

Aaron Collavini

Curriculum Vitae

(last update: June 2026)

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Research Interests

- **AOS**: Foundations of Physics, Theories of Gravity, Philosophy of Space-Time
- **AOC**: Theoretical Physics, Metaphysics of Physics, Philosophy of Physics

Current Position

- 2025 – present **PhD candidate in Philosophy**, Department of Philosophy, University of Geneva, Geneva (SWI)
- 2025 – present **PhD candidate in Physics**, Department of Mathematics, Computer Science, and Physics, University of Udine, Udine (ITA)
- 2025 – present **INFN associate**, National Institute of Nuclear Physics, Section of Trieste (ITA)
- 2025 – present **Geneva Symmetry Group – Member**, Department of Philosophy, University of Geneva, Geneva (SWI)
- 2026 – present **Philosophy and Foundations of Physics Seminar – Co-founder**, Department of Mathematics, Computer Science, and Physics, University of Udine, Udine (ITA)

Education

- Jun 2026 **Visiting PhD Student**, Department of Logic & Philosophy of Science, University of California – Irvine, Irvine (USA)
Sponsor: James Owen Weatherall
- 2023 – 2025 **M.A. in Philosophy**, University of Italian Switzerland, Lugano (SWI)
Thesis: “Coordinates, symmetries and space-times”
Supervisor: T. Maudlin (New York University)
Final Mark: 9.6/10 *summa cum laude*
- 2019 – 2022 **M.Sc. in Physics**, University of Trieste, Trieste (ITA)
Thesis: “Emergent gravity: a paradigm”
Supervisors: S. Ansoldi (University of Udine) & S. Sonego (University of Udine)
Final Mark: 110/110 *cum laude*
- 2016 – 2019 **B.Sc. in Physics**, University of Trieste, Trieste (ITA)
Thesis: “Mass determination in galaxy clusters”
Supervisors: S. Borgani (University of Trieste) & E. Rasia (University of Trieste)
Final Mark: 109/110

Publications (* indicates contribution already agreed with the journal)

- In prep “Torsion, Gravity & Inertia”
- In prep “From the Quantum of Light to the Photon: The Evolution of an Open Concept”, with F. Parmigiani, V. Bologna, F. Longo, S. Ansoldi
- In prep “Assessing Supersubstantivalism in Contemporary Physics”, with L. Gasparinetti, *CUP**
- In prep “Restoring the dichotomy in cosmology and analogue gravity”, *CUP**

- 2026 “**The hole argument: indeterminism and the ontological status of space-time**”, *APhEx*
- 2025 “**On the viability of higher-order theories**”, with S. Ansoldi, *Transactions A of the Royal Philosophical Society*
- 2025 “**Ontologies for Quantum Field Theory**”, with L. Gasparinetti, *Philosophy Compass*
- 2025 “**Particelle in fisica moderna**” (“Particles in Modern Physics”), with L. Gasparinetti, *APhEx*

Scholarships, Grants and Awards

- 2025 –2028 **PhD Scholarship**, University of Udine (ITA)
Scholarship value: EUR 48.729
- 2026 **Award for Academic merits (M.A.)**, Banca 360 FVG (ITA)
Award value: EUR 1000
- 2026 **Award for Academic merits (M.A.)**, Banca di Credito Cooperativo del Friuli (ITA)
Award value: EUR 300
- 2025 **Conference Grant**, for presenting at the Annual Conference of the Philosophy of Physics Group of the German Physical Society, Bonn (GER)
Grant value: EUR 400
- 2023 **Scholarship "Contributo Sociale" (first semester)**, University of Italian Switzerland (SWI)
Scholarship value: CHF 1500
- 2022 **Award for Academic merits (M.Sc.)**, Banca 360 FVG (ITA)
Award value: EUR 1000
- 2022 **Award for Academic merits (M.Sc.)**, Banca di Credito Cooperativo del Friuli (ITA)
Award value: EUR 300
- 2020 **Award for Academic merits (B.Sc.)**, Banca di Credito Cooperativo del Friuli (ITA)
Award value: EUR 300

Guest Lectures

- 2025 **Ontologies for Quantum Field Theory**, *Course of History and Philosophy of QFT*, Fall semester, M.A. in Philosophy and M.Sc. in Theoretical Physics, Utrecht University (NLD)

Administrative Jobs

- Oct-Mar 24/25 **Student assistant**, Institute of Philosophy, Lugano (SWI)
Managing accommodation and travel reimbursement of guest professors for the M.A./B.A. courses in Philosophy, and managing social media for the Institute

Talks (* indicates refereed presentation/ † indicates online presentation)/° indicates invitation)

- 2026
- (6) *Conceptual Foundations of Gravity with Torsion*, Foundations of Physics 2026, University of California – Irvine (USA)*
 - (5) *Foundations of torsion theories of gravity*, Irvine-London-Munich-PoliMi-Salzburg network in philosophy and foundations of physics, Ludwig-Maximilians-Universität München (GER)*
 - (4) *The path of paths in torsion theories of gravity*, Seminar of the Geneva Symmetry Group, University of Geneva (SWI)
 - (3) *On the viability of primitive ontology for cosmological theories*, UPAC Colloquium – Work-in-progress Session, Utrecht University (NLD)†°
 - (2) *On the viability of primitive ontology for cosmological theories*, Online Workshop: Philosophical and Technological Reflections on Contemporary Cosmology, Universidad Nacional Autónoma de México (MEX)*†

2025

- (1) *Unvealing Biases in Physics*, with L. Gasparinetti, Annual conference of the Philosophy of Physics Group of the German Physical Society, University of Bonn (GER)*

Professional Developments – Summer Schools

2025 **The Aim and Structure of a Cosmological Theory**, organized by the University of Italian Switzerland (SWI), with C. Smeenk and J.O Weatherall

Languages

- Italian: Native ◦ English: Advanced ◦ Spanish: Beginner

References (upon request)