Filippo Fecit

Born on March 19th, 1998

Genova – ITALY

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Linkedin Profile

Scientific Interests

- Theoretical and Particle Physics
- Mathematical Physics
- Gravitational Physics

Languages

Italian	• Mother tongue
English	• Proficient
German	• Conversational
	Goethe-Zertifikat B1 (2016)

Tools

LaTex	●●●●●
Mathematica	●●●●○
Python	●●●○○
C++	●●●○○
Matlab	●●●○○

Education

Nov. 2022 – In progress. PhD in Physics XXXVIII Cycle

University of Bologna - Alma Mater Studiorum

Sep. 2020 – Jun. 2022. Master Degree in Physics

University of Genova

Mark: 110/110 cum laude

Thesis Title: Physical Consequences of a Non-Flat Spacetime for Topological States of Matter

Supervisor: Prof. Nicola Maggiore

Sep. 2017 – Jul. 2020. Bachelor Degree in Physics

University of Genova

Mark: 109 /110

Thesis Title: Mössbauer Effect. Treatment with the tools of Statistical Quantum Mechanics

Sep. 2012 – Jun. 2017. High School Diploma

Liceo Scientifico "G.D.Cassini" bilingual (English-German)

Mark: 100/100

Publications

- *Topological BF description of 2D accelerated chiral edge modes*
  Authors: E. Bertolini, F. Fecit, N. Maggiore
  Symmetry **14** (2022) no.4, 675, doi: 10.3390/sym14040675
  [arXiv:2203.13520 [hep-th]].
- *Six-dimensional one-loop divergences in quantum gravity from the $\mathcal{N} = 4$ spinning particle*
  Authors: F. Bastianelli, F. Comberiati, F. Fecit, F. Ori
  JHEP **10** (2023) 152, doi:10.1007/JHEP10(2023)152
  [arXiv:2307.09353 [hep-th]].
- *Massive gravity from a first-quantized perspective*
  Author: F. Fecit
  [arXiv:2312.15428 [hep-th]].
- *Worldline path integral for the massive graviton*
  Author: F. Fecit
  [arXiv:2402.13766 [hep-th]].

Talks and Seminars

Seminar: *Physical consequences of a non-flat spacetime for topological states of matter.*
February 14, 2022 - TU Wien, Vienna, Austria.

Seminar: *Massive Gravity in the Worldline Formalism.*
March 18, 2024 - Worldline Meetings (online).

Experience

Oct. 2021 – Jun. 2022. **Teaching Assistantship**

University of Genova
Aimed at first-year engineering students, in English. Subjects: Mathematics and Physics. Courses: Mathematics, Algebra, Physics I and Physics II for the Maritime Science and Technology degree.

Sep. 2023 – Jun. 2024. **Teaching Assistantship**

University of Bologna
Aimed at first-year physics students. Course: Calculus.

Sep. 2021 – Feb. 2022. **Erasmus Fellowship**

Technische Universitat Wien
At TU I passed the following exams:

- *Geometry, Topology and Physics I* (26/01/2022) - excellent (1) (3 ECTS)
- *Quantum information theory* (28/01/2022) - excellent (1) (3 ECTS)
- *Symmetries and QFT I* (09/02/2022) - excellent (1) (3 ECTS)
- *Path integrals in quantum mechanics and quantum field theory* (21/02/2022) - excellent (1) (3 ECTS)
- *Journal Club Mathematical Physics 1* (22/02/2022) - excellent (1) (2 ECTS)

Organisational and Communication skills

Nov. 2022 – In progress. **PhD Student Representative**

Knowledge of the academic bureaucracy at the University of Bologna.

Sep. 2018 – Jul. 2022. **Student Representative**

Experience in group work and organizing events; knowledge of academic bureaucracy at the University of Genova.

Mar. 2019 – Mar. 2021. **AISF Genova** - Associazione Italiana Studenti di Fisica

Experience in organizing events and social media managing.

List of Exams (with grades) taken during Master Degree

- *Theoretical Physics* (11/01/2021) - 30/30 (8 ECTS)
- *Matter Physics 2* (19/01/2021) - 30/30 cum laude (8 ECTS)
- *Nuclear and Particle Physics and Astrophysics 2* (01/02/2021) - 30/30 cum laude (8 ECTS)
- *General Relativity* (17/02/2021) - 30/30 cum laude (6 ECTS)
- *Statistical Physics* (04/06/2021) - 30/30 cum laude (6 ECTS)
- *Fields Theory* (25/06/2021) - 30/30 (6 ECTS)
- *Quantum Electrodynamics* (06/07/2021) - 30/30 cum laude (6 ECTS)
- *Foundations of Astrophysics and Cosmology* (26/07/2021) - 30/30 cum laude (6 ECTS)
- *Experimental Astrophysics* (16/09/2021) - 30/30 cum laude (6 ECTS)

Work experience

Feb. 2018 – Mar. 2023. **Community manager**

Tatabox Soc. Coop. Sociale · Part-time

I have been a member and part-time employee of Tatabox Cooperativa Sociale. My responsibilities included managing the reception of customers, presence in the spaces, the cash desk and the sales of the shop. I dealt with customer relations, which are mainly university students, and engaged them by proposing content and activities through our communication channels.

Last updated: March, 2024. Signature: Filippo Fecit