

Antonio Vassallo

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Areas of Specialization

- Philosophy of spacetime physics
- Philosophy of quantum physics

Areas of Competence

- Philosophy of science
- Metaphysics
- Epistemology
- Logic

Education

- 2013 **Ph.D. in Philosophy**, *Université de Lausanne and Uniwersytet Warszawski*, Lausanne/Warsaw, Switzerland/Poland.
Dissertation title: *The Metaphysics of Quantum Gravity: A Causal Approach*.
Supervisors: Michael Esfeld, Tomasz Bigaj.
External referees: Gordon Belot, Tim Maudlin, Christian Wüthrich.
- 2005 **Laurea (B.Sc. + M.Sc.) in Physics**, *Università di Catania*, Catania, Italy.

Experience

- 2020– **Assistant Professor**, *Politechnika Warszawska, Zakład Filozofii i Etyki w Administracji*.
- Establishing and leading a research group in the philosophy of physics.
 - Acting as PI for the NCN funded project “Self-subsisting structures in quantum gravity” (2020-2023).
 - Managing the hiring process and the co-supervision of a PhD student in the context of the NCN project.
 - Devising and managing the content of the websites for the philosophy of physics group and the NCN project.
 - Establishing a collaborative research network of renowned scholars.
 - Participating in the scientific activities of the International Center for Formal Ontology.
 - Organizing an international colloquium online on the foundations of spacetime physics (16 speakers for the first year, 15 for the second).
- 2017–2019 **Post-doctoral Researcher**, *Universitat de Barcelona, Facultat de Filosofia*.
- Participating in the activities of the LOGOS research group.
 - Publication of a paper in the European Journal for Philosophy of Science.
 - Publication of a chapter on the Einstein Studies volume series co-authored by Carl Hoefer.
 - Teaching one undergraduate course (30 hours) per year in philosophy of science.
 - Acting as a Master’s Thesis examiner.
 - Leading the organization of an international workshop on the foundations of quantum physics held in Barcelona (May 14, 2019, ca. 30 participants).

- 2016–2017 **Lecturer**, *Uniwersytet Warszawski, Instytut Filozofii*.
- Teaching three undergraduate courses in ontology, logic, and philosophy of physics and one graduate seminar on the metaphysics of laws of nature as part of the programme of philosophy studies in English (210 hours in total).
- 2013–2016 **Post-doctoral Researcher**, *Université de Lausanne, Section de Philosophie*.
- Carrying out genuinely interdisciplinary research combining philosophy and physics in the context of the Swiss SNF funded project “The metaphysics of physics: Natural philosophy”.
 - Collaboration with internationally recognized philosophers and physicists, which led to the publication of 7 papers in top-level journals and a book for Routledge (as a co-author).
 - Teaching one course per year on the philosophical foundations of physics at the Swiss Federal Institute of Technology in Lausanne (ca. 40 students per year).
 - Helping in supervising 2 Ph.D. projects.
- 2013–2015 **Research Coordinator**, *Université de Lausanne, Section de Philosophie, and Ecole Polytechnique Fédérale de Lausanne, Institut de Théorie des Phénomènes Physiques*.
- Performing research and administrative duties in an interdisciplinary research project funded by the UNIL/EPFL (title: “The quantum state as the memory of a quantum system: A physical inquiry and a metaphysical appraisal”).
 - Responsible for the communication between the philosophy and the physics departments.
 - Leading the organization of an international workshop on the foundations of quantum physics held in Lausanne (May 1-3, 2014, ca. 30 participants).
- 2008–2013 **Doctoral Researcher**, *Université de Lausanne, Section de Philosophie, and Uniwersytet Warszawski, Instytut Filozofii*, Lausanne/Warsaw, Switzerland/Poland.
- Participating in an international joint project partially funded by the Rectors’ Conference of the Swiss Universities and the Fondation pour l’Université de Lausanne (title: “The metaphysics of quantum gravity: A causal approach”).
 - Publication of two papers on the philosophical foundations of quantum gravity.
 - Ensuring the communication between the supervisors in Lausanne and Warsaw by creating weekly reports summarizing the overall research progress.
 - Teaching 3 undergraduate courses in analytic philosophy, philosophy of physics, and philosophy of mathematics for the students in philosophy at the University of Warsaw (ca. 15 students per course).
- 2006–2008 **Science Writer**, *www.tifeoweb.it*, Catania, Italy.
- Writing over 50 articles in popular science (in Italian) for a diverse online readership of laypeople, conveying important ideas through accessible not dumbed-down language.
 - Reviewing state-of-the-art scientific articles, individuating the key points to be communicated to the audience.
 - Creating a network of internationally recognized scientific advisors.

