

CURRICULUM VITAE

Vera Matarese

Dipartimento di Filosofia, Scienze Umane, Sociali e della Formazione
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AREAS OF SPECIALIZATION:

Metaphysics of Science
Philosophy of Science
Philosophy of Physics

AREAS OF COMPETENCE:

Metaphysics
Epistemology
History of Physics

ACADEMIC APPOINTMENTS:

11.2022-Now	RTDB-researcher (Tenure-track Assistant Professor) in Philosophy of Science, Department of Philosophy, Social Sciences and Education, University of Perugia (Italy, IT).
01.2020-10.2022	Postdoctoral Researcher¹ in Philosophy of Science, Institute of Philosophy, University of Bern (Bern, CH) Fellow , Center for Space and Habitability, University of Bern (Bern, CH)
09.2019-12.2019	Visiting Fellow , Center for Philosophy of Science, University of Pittsburgh (Pittsburgh, PA, USA)
09.2017-12.2019	Postdoctoral Researcher in Philosophy of Science, Institute of Philosophy, Czech Academy of Sciences (Prague, CZ)

EDUCATION:

09.2013-08.2017	Ph.D. in Philosophy of Science , The University of Hong Kong Dissertation: A structuralist reconciliation of the realist and nomological views in Bohmian Mechanics Supervisors: Dr. Jo E. Wolff; Dr. Jamin Asay External examiner: Prof. Jill North (Rutgers University)
09.2011-04.2013	Master's degree in Philosophy , University of Milan; 110/110 cum laude Dissertation: Philosophical considerations on non-locality in Quantum Mechanics Supervisor: Prof. Renato Pettoello External examiner: Prof. Adriano Morando (Polytechnic University of Milan)

¹ Since 01.2022, Advanced Postdoctoral Researcher.

09.2008-05.2011

Undergraduate Degree in Philosophy, University of Milan; 110/110 cum laude
Dissertation Title: Philosophical considerations on the dynamical theory of the electromagnetic field
Supervisor: Prof. Renato Pettoello

RESEARCH VISITS:

Funded by host institution or external funding:

05.2018: Visiting fellow, Centre for Philosophy of Science, University of Geneva.

09.2011-07.2012: Master of Arts exchange student, King's College London.

Funded by home institution:

09.2016-12.2016: Visiting postgraduate student, Rutgers University.

01.2015-04.2015: Registered postgraduate student, The University of Aberdeen.

PUBLICATIONS:

Books

1. Matarese V. (2022). *The Metaphysics of Bohmian Mechanics*. De Gruyter. ISBN: 978-3-11-079374-1

Edited Volumes:

2. Boyd N., de Baerdemaeker S., Heng K., Matarese V. (editors) (forthcoming). *Philosophy of Astrophysics*. Synthese Library.

Book chapters (invited, refereed):

3. Matarese V. (2022). "Space the many substances", in Antonio Vassallo (ed), *The Foundations of Spacetime Physics: Philosophical Perspectives*, Routledge Studies in the Philosophy of Mathematics and Physics.
4. Matarese V. (2022). "On the principles that serve as guides to what's fundamental in non-relativistic quantum mechanics", in Valia Allori, *Quantum Mechanics and Fundamentality: Naturalizing Quantum Theory between Scientific Realism and Ontological Indeterminacy*, Synthese Library.
5. Boyd N., de Baerdemaeker S., Matarese V. (forthcoming). *Introduction*. In Boyd N., de Baerdemaeker S., Heng K., Matarese V. (editors) (forthcoming). *Philosophy of Astrophysics*. Synthese Library.

