

Davide Romano

Curriculum Vitae

CONTACTS

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AREAS OF SPECIALIZATION

Philosophy of physics; foundations and philosophy of quantum mechanics

AREAS OF COMPETENCE

Philosophy of science; epistemology; history of philosophy; history of modern physics

EMPLOYMENT

April 2025/now: **Junior researcher (RTD-A)**, Università di Verona, dipartimento di Scienze Umane, Verona, Italia.

Jan 2024 / March 2025: **Postdoctoral researcher**, Université Grenoble Alpes, Institut Néel-CNRS, Grenoble, France.

Sept 2022 / Dec 2023: **FCT Junior Researcher**, Centre of Philosophy, University of Lisbon, Portugal.

Sept 2021 / Aug 2022: **High school teacher**, Liceo Scientifico Statale “G. B. Grassi”, Latina, Italy.

Dec. 2020/Aug 2021: **FCT Junior Researcher**, Centre of Philosophy, University of Lisbon, Portugal.

Oct. 2019/Feb. 2020: **Scientific Collaborator**, Polytechnic University of Milan, department of mathematics, Milano, Italy.

Oct 2018/June 2019: **Ernst Mach Postdoctoral Scholar**, University of Salzburg, department of philosophy (KGW), Salzburg, Austria.

Nov. 2013/Nov. 2016: **PhD Student SNF and Teaching Assistant**, University of Lausanne, department of philosophy, Lausanne, Switzerland.

EDUCATION

Nov 2013/Nov 2016: **PhD in Philosophy**, department of philosophy, University of Lausanne.

Funded by the **Swiss National Science Foundation** [grant no. 105212_149650].

Thesis title: “*The Emergence of the Classical World from a Bohmian Universe*”.

Supervisor: Michael Esfeld (Lausanne). External committee: Guido Bacciagaluppi (Utrecht), Angelo Bassi Trieste).

Oct 2007/Oct 2009: **Laurea Specialistica (M. A.) in History and Philosophy of Science**, University of Rome “La Sapienza”, Italy. [Final grade: 110/110 summa cum laude.]

Nov 2009/July 2013: **Studies in Physics**, University of Rome 3, Rome, Italy (dropped out before completion).

Sept 2003/Sept 2007: **Laurea Triennale (B. A.) in Philosophy**, University of Siena, Italy.

[Final grade: 110/110 summa cum laude.]

RESEARCH VISITS

September 2015 – February 2016: **Visiting Fellow**, department of physics, University of Trieste, Italy.
[Advisor: Prof. Angelo Bassi.]

February 2015 – June 2015: **Visiting Fellow**, department of philosophy, University of Aberdeen, UK.
[Advisor: Prof. Guido Bacciagaluppi.]

PUBLICATIONS

Monograph (in Italian)

1. D. Romano (2024), “Filosofia della Meccanica Quantistica: L’Interpretazione Standard”, *Carocci* editore, publication date: 27 September 2024. [ISBN: 9788829026678]

Journal articles (peer-reviewed)

2. D. Romano (2023), “A decoherence-based approach to the classical limit in Bohm’s theory”, *Foundations of Physics*, 53:41, in the special issue by A. Drezet (ed.): *Pilot-wave and beyond: Louis de Broglie and David Bohm’s quest for a quantum ontology*. DOI: <https://doi.org/10.1007/s10701-023-00679-w>.

3. A. Vassallo & **D. Romano** (2023), “The metaphysics of decoherence”, *Erkenntnis* 88: 2609-2631.
DOI: <https://doi.org/10.1007/s10670-021-00469-8>

4. D. Romano (2021), “On the alleged extra-structures of quantum mechanics”, *Foundations of Physics* 51:29.
DOI: <https://doi.org/10.1007/s10701-021-00426-z>

5. D. Romano (2021), “Multi-field and Bohm’s theory”, *Synthese* 198: 10587–10609.
DOI: <https://doi.org/10.1007/s11229-020-02737-6>

6. M. Hubert & **D. Romano** (2018), “The wave-function as a multi-field”, *European Journal for Philosophy of Science*, 8 (3): 521-537. DOI: <https://doi.org/10.1007/s13194-017-0198-9>

