Theoretical Physicist

Bert Depoorter

+32 476 50 03 40
bert@depoorter.name
www.linkedin.com/in/bert-depoorter

Theoretical / computational physicist (MSc.) aspiring to become a professional researcher. Mainly enthousiastic about gravitational wave astrophysics, data analysis and simulations. Proficient in python, background in many aspects of modern theoretical physics.

Demonstrated ability to cooperate at both university level as via extracurricular engagement at local scouts group, where I fulfilled a managerial function for 3 years. This allowed me to develop many valuable skills in cooperation, communication and planning.

Other interests include data-driven solutions to the climate crisis, history, geography literature and many others.

Research Experience

Master Thesis *Institute of Theoretical Physics, Leuven* — 09/2024 - 06/2025

EMRI simulations for LISA

Content

- coding: 70% development / 30% Theory
- Using GPU-based software for generation of waveforms for EMRI systems, investigating the possibilities for detection of these sources in LISA-band

Tech Stack Python, GPU-HPC computing, Numerical methods for solving complex problems

Experience

Teaching Assistant *KU Leuven* — 2024

- Student job as TA for 1st bachelor course on biophysics for students of biology.
  Course covers basic physics at university level.
- Duties: Guiding students through exercise sessions. Explaining concepts and exercises.

Education

MSc. of Physics *KU Leuven* — 09/2023 - 06/2025

- Grade: currently Magna Cum Laude (80%)
- Profile: Theoretical Physics with emphasis on computational courses
- Main courses: General Relativity, (Advanced) Quantum Field Theory, Data Analysis, Gravitational Waves, Monte Carlo Methods
- Master thesis: EMRI simulations for LISA. Supervised by prof. Thomas Hertog, Dr. Henri Inschauspé and Dr. Jonathan Menu

Bachelor of Physics *KU Leuven* **2020-2023**

- Grade: Cum Laude (76%)
- Minor in Mathematics
- Bachelor thesis:
  - I. Anisotropies of the Stochastic Gravitational Wave Background in LISA.
    Supervised by Simon Maenaut & Milan Wils
  - II. Computational Study of Atom-Laser interactions in the ^{87}Sr ion.
    Supervised by prof. Ruben De Groote & Anaïs Dorne
- Peer-assisted learning (PAL) for the course on quantum mechanics

High School *Latin-Mathematics* **06/2020**

- Graduated Magna Cum Laude, 2nd of my graduation class
- Voluntary took extra course on German and physics
- Received prize for student best personifying educational project of school (kvo-prijs)

Extracurricular Activities

Animator *Scoust Westmalle* **2020-2025**

- Organization of outdoor activities on a weekly basis
- Co-organising a youth camp of 10 days for approximately 140 children
- Helping with organisation of local scouts group

Group Leadership *Scouts Westmalle* **2021-2024**

- Head responsible for a youth movement (scouts). Duties include preparing and chairing meetings, organising fundraising events that attracted up to 500 attendees and keeping track of finances
- Ensuring weekly activities of local scouts group are well-organized, supporting other animators
- Skills obtained: planning, communication and cooperation.

Languages

- Dutch: Native language
- English: Full professional proficiency
- French: Basic professional proficiency
- German: Basic notions