International Academic Journals:

6. Matarese V. (2023). De Broglie-Bohm Theory, Quo Vadis?. *Foundations of physics*, 53(1), 18.
7. Matarese V. (2022). Against the Resampling Account of Replication. *Journal of Theoretical and Philosophical Psychology*. <https://doi.org/10.1037/teo0000207>
8. Matarese V. (2022). 'Oumuamua and Meta-empirical Confirmation. *Foundations of Physics*, 52 (83) <https://doi.org/10.1007/s10701-022-00587-5>
9. Matarese V. (2022). Kinds of Replicability: different terms and different functions. *Axiomathes*. <https://doi.org/10.1007/s10516-021-09610-2>
10. Matarese V. (2022). "On the methodological arguments for wave-function realism". *International Studies in Philosophy of Science*. <https://doi.org/10.1080/02698595.2021.2024786>
11. Matarese, V. (2021). Super-Humeanism and physics: A merry relationship?. *Synthese*, 199(1), 791-813.
12. Matarese, V. (2020). A challenge for Super-humeanism: the problem of immanent comparisons. *Synthese*, 197(9), 4001-4020.
13. Matarese, V. (2019). Loop quantum gravity: A new threat to Humeanism? Part I: The problem of spacetime. *Foundations of Physics*, 49(3), 232-259.

Italian journals:

14. Matarese, V. (2022), 'Le leggi dinamiche come guide alla ontologia fondamentale'. *La nottola di Minerva. Journal of Philosophy and Culture Supplement*. ISSN 1973-3003.
15. Matarese, V. (2014), "A Structuralist Perspective on the Problem of Objecthood: Herbart's Realism without Objects", *Method – Analytic Perspectives*, vol. 3, n. 4, pp. 167-183.
16. Matarese, V. (2013), "Dall'articolo 'EPR' agli esperimenti di Alain Aspect: il lungo cammino del problema della Nonlocalità in Meccanica Quantistica", *Annali di Lettere e Filosofia dell'Università degli Studi di Milano, Acme* 1-2, pp. 197-223.

INVITED PRESENTATIONS (SELECTION):

- 2022: *When replicability is more than reliability*, Seminar at the Black Hole Initiative, Harvard University (online).
- 2022: *Space the many substances*, Workshop "Quantum Gravity", University of Geneva (Geneva).
- 2022: *On the epistemic status of exoplanet atmosphere retrieval models*, Department Seminar, University of Stockholm (Stockholm)
- 2021: *Scientific Fictional properties and their explanatory power*, Department Seminar, LanCog, University of Lisbon (Lisbon)
- 2021: *Quantum Fictionalism*, Workshop "Quantum objects", University of Geneva (Geneva).
- 2021: *Scientific Fictional properties and their explanatory power*, Department Seminar, UCLouvain (Louvain-la-Neuve)
- 2021: *Scientific Replicability: A contextualist account*, Philosophy of Science Research Colloquium, California Institute of Technology (online).
- 2021: *Quantum Humeanism or Quantum Humean Fictionalism?* Department Seminar, Institut Néel, (online).
- 2021: *Super-Humean Fictionalism*, Workshop "Humeanism and the Pragmatic Turn", University of Florida and University of Birmingham. (online).
- 2021: *A Humean Wavefunction for Quantum Mechanics*, Workshop "Humean Entanglement", FraMePhys, University of Birmingham (online).
- 2021: *Space the many substances*, Foundations of Spacetime Seminar, Warsaw University of Technology (online).
- 2020: *Super-Humeanism and Physics: a merry relationship?*, Workshop on Laws of Nature, Rutgers University (New Brunswick, USA). Postponed.
- 2019: *On Dynamical Laws as Guides to what's fundamental*, Workshop 'Fundamentality in Metaphysics and in Science', Centre for Science and Philosophy, University of Bristol (Bristol).
- 2019: *Super Humeanism: A Naturalized Metaphysical Theory?*, Workshop 'Modality in structural/naturalistic ontologies', Lingnan University (Hong Kong).
- 2018: *How to understand nomological entities: the case of spin-networks in Loop Quantum Gravity*, Workshop 'New Topics in Quantum Foundations', the University of Lausanne (Lausanne).
- 2018: *On the tenability of Humeanism in Loop Quantum Gravity. The problem of spacetime*. Seminar talk at the Centre for Philosophy of Science, Geneva University (Geneva).
- 2017: *A case study for structuralism: The identity-based Bohmian mechanics*, The Rutgers Workshop on Structuralism, Rutgers University (New Brunswick).

