

Luca Rivelli, PhD.

Curriculum Vitae (July 2025)

Name: Luca Rivelli

Born in: Parma, Italy

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Research Area

I am a philosopher (*PhD* degree), interested in the subjects of *philosophy of science*, *philosophy of technology*, *computational philosophy*, *philosophy and ethics of AI*, *philosophy of computing*, *philosophy of biology*, *history of science and technology*. Along the lines of an empirically informed philosophy of science, I study the intersections between these areas and the history of recent debates ongoing therein, focusing on the philosophical implications of computational issues for explanation practices in the special sciences, such as computational biology.

On a meta level, I investigate the role of philosophy in the possible future scenarios of machine learning/AI-driven advancements in scientific research and innovation in technology.

I also apply computational methods to the analysis of citation networks, in order to help clarify both theoretical and historical questions in the history of recent scientific disciplines. I am actively coding computer software for the processing of citation networks, released under open source licenses.

Academic Positions

2019 - 2021: **Post-Doc fellowship** at **UCLouvain (Université catholique de Louvain)**, Belgium, **Higher Institute of Philosophy (ISP)**, **Center for Philosophy of Science and Society (CEFISES)**, under P.I. **Charles H. Pence**.

2016 - Today: *Cultore della materia*¹, History of Philosophy, University of Padova, Italy, *FISPPA* department.

Academic Training

2015: **PhD degree in Philosophy**, under a joint programme (co-tutelle), between *Université Paris 1 Panthéon-Sorbonne* (Paris, France) and *Università degli Studi di Padova* (Padua, Italy). Joint supervision by **Philippe**

¹Nonsalaried official affiliation as an expert.

Huneman (IHPST - Institut d’Histoire et Philosophie des Sciences et des Techniques, Paris 1 University) and **Fabio Grigenti** (FISPPA department - Filosofia, Sociologia, Pedagogia e Psicologia Applicata, University of Padova).

- **PhD degree at Paris 1 University** awarded with *Tres honorable avec félicitations du jury à l’unanimité* (equivalent to “With Highest Honors”).
- **PhD degree at University of Padova** awarded with *Eccellente* (“Excellent”—the highest possible evaluation in Italy).
- Title of the thesis: *Modularity, Antimodularity and Explanation in Complex Systems*.

2013: Six-months stage in Paris, France, as an officially invited visiting PhD student at the IHPST, (Institut d’Histoire et Philosophie des Sciences et des Techniques), Paris 1 University, under the supervision of Philippe Huneman. Joining the IHPST Paris 1 University PhD course in Philosophy (*Philosophie*) after the visiting period.

2011: Start of the PhD course in Philosophy at University of Padova, FISPPA, under the supervision of Fabio Grigenti.

2010: **Master’s degree** (*Laurea magistrale*) in Philosophy at the University of Padova, awarded “summa cum laude”.

Academic Authorizations

2016: *Qualification de Maître de conférences*, section 72 - *Epistémologie, histoire des sciences et des techniques*, and section 17 - *Philosophie*, released by the **French Ministry of Research and Education**.

Other training certifications

- 2024: Accomplishment of the *Ethics of Artificial Intelligence* MOOC by prof. Viola Schiaffonati, *Polimi Open Knowledge MOOC programme* at Politecnico di Milano, Italy.
- 2024: Accomplishment of the *Machine Learning* MOOC by prof. Marcello Restelli, *Polimi Open Knowledge MOOC programme* at Politecnico di Milano, Italy.

Published Works

- Rivelli, L. (2025). The Ethical No-Free-Lunch Principle: Fundamental Limits to Purely Data-Driven AI Ethics. In D. D. Hromada & B. Lomfeld (Eds.), *Proceedings of 0th Moral and Legal AI Alignment Symposium, Joint IACAP/AISB 2025 Conference on Philosophy of Computing and AI, July 2025, University of Twente, Enschede, the Netherlands* (pp. 25–37). International Association for Computing and Philosophy (IACAP) and the Society for the Study of Artificial Intelligence and Simulation of Behaviour (AISB). https://udk.ai/alignment_symposium_0.pdf

