Davide Rolino - Curriculum Vitae

Ph.D. Student in Theoretical Physics

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Personal Profile

I am a young researcher in the field of quantum foundations. In my Ph.D., I am using the framework of Operational Probabilistic Theories to study and try to comprehend quantum mechanics and tackle the deepest question of modern physics. In addition to foundational phenomena I am also interested in the fields of quantum computation and cryptography, cellular automata and that of causal inference.

Professional experience and education

Oct 2022

Ph.D. in Physics

Present

University of Pavia (IT)

- Advisors: Prof. Paolo Perinotti and Dr. Alessandro Tosini
- · Specialization in Theoretical Physics, in particular Foundations of Quantum Mechanics
- Working with the framework of Operational Probabilistic Theories
- Studying classical theories with quantum features

Oct 2020

Master degree in Physical Sciences

Sept 2022

Summa cum Laude, University of Pavia (IT)

- M.Sc. thesis' title: "A classical theory with incompatible measurements"
- Supervisors: Prof. Paolo Perinotti, Dr. Alessandro Tosini and Dr. Marco Erba
- · Definition and characterization of the class of Minimal Operational Probabilistic Theories
- · Construction of Minimal Bi-local Classical Theory: a classical theory exhibiting incompatible instruments

Oct 2017

Bachelor Degree in Physics

Sept 2020

Summa cum Laude, University of Pavia (IT)

Publications

Pre-prints

■ Erba, Marco, Perinotti, Paolo, Rolino, Davide, and Tosini, Alessandro. *Measurement incompatibility is strictly stronger than disturbance*. 2023. arXiv: 2305.16931 [quant-ph]

Events and presentations

Posters

24 - 28 Jul Theory of Quantum Computation, Communication and Cryptography (TQC) 2023

2023 *Aveiro (PT)*

Poster: Disturbance does not imply complementarity

Short visits

02 - 05 Jul International Centre for Theory of Quantum Technologies (ICTQT)

2023 Uniwersytet Gdański, Gdańsk (PL)

Seminar: Measurement incompatibility vs Irreversibility

Attended schools and workshops

Schools

7 - 19 Aug
2023
Picturing Quantum Weirdness
University of Gdańsk, Gdańsk (PL)

Workshops

17 - 21 Apr Causal Inference & Quantum Foundations Workshop 2023 Perimeter Institute for Theoretical Physics, Waterloo (CA)

Honors and awards

2017 - 2020 Winner for 4 consecutive years of the scholarship offered by Vitale Barberis Canonico S.p.A

Memberships

Mar 2023 INFN, Gruppo IV, Sezione di Pavia, via Bassi 6, 27100 Pavia, Italy

Present

Languages

Italian Native

English Professional Working Proficiency - First Certificate (FCE) B2 (2016)

Computer related Knowledge

Program-

ming Bash, C/C++, Python (PyTorch, TensorFlow and Keras libraries), TeX, LTEX, SQL

languages

Office suite, AutoCAD, Krita, Photoshop, Blender, Canva **Software**

General

Machine learning techniques (FNNs, CNNs, RNNs, MPNNs, GCNs, GANs, Autoencoders, knowledge

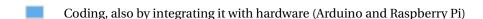
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Extracurricular activities

Five years of drama class (2012 - 2017). It improved my public speaking skills

Partecipated at several Coding Gym events to improve my technical and communicating skills in the area of programming

Personal interests





Sports, mainly working out and skiing



Reading

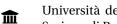


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References

Prof. Paolo Perinotti

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Dr. Alessandro Tosini

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Dr. Marco Erba



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I, Davide Rolino, born in Biella (BI) on 03/09/1998, resident in via Iside Viana n.5/G, Candelo (BI), declare under penalty of perjury subject to all applicable laws (art.76 D.P.R. 28/12/2000 n.445), that the information provided is true and correct to the best of my knowledge, information and belief. This document is authorized to personal data treatment, according to Art. 7 of Legislative Decree n. 196/2003.

Pavia, 23/08/2023

Davide Rolino