

Aaron Collavini

Curriculum Vitae

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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)

Education

- 2025 – present **PhD in Philosophy (double degree)**, University of Geneva, Geneva (SWI)
Thesis: “Foundations of torsion theories of gravity”
Supervisor: C. Wüthrich (University of Geneva)
- 2025 – present **PhD in Physics (double degree)**, University of Udine, Udine (ITA)
Thesis: “Foundations of torsion theories of gravity”
Supervisors: S. Ansoldi (University of Udine) & D. Pranzetti (University of Udine)
- 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 “From the Quantum of Light to the Photon: The Evolution of an Open Concept”, with F. Parmigiani
- In prep “Assessing Supersubstantivalism in Contemporary Cosmology: the Case of Superfluid Dark Matter”, with L. Gasparinetti, *CUP**
- In prep “On the viability of primitive ontology for cosmological theories”, with C. Mariani, *CUP**
- Und rev “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”, (in Italian: “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
- 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 (Master)**, Banca 360 FVG (ITA)
Award value: EUR 900
- 2022 **Award for Academic merits (Master)**, Banca di Credito Cooperativo del Friuli (ITA)
Award value: EUR 300
- 2020 **Award for Academic merits (Bachelor)**, 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 (NL)

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)

- 2026
 (3) *Foundations of gravitational theories with torsion*, Seminar of the Geneva Symmetry Group, University of Geneva (SWI)
 (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)