Book chapters (peer-reviewed)

7. D. Romano (2022), “The unreasonable effectiveness of decoherence”, in the volume by V. Allori (ed.): *Quantum Mechanics and Fundamentality*, *Synthese Library*, vol. 460, Springer, 2022.
DOI: <https://doi.org/10.1007/978-3-030-99642-0>

Conference proceedings (peer-reviewed)

8. D. Romano (2016), “Bohmian classical limit in bounded regions”, in L. Fellingine, A. Ledda, F. Paoli & E. Rossanese (eds.): *New Directions in Logic and the Philosophy of Science*, College Publications, SILFS series, vol. 3, London, 2016. [ISBN: 978-1-84890-160-5]

Journal articles in Italian (peer-reviewed)

9. D. Romano (2024), “Formalizzazione del quadrato aristotelico”, *Nuova Secondaria*, n. 1, Settembre 2024: 183-191. [ISSN 1828-4582].

10. D. Romano (2024), “Trascendenza e immanenza: Platone, Hume e la legge fisica”, *Nuova Secondaria*, n.7, Marzo 2024: 52-55. [ISSN 1828-4582].

TALKS

Invited Talks

20.11.2024: “Quantum origin of time’s arrow”

Colloquium research seminar series, department of philosophy, LMU, Munich, Germany.

10.04.2024: “Quantum origin of time’s arrow”

X International Workshop on Quantum Mechanics and Quantum Information: Philosophy and Phenomenology of Quantum Interpretations, 09-11 April 2024, University of Rome 3, Rome, Italy.

11.05.2023: “A decoherence-based approach to the classical limit in Bohm’s theory”
New Perspectives on the Philosophy of Quantum Mechanics, Warsaw University of Technology, Warsaw, Poland.

26.04.2023: “What you can do and cannot do with decoherence” (online talk)
Lisbon Philosophy of Physics seminars 2023. Centre of Philosophy, University of Lisbon, Lisbon, Portugal.

04.11.2022: “The unreasonable effectiveness of decoherence”
LanCog Seminar Series in Analytic Philosophy. Centre of Philosophy, University of Lisbon, Lisbon, Portugal.

14.06.2021: “On the emergence of three-dimensional space from configuration space realism” (online talk)
Workshop: Alyssa Ney, “The World in the Wave-Function”, University of Geneva, Geneva, Switzerland.

22.06.2021: “The unreasonable effectiveness of decoherence” (online talk)
Philosophy of physics reading group, department of philosophy, University of California San Diego, United States.

19.02.2021: “The classical limit of quantum mechanics: one world, many routes”
LanCog Seminar Series in Analytic Philosophy, Center of Philosophy, University of Lisbon, Portugal.

30.06.2020: “Multi-field and Bohm’s theory” (online talk)
Caltech philosophy of physics reading group, Division of the Humanities and Social Sciences: History and Philosophy of Science. California Institute of Technology, Pasadena, USA.

30.05.2019: “Does decoherence theory support the Many Worlds Interpretation of quantum mechanics?”
Workshop: “*What does mathematics tell us about the physical world?*”, Czech Academy of Sciences, Prague.

14.05.2019: “Does decoherence theory support the Many Worlds Interpretation of quantum mechanics?”
LOGOS research seminars, University of Barcelona, Barcelona, Spain.

29.11.2018: “The multi-field interpretation in Bohm’s theory”.
International workshop: *New Topics in Quantum Foundations*, University of Lausanne, Lausanne, Switzerland.

03.07.2018: “What is the wave function? A realist approach in Bohm’s theory”.
International workshop and training school: *Is quantum theory exact? The spin statistics connection violation and related items*, Frascati National Laboratories (LNF), Frascati, Italy.

03.05.2017: “Classical limit in the de Broglie-Bohm’s theory”.
International workshop: *Ontology and Physics*, University of Rome 3, Rome, Italy.

Contributed Talks

22.09.2023: “A new direction for quantum ontology”, *EPSA23, Europe, 9th Biennial Meeting of the European Philosophy of Science Association*, University of Belgrade, Belgrade, Serbia.