Various

- 2007 **Cash and Payment Investigator**, *ABN AMRO Polish Financial Advisory Services Sp. Z.O.O.*, Warsaw, Poland.
- 2006 **C, SQL, Java, J2EE Programmer**, *Accenture Technology Solutions*, Milan, Italy.
- 2003 **Employee**, *Comune di Catania*, Catania, Italy.

Note: From November 2005 until September 2008 I pursued a professional career outside the Academia. However, I realized that such a career was not fully satisfactory from an intellectual point of view. Therefore, I decided to return to my research activity in philosophy of physics.

Publications

A. Vassallo, P. Naranjo, and T.A. Koslowski. The physics and metaphysics of pure shape dynamics. In A. Vassallo, editor, *The Foundations of Spacetime Physics: Philosophical Perspectives*, chapter 4. Routledge, 2022. Preprint available at <https://arxiv.org/abs/2203.02773>.

A. Solé and A. Vassallo. Quantum foundations in a nutshell. *Metascience*, 31(1):17–20, 2022.

A. Vassallo and D. Romano. The metaphysics of decoherence. *Erkenntnis*, pages 1–23, 2021. DOI 10.1007/s10670-021-00469-8.

A. Vassallo. Does general relativity highlight necessary connections in nature? *Synthese*, 199:4929–4951, 2021.

A. Vassallo and C. Hofer. The metaphysics of Machian frame-dragging. In C. Beisbart, T. Sauer, and C. Wüthrich, editors, *Thinking about space and time*, Einstein Studies Vol. 15, pages 227–246. Birkhäuser, 2020. <http://arxiv.org/abs/1901.10766>.

T. Bigaj and A. Vassallo. How Humean is Bohmianism? *Foundations of Physics*, 50:1171–1188, 2020.

A. Vassallo. Dependence relations in general relativity. *European Journal for Philosophy of Science*, 10(2), 2020. DOI 10.1007/s13194-019-0265-5. <https://arxiv.org/abs/1910.04496>.

A. Vassallo. Review of ‘Philosophy of physics: Quantum theory’ by T. Maudlin (Princeton University Press, 2019). *Notre Dame Philosophical Reviews*, 2019. <https://ndpr.nd.edu/news/philosophy-of-physics-quantum-theory/>.

M. Esfeld, D.-A. Deckert, D. Lazarovici, A. Oldofredi, and A. Vassallo. *A minimalist ontology of the natural world*. Routledge, 2018.

A. Vassallo, D.-A. Deckert, and M. Esfeld. Relationalism about mechanics based on a minimalist ontology of matter. *European Journal for Philosophy of Science*, 7(2):299–318, 2017. <http://arxiv.org/abs/1609.00277>.

A. Vassallo and M. Esfeld. Leibnizian relationalism for general relativistic physics. *Studies in History and Philosophy of Modern Physics*, 55:101–107, 2016. <https://arxiv.org/abs/1608.07257>.

A. Vassallo. A metaphysical reflection on the notion of background in modern spacetime physics. In L. Felling, A. Ledda, F. Paoli, and E. Rossanese, editors, *New Directions in Logic and the Philosophy of Science*, pages 349–365. College Publications, 2016. <http://arxiv.org/abs/1602.06254>.

A. Vassallo and P. H. Ip. On the conceptual issues surrounding the notion of relational Bohmian dynamics. *Foundations of Physics*, 46(8):943–972, 2016. <http://arxiv.org/abs/1602.02468>.

