS, Pisa, 2018.
- Journal Pasquali F., Pistone, L’Hotel di Hilbert e l’imbarazzo della scelta. *Archimede*, vol. 1/2017, Le Monnier, 2017 (Italian journal on the didactics of mathematics), 2017.
- Journal Pistone, Dalle regole dell’argomentazione alla logica delle regole. *Rivista Italiana di Filosofia Analitica Junior*, vol. 1 n. 2, pp. 25-38 (Italian journal for young researchers in analytic philosophy), 2011.

———— PREPRINTS

- Preprint Pistone. [From Identity to Difference: a Quantitative Interpretation of the Identity Type](#), 2021
- Preprint Lê Thành Dũng, Pistone, Seiller T., Tortora de Falco L., [Finite models of polymorphism, complexity and the expressive power of type fixpoints](#), 2019
- Preprint Pistone, [Proof nets and the instantiation overflow property](#), 2018