06.09.2023: “The multi-field as determinable”, talk in the symposium: “Determinable and undeterminable in quantum mechanics”, *SILFS 2023, Triennial International Conference of the Italian Society for Logic and the Philosophy of Science*, University of Urbino, Italy.

04.09.2023: “A new direction for quantum ontology”, *SILFS 2023, Triennial International Conference of the Italian Society for Logic and the Philosophy of Science*, University of Urbino, Italy.

01.06.2023: “A new direction for quantum ontology”, *CPA 2023 - Annual Congress of the Canadian Philosophical Association*, York University, Toronto, Canada.

September 2021: “The unreasonable effectiveness of decoherence”, *Sixth Annual Conference of the Society for the Metaphysics of Science* – SMS 2021 Conference.

02.09.2019: “A proposal for the classical limit in Bohm’s theory”, *ILMPS 2019: Second Irvine-London-Munich-PoliMi-Salzburg Conference in Philosophy and Foundations of Physics*, University of Salzburg, Austria.

11.07.2018: “A proposal for the classical limit in Bohm’s theory”, *Foundations 2018: The 19th UK and European Conference on Foundations of Physics*, Utrecht University, Netherlands.

16.03.2018: “A proposal for the classical limit in Bohm’s theory”, *Deutsche Physikalische Gesellschaft*, working group in philosophy of physics, Technische Universität, Berlin, Germany.

20.06.2017: “The multi-field interpretation of the wave function in the de Broglie-Bohm theory”, *SILFS 2017, Triennial International Conference of the Italian Society for Logic and the Philosophy of Science*, University of Bologna, Italy.

20.12.2016: “Quantum to classical transition in Bohmian mechanics”, international workshop and training school: *Are spin statistics connection and quantum theory exact? The endeavor for the theory beyond standard quantum mechanics*, Frascati National Laboratories (LNF), Frascati, Italy.

30.06.2016: “Why Bohmian non-locality is not a problem for us (classical objects)”, *Congrès de la Société de Philosophie des sciences*, University of Lausanne, Switzerland.

27.05.2016: “From the quantum holistic description to a classical separable world”, *Lake Geneva Graduate Conference (LG2C)*, University of Geneva, Switzerland.

02.07.2015: “Why Bohmian mechanics needs decoherence”, *British Society for the Philosophy of Science* conference, University of Manchester, UK.

18.06.2014: “Decoherence and Bohmian mechanics”, *SILFS 2014, Triennial International Conference of the Italian Society for Logic and the Philosophy of Science*, University of Rome 3, Italy.

02.05.2014: “The emergence of a classical world in Bohmian mechanics”, international workshop: *The Quantum State as the Memory of the Quantum System*, University of Lausanne, Switzerland.

Commentary

23.08.2018: Commentary on “Is non-locality a distinctive feature of quantumness?” by Joanna Luc, *4th Annual Conference of the Society for the Metaphysics of Science*, University of Milan, Italy.

TEACHING

Academic year 2023/24 [I semester]: **Instructor**, PhD and master course: *Epistemology and philosophy of science*, Centre of Philosophy, University of Lisbon.

Academic year 2022/23 [I semester]: **Instructor**, PhD and master course: *Epistemology and philosophy of science*, Centre of Philosophy, University of Lisbon.

Academic year 2021/22 [I semester]: **Instructor**, PhD and master course: *Epistemology and philosophy of science*, Centre of Philosophy, University of Lisbon.

Oct 2019/Feb 2020: **Teaching Assistant**, master course: *Philosophy of Science and Technology*, Polytechnic University of Milan, department of mathematics, Milan, Italy.

Oct 2015/June 2016: **Teaching Assistant**, master course: *Philosophy, Epistemology and History of Science*, École Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland.

Oct 2014/June 2015: **Teaching Assistant**, master course: *Philosophical Perspectives on the Exact Sciences and their History*, École Polytechnique Fédérale de Lausanne (EPFL), Lausanne, Switzerland.

OTHER TEACHING ACTIVITIES

July 2015: International Summer School: *The Ontology of Physics*, Saig, Germany, group tutorial “Structural Realism and the Ontology of Physical Objects” (with Matthias Egg and Tiziano Ferrando).