A. Vassallo. Can Bohmian mechanics be made background independent? *Studies in History and Philosophy of Modern Physics*, 52:242–250, 2015. <http://arxiv.org/abs/1509.00734>.

A. Vassallo and M. Esfeld. On the importance of interpretation in quantum physics: A reply to Elise Crull. *Foundations of Physics*, 45(12):1533–1536, 2015. <http://arxiv.org/abs/1504.02642>.

A. Vassallo. General covariance, diffeomorphism invariance, and background independence in 5 dimensions. In T. Bigaj and C. Wüthrich, editors, *Metaphysics in Contemporary Physics*, pages 237–258. Brill/Rodopi, 2015. <http://arxiv.org/abs/1410.1043>.

A. Vassallo and M. Esfeld. A proposal for a Bohmian ontology of quantum gravity. *Foundations of Physics*, 44(1):1–18, 2014. <http://arxiv.org/abs/1308.6291>.

M. Esfeld and A. Vassallo. From quantum gravity to classical phenomena. In T. Sauer and A. Wüthrich, editors, *New Vistas on Old Problems: Recent Approaches to the Foundations of Quantum Mechanics*, volume 3 of *Proceedings*, pages 35–57. Max Planck Research Library for the History and Development of Knowledge, 2013. <http://www.edition-open-access.de/proceedings/3/3/index.html>.

Grants, Fellowships, and Awards

2020–2023 **OPUS research grant**, *Narodowe Centrum Nauki*, Poland.

2020–2025 **Stimulus research grant (principal researcher level)**, *Fundação para a Ciência e Tecnologia*, Portugal.

2017–2019 **Juan de la Cierva-incorporación fellowship**, *Ministerio de Ciencia, Innovación y Universidades*, Spain.

2017–2019 **SONATA research grant**, *Narodowe Centrum Nauki*, Poland.

2013–2016 **Post-doctoral fellowship**, *Swiss National Science Foundation*.

2014–2015 **Research grant**, *Unil/EPFL Collaborative Research on Science and Society*.

2012 **Research subsidy**, *Fondation pour l'Université de Lausanne*.

2010–2011 **Sciex-NMS^{ch} fellowship**, *Rectors' Conference of the Swiss Universities*.

Notes: Qualified for the second stage of evaluation in the 2018 call of the ERC starting grant.

Stimulus grant turned down due to incompatibility with OPUS grant.

SONATA grant turned down due to incompatibility with Juan de la Cierva fellowship.

Recent Talks

09/07/2021 **Time and change in pure shape dynamics**, *BSPS Annual Conference (online)*.

18/09/2020 **Hybrid explanations in general relativity and quantum gravity**, *Ernst Mach Workshop*, University of Prague (online).

21/01/2020 **Does general relativity highlight necessary connections in nature?**, *philosophy seminar*, Warsaw University of Technology.

- 12/11/2019 **Towards an ontology of quantum gravity**, *philosophy seminar*, Warsaw University of Technology.
- 27/09/2019 **Some critical remarks on relational quantum mechanics**, *IV POND conference: "Science and objectivity"*, Barcelona.
- 30/05/2019 **On the nomic status of the Einstein field equations**, *workshop "What does mathematics tell us about the physical world?"*, Prague.
- 25/02/2019 **Dependence relations in general relativity**, *FraMEPhys Colloquium*, Birmingham.
- 29/11/2018 **A primitive ontology for quantum spacetime**, *workshop "New topics in quantum foundations"*, Lausanne.
- 28/11/2018 **A primitive ontology for quantum spacetime**, *conference "The origins and evolution of space-time"*, Vatican City.
- 28/07/2018 **How Humean is Bohumianism?**, *conference "Humeanisms"*, Budapest, (with T. Bigaj).
- 16/03/2018 **Can grounding help to solve the hole problem in general relativity?**, *conference "The logic and metaphysics of ground"*, Glasgow.
- 16/01/2018 **Comment on "Constitutive principles, analyticity and explanation in spacetime theories"**, *workshop on explanation and realism in physical and biomedical sciences*, Barcelona.
- 14/09/2017 **Grounding as metaphysical causation in spacetime physics**, *conference "Thinking about space and time"*, Bern.
- 19/07/2017 **Relationalism motivated by a parsimonious ontology of matter**, *5th International summer school in philosophy of physics*, Saig, (with M. Esfeld).
- 28/06/2017 **Grounding as metaphysical causation in spacetime physics**, *3rd international conference "Philosophy of quantum gravity"*, Geneva.
- 23/06/2017 **Grounding as metaphysical causation in spacetime physics**, *Triennial international conference of the Italian society for logic and philosophy of science*, Bologna.