OTHER PRESENTATIONS (SELECTION):

- 2022: *On the epistemic status of exoplanet atmospheric retrieval models*. British Society for philosophy of science. (Exeter).
- 2022: *On the epistemic status of exoplanet atmospheric retrieval models*. Society for philosophy of science in practice. (Ghent).
2022. *Space the many substances*. Irvine-London-Munich-Polimi-Ssalzburg. (Milano).

- 2021: *Direct or Conceptual Replicability as the Gold Standard for Science? The case of the Hubble constant*, UK-European Foundations of Physics Conference (Paris).
- 2021: *On the principles that serve as guides to the ontology of quantum mechanics*, Society for the Metaphysics of Science (online).
- 2020: *The metaphysics of replicability*, British Society of Philosophy of Science Annual Conference, Symposium “Replicability Crisis” (Canterbury). Cancelled.
- 2020: *On the double nature of the method of analogy in Science*, History of Philosophy of Science (HOPOS), Singapore. Cancelled.
- 2018: *In the name of Alessandro Volta. The unifying role of Italy in the development of the electromagnetic theory*. European Society for the History of Science Biennial Conference in conjunction with the British Society for the History of Science (London).
- 2018: *A Challenge to Super-Humeanism: the Problem of Immanent Comparisons*, Society for the Metaphysics of Science Conference (Milan).
- 2018: *Quantum Gravity: a threat to Humeanism?*, The UK-European Foundations of Physics Conference (Utrecht).
- 2018: *Methodological grounds against wave-function realism*, VI Congrès de la Société de la Philosophie de Sciences (Nantes).
- 2018: *On the discrepancy of the method of analogy between Carnapian epistemology and Maxwellian physics*. Trattenbach talk series, Institute of Philosophy, Czech Academy of Science (Prague).
- 2016: *Bohmian mechanics and ontic structural realism, or why we should be modest when we do philosophy of physics*, Rutgers University (New Brunswick).
- 2016: *A coherent ontology for the Aristotelian Pilot-wave Theory*, Society for the Metaphysics of Science Conference (Geneva).
- 2016: *From Newtonian to Bohmian Mechanics: what a structural realist might want to tell us*, III Conference of Contemporary Philosophy in East Asia (Seoul).
- 2016: *The complex interplay between the wave-function and the particles in the De Broglie-Bohm Theory*, Fourth International Summer School in Philosophy of Physics (Saig).
- 2016: *For an approximate continuity of structure between Newtonian and Bohmian Mechanics*, VI Congrès de la Société de la Philosophie de Sciences (Lausanne).
- 2015: *A Structuralist Reconciliation between Bohmian Mechanics and the Pilot-Wave Theory*, Third International Summer School in Philosophy of Physics (Saig).
- 2015: *The Dispositional Interpretation of the DGZ Bohmian Ontology*, Philosophy of Physics Seminar (The University of Aberdeen).
- 2014: *The Dispositional Interpretation of the DGZ Bohmian Ontology*, Philosophy Seminar (The University of Hong Kong).
- 2014: *The dispositional property in Bohmian Mechanics: A Disposition of a Dynamical Structure*, Student Presentation, Second Summer School in Philosophy of Physics (Saig).
- 2014: *The new conception of order as revealed by the holographic paradigm*- V Congrès de la Société de Philosophie des Sciences (Lille).
- 2014: *Philosophical considerations on the Aharonov-Bohm effect* - Second International Spring School in Particle Physics and Philosophy (Wuppertal).
- 2014: *Can Bohmian Mechanics be a good candidate for the Ontic Structural Realism?* – Second International Spring School in Particle Physics and Philosophy (Wuppertal).
- 2014: *The quantum-classical divide according to Bohm* - Jahrestagung der DPG und DPG-Frühjahrstagung -Deutsche Physikalische Gesellschaft (Berlin).

TEACHING EXPERIENCE:

Lecturer:

Metaphysics of Science (undergraduate seminar open to post-graduate students), University of Bern.

