



Personal info

○ Pronouns : he / him

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📍 Brussels

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Skills

○ Python

○ ROOT

○ \LaTeX

○ Wolfram

Languages

🇫🇷 French

🇬🇧 English

Antoine Dierckx de Casterlé

I am a 25-year-old physics student in my second year of a master's at the Université Libre de Bruxelles.

I have a strong interest in high-energy physics, quantum gravity, and cosmology.

As part of my master's thesis, I am investigating the role of Primordial Black Holes within the framework of Loop Quantum Gravity.

I value both analytical, "pen-and-paper" approaches and computational simulations as complementary tools for tackling complex questions.

I aspire to continue conducting research in these fascinating fields, which I find deeply inspiring.

Education

Bachelor

@ Université Libre de Bruxelles

September 2020- June 2023

Bachelor in Physics - with honors

Master

@ Université Libre de Bruxelles

September 2023- present

Master in Physics - Research focus

Internship Experience

Internship @ Inter-University Institute For High Energies

January 2023- April 2023

Study of the production of the scalar boson in proton-proton collision at $s = \sqrt{13} \text{ TeV}$ in CMS data.

Internship @ CERN

July 2024 - August 2024

Vector Boson Fusion Tagging with Graph Neural Networks

Study of the Stability of Tagging Algorithms Applied to the Analysis of Higgs to Invisible Decays.

Research Experience

Visiting Graduate Student @ Western University, Canada

September 2024 - present

Co-supervised Master's thesis on the phenomenology of primordial black holes (PBH) in the framework of Loop Quantum Gravity (LQG). Supervised by Francesca Vidotto (Western University) and Sébastien Clesse (Université Libre de Bruxelles).

Hobbies / interests

- Quantum Field Theory, High Energy Physics
- Physics outreach
- Cosmology and Quantum Gravity