- Rivelli, L. (2025). Modularity in biological thought: Sketch of a unifying theoretical framework. *BioSystems*, 250, 105430. <https://doi.org/10.1016/j.biosystems.2025.105430>
- Rivelli, L. (2024). The evolving hierarchy of naturalized philosophy: A metaphilosophical sketch. *Metaphilosophy*, 55(3), 285–300. <https://doi.org/10.1111/meta.12690>
- Lean, O., Rivelli, L., & Pence, C. H. (2023). Digital Literature Analysis for Empirical Philosophy of Science. *The British Journal for the Philosophy of Science*, 74(4). <https://doi.org/10.1086/715049>
- 2022: Co-editor with Charles Pence of the Synthese Topical Collection “Digital Studies of Digital Science”, *Synthese*, 200 (2022)².
- Pence, C.H., Rivelli, L. (2022). Editorial introduction to “Digital Studies of Digital Science”. *Synthese*, 200, 328. <https://doi.org/10.1007/s11229-022-03802-y>
- Rivelli, L. (2019). “Multilevel Ensemble Explanations: A Case from Theoretical Biology”. *Perspectives on Science*, 27(1), 88–116. https://doi.org/10.1162/posc_a_00301
- Rivelli, L. (2019). “Antimodularity: Pragmatic Consequences of Computational Complexity on Scientific Explanation”. In D. Berkich & M. V. D’Alfonso (Eds.), *On the Cognitive, Ethical, and Scientific Dimensions of Artificial Intelligence: Themes from IACAP 2016* (pp. 97–122). Springer International Publishing. ISBN 978-3-030-01799-6. https://doi.org/10.1007/978-3-030-01800-9_6
- Rivelli, L. (2013). Review of: Paolo Tripodi, *Dimenticare Wittgenstein. Una vicenda della filosofia analitica*. *Universa. Recensioni di filosofia*, 2(2), 145-149. <https://universa.padovauniversitypress.it/2013/2/28>
- Rivelli, L. (2013). Review of: Daniel C. Dennett & Alvin Plantinga, *Science and Religion. Are They Compatible?*. *Universa. Recensioni di filosofia*, vol. 2(1), 41-46. <https://universa.padovauniversitypress.it/2013/1/9>
- Rivelli, L. (2012). Review of: Penelope Maddy, *Defending the Axioms: On the Philosophical Foundations of Set Theory*. *Universa. Recensioni di filosofia*, vol. 1(2), 121-126. <https://universa.padovauniversitypress.it/2012/2/25>
- Rivelli, L. (2011). Review of: J. Fodor & M. Piattelli-Palmarini, *What Darwin Got Wrong* (Italian translation: *Gli errori di Darwin*). *Universa. Recensioni di filosofia*, 1(1), 123-128. <https://universa.padovauniversitypress.it/2012/1/27>

Organization of Conferences

- 2021: Co-chair with Charles Pence of the conference *DS²: Digital Studies of Digital Science*, held online at ISP, UCLouvain. Louvain-La-neuve, Belgium. March 15–18, 2021. <https://uclouvain.be/en/node/83749>
- 2016: Member of the steering committee of *Principles of Composition: Towards a Laocoon for Works of Technological Art*. International Workshop, University of Padova (FISPPA, CIGA) in collaboration with Technische

²At https://link.springer.com/journal/11229/topicalCollection/AC_1c4c69b0590f6e1f1e3f19cb34f7d769/page/1.

Universität Darmstadt, Germany. Padua, Italy. December 5-7, 2016. <https://laocoon-conference.blogspot.com/>

- 2016: Member of the steering committee and one of the main organizers of *SCIECONS - Science and Conspiracy - Dealing with Scientific Denialism, Distrust of Expertise and Conspiracy Theories*. International conference and workshop, University of Padova (FISPPA, CISFIS). Padua, Italy. November 28-30, 2016. <https://sciecons.blogspot.com/>

Contributions to Conferences and workshops

- Rivelli, Luca (2025). “The Ethical No-Free-Lunch Principle: Fundamental Limits to Purely Data-Driven AI Ethics”. *Moral and Legal AI Alignment Symposium, Joint IACAP/AISB 2025 Conference on Philosophy of Computing and AI*. July 2025, University of Twente, Enschede, the Netherlands.
- Pence, Charles & Lean, Oliver & Rivelli, Luca (2019). “Digital Humanities as Empirical Philosophy of Science”. Workshop talk at *XPhiSci 2019. Workshop on Experimental Philosophy of Science*, Aarhus University (Denmark), October 15-16, 2019.
- Rivelli, Luca (2017). “Robot Scientists”. Workshop talk at *Subject - Machine - Animal. Technological Developments and New Identities*. FISPPA Department, University of Padova (Italy), June 15-16, 2017.
- Rivelli, Luca (2016). “Antimodularity: Computational Complexity may Hinder Scientific Explanation”. Conference talk at *Le changement dans les sciences – Change in science, 6th meeting of the SPS - Société de Philosophie des Sciences*, University of Lausanne (CH), June 29 - July 1, 2016.
- Rivelli, Luca (2016). “Antimodularity: Pragmatic Consequences of Computational Complexity on Scientific Explanation”. Conference talk at *IACAP 2016: International Association for Computing and Philosophy – Annual Meeting*, University of Ferrara (Italy), June 14-17, 2016.
- Rivelli, Luca (2016). “Functional and mechanistic explanations are reverse-engineered modular descriptions constrained by computational complexity”. Conference talk at *3PCILAPS: SILFS 3rd Postgraduate Conference on Logic and Philosophy of Science*, University of Urbino (Italy), May 30-June 1st, 2016