July 2014: International Summer School: *Probabilities in Physics*, Saig, Germany, group tutorial “The Nature of Probability in Bohmian Theories” (with Antonio Vassallo and Andrea Oldofredi).

SUMMER SCHOOLS

2016: Training School for graduate students and researchers: “*Are spin statistics connection and quantum theory exact? The endeavor for the theory beyond standard quantum mechanics*”, 19-21 December, LNF – Frascati National Laboratory, Frascati, Italy.

2016: 4th International Summer School in Philosophy of Physics: “*Understanding Quantum Physics. The Meaning of the Wave Function*”, 18-23 July, Saig, Germany.

2015: 3rd International Summer School in Philosophy of Physics: “*The Ontology of Physics*”, 20-25 July, Saig, Germany.

2014: 2nd International Summer School in Philosophy of Physics: “*Probabilities in Physics*”, 21-26 July, Saig, Germany.

2014: Summer School on the Foundations of Quantum Mechanics dedicated to John Bell, 28-30 July, Sexten, Italy.

2014: 2nd International Spring School on Particle Physics and Philosophy, 26 March-04 April, Wuppertal, Germany.

GRANTS

- **FCT Junior Researcher Fellowship**. Grant for conducting research (3+3 years) at the Centre of Philosophy at the University of Lisbon (CFUL). [Dec. 2020 – Dec. 2026].
Research project: *The Emergence of the Classical World from Quantum Mechanics*. [Final rank: 17th over a total of 2180 projects, 2nd in the section of Humanities].
- **Ernst Mach Grant-Worldwide**, funded by the *Austrian Agency for International Cooperation in Education and Research* (OeAD-GmbH) and the *Centre for International Cooperation and Mobility* (ICM), for the project: “What is Achieved by Decoherence?” [Oct. 2018 – June 2019].

ACADEMIC SERVICE

1. Referee for peer-reviewed international journals

The British Journal for the Philosophy of Science, Studies in History and Philosophy of Modern Physics, International Studies in the Philosophy of Science, Philosophical Studies, Philosophy of Science, Foundations of Physics, Foundations of Science, Erkenntnis, Manuscripta, European Journal for the Philosophy of Science.

2. Organization of international conferences

- Three-day international conference: *Open Topics in Philosophy of Physics*, University of Lisbon, Faculty of Humanities, Lisbon, June 12th-14th, 2013.

3. Organization of seminars

- *Philosophy of physics seminar series*, Institute Néel, Université Grenoble Alpes [Sept 2024 - ongoing].

- *Lisbon-Warsaw reading group* in the philosophy of physics (with A. Oldofredi and A. Vassallo), online seminar series, three meetings [Sept-Dec 2023].

3. Thesis Supervision

- [2023-ongoing] Co-supervision of Mariana Seabra's master thesis: "Data-driven science: metaphysical and epistemological issues, department of philosophy, University of Lisbon.

4. Member of scientific committees

- *First International Colloquium on Emergence and Time* (organizer: Elton Marques), 03-05 July, Faculty of Philosophy and Social Sciences, Catholic University of Portugal, Braga, Portugal.

Memberships

SILFS – Italian Society for Logic and the Philosophy of Science

EPSA – European Philosophy of Science Association

Career breaks

- Sept 2021 / Aug 2022: **High school teacher**, Liceo Scientifico Statale "G. B. Grassi", Latina, Italy.

Scientific awards

- MSCA Seal of Excellence 2023, project: "A quantum origin for time's arrow" (final score: 94,60%).

Scientific outreach

1. Letture.org <https://www.letture.org/filosofia-della-meccanica-quantistica-davide-romano>

Divulgate presentation of my book: "Filosofia della Meccanica Quantistica" (Carocci 2024)

2. Stroncature [scheduled, 11 April 2025]

Discussion online on the philosophy of quantum mechanics with Matteo Morganti (University of Rome3) and Vera Matarese (University of Perugia).

3. Festival delle Neuroscienze [scheduled, 23 May 2025],

Public meeting on neurosciences and quantum mechanics

LANGUAGES

Italian: native; English: excellent (C1) ; French: intermediate (B1) ; Portuguese: basic (A2)