Special Topics in Philosophy of Science (post-graduate seminar open to undergraduate students), University of Bern.

Philosophy of Mind (undergraduate course, second year), University of Perugia.

Logic and Philosophy of Language (undergraduate course, first year), University of Perugia.

Invited Lecturer:

What is the quantum wavefunction? (one lecture for PhD seminar in Philosophy of Science), University of Plzeň, Czech Republic.

Teaching Assistant:

Critical Thinking (undergraduate common core curriculum), The University of Hong Kong.

Scepticism and Relativism (undergraduate course for philosophy undergraduate students), The University of Hong Kong.

Supervision:

This year, I am supervising a number of undergraduate and postgraduate dissertations in Philosophy of Science.

RESEARCH EXPERIENCE:

09.2017-12.2019: Member of the Project “Formal Epistemology – the Future Synthesis”, Centre for Formal Epistemology, the Czech Academy of Sciences.

AWARDS AND FELLOWSHIPS:

2022: EPSA Fellowship, FraMEPhys, University of Birmingham.

2018: Junior Visiting Fellowship, Centre for Philosophy of Science, The University of Geneva

2018-2020: International research fellowship, Wuhan University (declined)

2013-2017: Hong Kong Ph.D. Fellowship

2013-2017: Hong Kong Ph.D. Fellowship Travel Grants

2015: Aberdeen University Postgraduate Student Travel Grant

2014: Bursary for the Second International Spring School in Particle Physics and Philosophy

2011-2012: Erasmus Mundus Scholarship

2008-2012: AFS Conference Bursaries and Travel Grants

2006: AFS Studentship (AFS is an international non-profit organization for intercultural education)

DEPARTMENT AND UNIVERSITY SERVICE:

2022-Now: Member of the committee for International Relations (i.e. double degree-programs, Erasmus programs, visiting programs for faculty members), University of Perugia.

2022-Now: Member of undergraduate dissertation evaluation, University of Perugia

2020-2022: Member of Management Committee, Center for Space and Habitability, University of Bern.

2021: Member of the hiring committee for CHS Fellow, University of Bern.

2015-2017: Anti-harassment contact person, School of Humanities, University of Hong Kong.

SERVICE TO PROFESSION:

Peer-review

2017-2020: Referee for *British Journal for Philosophy of Science*, *Studies in History and Philosophy of Science*, *Erkenntnis*, *Philosophy of Science*, *Synthese*, *Philosophical Studies*, *Foundations of Physics*, *Inquiry*, *General Journal in Philosophy of Science*, *International Studies in Philosophy of Science*, *Journal of Consciousness Studies*, *Latu Sensu*.

2020: Referee for the workshop *Non causal explanation in physics* (Czech Academy of Sciences).

Reading Group, Workshop and Conference Organization:

2020 – 2021: Organizer the CSH PhilScience reading group (fortnight), University of Bern.

2022: Organizer of the workshop *Reassessing Ignorance. Its varieties, roles and values in science, philosophy and religion*, 2nd CSH Forum on Science, Philosophy, and Religion, University of Bern (Bern)

2020: Organizer of the workshop *What can Astrophysics teach us about Replicability?*, University of Bern (online)

2019: Member of the Local Organizing Committee for *International Congress of Logic, Methodology and Philosophy of Science and Technology* (Prague).

2019: Organizer of the workshop *What does mathematics tell us about the physical world?*, Czech Academy of Sciences (Prague).

Commentator:

2019: Invited commentator for the workshop *Grounding and Laws of Nature*, Birmingham University (Birmingham).

2018: Commentator for the *Society and Metaphysics of Science annual conference* (Milan).

PROFESSIONAL MEMBERSHIPS AND AFFILIATIONS:

2021-Now: Member of National Center of Competence in Research Planets (NCCR PlanetS).

2018-2019: Member of the European Early Career Philosophers' network.

COMMUNITY INVOLVEMENT AND OUTREACH:

2018: *On the Relation between Ontology and Epistemology in Physical Theorizing*, Afternoon with the Institute of Philosophy, one-time event, the Czech Academy of Sciences (Prague).