Teaching

- 2017–2019 **Foundations of philosophy of science.**
Master in Analytic Philosophy, Universitat de Barcelona, Facultat de Filosofia, Barcelona, Spain.
- 2016–2017 **Philosophical problems in physics.**
I year Philosophy Studies in English, Uniwersytet Warszawski, Instytut Filozofii, Warsaw, Poland.
- 2016–2017 **Ontology.**
II year Philosophy Studies in English, Uniwersytet Warszawski, Instytut Filozofii, Warsaw, Poland.
- 2016–2017 **Logic.**
I year Philosophy Studies in English, Uniwersytet Warszawski, Instytut Filozofii, Warsaw, Poland.
- 2016–2017 **The metaphysics of laws of nature.**
Graduate seminar, Uniwersytet Warszawski, Instytut Filozofii, Warsaw, Poland.

- 2013–2016 **Philosophical perspectives on the exact sciences and their history.**
SHS Master Projects, École Polytechnique Fédérale de Lausanne, Lausanne, Switzerland.
- 2012–2013 **Structures in mathematics, physics and philosophy.**
Graduate seminar, Uniwersytet Warszawski, Instytut Filozofii, Warsaw, Poland.
- 2012–2013 **Philosophical foundations of special sciences.**
I year Philosophy Studies in English, Uniwersytet Warszawski, Instytut Filozofii, Warsaw, Poland.
- 2009–2010 **Analytic philosophy.**
III year Philosophy Studies in English, Uniwersytet Warszawski, Instytut Filozofii, Warsaw, Poland.

Note: Teaching portfolio available upon request

Miscellaneous

- 2021– Member of the British Society for the Philosophy of Science, UK.
- 2020– Member of the International Center for Formal Ontology, Poland.
- 2019– Member of the “Philosophy of Science around the Mediterranean” (POND) network.
- 2017–2019 Senior member of LOGOS Research Group in Analytic Philosophy, Spain.
- 2017–2019 Senior member of the Barcelona Institute of Analytic Philosophy, Spain.
Expert reviewer for the Austrian Science Fund (FWF) and the Research Grants Council (RGC) of Hong Kong.
Reviewer for *Foundations of Physics*, *Studies in History and Philosophy of Modern Physics*, *Studies in History and Philosophy of Science*, *British Journal for the Philosophy of Science*, *Erkenntnis*, *Synthese*, *European Journal for Philosophy of Science*, *Foundations of Science*, *Journal of the American Philosophical Association*, *Philosophia Scientiae*, *Kairos*, *Filozofia Nauki*, *Theoria*, *Philosophical Problems in Science*.
- 2014–2017 Discussion group organizer and leader for Saig summer school in philosophy of physics.
Academia: <https://pw.academia.edu/AntonioVassallo>.
Research Gate: www.researchgate.net/profile/Antonio_Vassallo2.
PhilPeople: <https://philpeople.org/profiles/antonio-vassallo>.
ORCID ID: orcid.org/0000-0002-1846-5362.
Publons: publons.com/author/1129734/antonio-vassallo.

Languages

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| Italian | Native | French | Working (B2) |
| English | Fluent (C2) | Polish | Basic (A2) |
| Spanish | Working (B2) | | |

Computer skills

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| MS Windows OS (Excellent) | MacOS (Excellent) |
| MS Office Suite (Excellent) | LaTeX (Excellent) |

Libre Office/Open Office Suites
(Excellent)

WordPress CMS (good)

Wolfram Mathematica (Basic)

iMovie (good)