Other Talks

- 2019:
 - Lecture “Debunking Scientific Denialism through Computer-Aided Fake Data Analysis”, by Luca Rivelli and Massimo Nucci. CEFISES weekly seminar, *WIP* series, organized by François Kammerer. ISP, UCLouvain.
 - Lecture “The evolving hierarchy of naturalized philosophy. A tentative meta-philosophical sketch”. CEFISES weekly seminar. ISP,

UCLouvain.

- Lecture “Digital Humanities as Empirical Philosophy of Science”, by Charles H. Pence, Oliver Lean, and Luca Rivelli. CEFISES weekly seminar. ISP, UCLouvain.
- 2014:
 - Lecture “La macchina del pensiero” (*The Machine of Thought*). Doctoral seminar “Riflessione sull’uomo” (*Reflection on Man*). FISSPA, University of Padova.
 - Lecture “Funzionalismo: l’attacco di Putnam contro la teoria dell’identità mente-cervello” (*Functionalism: Putnam’s attack to the Mind-Body Identity*). Doctoral seminar *Mente, Corpo, Macchina* (*Mind, Body, Machine*). FISSPA, University of Padova.
 - Lecture “Modularity and Explanation in Natural and Artificial Life Sciences”. *Club PhiBioMed* seminar on the Philosophy of Biology, organized by Matteo Mossio. IHPST, Université Paris 1.
- 2012: Lecture “Computazione, emergenza, mente” (*Computation, Emergence, Mind*). Doctoral seminar *Il laboratorio del sé* (*The Laboratory of the Self*). FISSPA, University of Padova.
- 2011: Lecture “L’uomo come essere intenzionale nella filosofia di Daniel Dennett” (*Man as an Intentional Being in Daniel Dennett’s Philosophy*). Doctoral seminar *La Natura dell’Uomo* (*The Nature of Man*). Department of Philosophy, University of Padova.

Teaching Experiences

- 2014: Two lessons on *Philosophy of Psychology* at the course on History of Scientific Thought held by Fabio Grigenti at the Faculty of Psychology, University of Padova.
- 2013: One lesson about *Functionalism in philosophy of mind and psychology* at the course on History of Scientific Thought held by Fabio Grigenti at the Faculty of Psychology, University of Padova.
- 2011: Three lessons about the Turing machine in the Philosophy of Mind course of Massimiliano Carrara and Vittorio Morato, Faculty of Psychology, University of Padova.

Memberships

- Since 2013: member of ISHPSSB – International Society for the History, Philosophy, and Social Studies of Biology.
- 2016 and 2019-today: Member of IACAP – International Association for Computing and Philosophy.

Languages

- Native speaker of Italian.
- Proficient in written and spoken English.

- Good comprehension of written French and a discrete competence in spoken French, sufficient to manage basic academic tasks and relationships.

Computer-related skills

- Proficient in the Python programming language and with a basic knowledge of Javascript.
- Good overall knowledge of Linux systems and a good capability to install and administer Linux clients and servers via graphical and command-line tools.

Other

- 1994-2007: I worked as a free-lance computer programmer and IT technician.
- 1995-2007: I worked as a free-lance videomaker/video journalist, producing several experimental short videos. In 2001 I won the Videopolis Festival (Padua, Italy), with the video *Suburbia* in co-authorship with the architect Arianna Maretto).
- 1999-today: I am working on several videoart projects with musical composer Manuel Cecchinato. In 2006, the electronic music/videoart live performance *Oniricam*, co-authored by me and Manuel Cecchinato, was performed at *iXem* festival, Rome, and on tour at the *404* International Festival of electronic art (Trieste, Vienna and Hasselt).