



Thibeau Wouters

curriculum vitae

Education

- 2022 – now **Advanced Master of Artificial Intelligence**, *KU Leuven*.
- 2020 – 2022 **Master of Theoretical Physics (minor: nuclear physics)**, *KU Leuven*, 91.41% *summa cum laude with congratulations of the Board of Examiners*.
- 2017–2020 **Bachelor of Physics**, *KU Leuven*, 74.42% *cum laude*.
- 2017–2020 **Bachelor of Mathematics**, *KU Leuven*, 73.92% *cum laude*.
- 2011–2017 **Latin-mathematics**, *Sint-Ursula-Insituut*, OLV Waver.

Projects & theses

- title *Advancing gravitational wave simulations with machine learning*
supervisors Tjonnie Li, Johan Suykens
summary AI master thesis investigating machine learning techniques to speed up existing GRMHD simulations of neutron stars. (work in progress)
- title *Holographic RG flows in gauged supergravity*
supervisor Nikolay Bobev
summary Physics master thesis studying an application of the AdS/CFT correspondence in gauged supergravity theories. ([PDF](#)) ([presentation](#))
- title *Supersymmetric black holes and the black hole attractor mechanism*
supervisor Antoine Van Proeyen
summary Exam report on supersymmetric black holes and black hole attractors as solutions to supergravity theories. ([PDF](#)) ([presentation](#))
- title *Spatiotemporal coordination of the cell division cycle*
supervisors Lendert Gelens, Daniel Ruiz Reynés
summary Research internship investigating wave phenomena in cell cycle oscillations via HPC simulations and dynamical systems theory. ([PDF](#)) ([presentation](#))
- title *On Quantum Harmonic Oscillators, Modularity and Algebraic Number Theory*
supervisor Valentin Reys
summary Physics bachelor thesis. ([PDF](#))
- title *On Algebraic Geometry and the 27 Lines on Smooth Cubic Surfaces in $\mathbb{C}P^3$*
supervisor Feng Hao
summary Mathematics bachelor thesis. ([PDF](#))

Leuven – Belgium

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Experience

Vocational

- 2022 – now **Tutor, Spring-stof** ([URL](#)).
- Tutoring groups of cognitively strong children and teenagers (age 10 – 18)
 - Developing original, tailor-made educational material
- 2021 – now **Tutor, Slaagsleutels** ([URL](#)).
- Private tutoring of high school and university students.
 - Preparing students for the entry exams of medicine and dentistry.
- 2020 – 2022 **Teaching Assistant and Student Developer, KU Leuven** ([URL](#)).
- Revising and expanding the *General Physics III* course material, including recording screen-casts and lab videos (2020).
 - Expanding the mathematics (2020) and chemistry (2022) summer school material for incoming bachelor students in an online \LaTeX -environment.
 - Teaching exercise classes to first year bachelor students for the courses *General Physics I*, *Mathematical proofs and reasoning* (2020) and *Biophysics* (2021).
 - Teaching the mathematics and physics exercise sessions of the summer school (2022).
- 2019 – now **Tutor, Student** ([URL](#)).
- Private tutoring of high school and university students.
- 2015 – 2019 **Student employee, Delhaize, Keerbergen**.
- All-round employee, including cashier and centre store.

Miscellaneous

- 2022 **Volunteer, Mobile School**.
- Organising and helping at a walk to raise money to help street kids around the world.
- 2022 – 2023 **Student representative, KU Leuven**.
- Member of committee responsible for the quality of education of the master AI program.
- 2021 **Completed teaching assistant training, KU Leuven**.
- 2020 **Peer Assisted Learning tutor, KU Leuven**.
- PAL tutor for the *Quantum Mechanics* physics course.
- 2019 – 2020 **Volunteer, Pangaea**.
- Welcoming new students and organizing events in international student residence.

Languages & Computer skills

Dutch ● ● ● ● ●
English ● ● ● ● ○
French ● ● ○ ○ ○

\LaTeX ● ● ● ● ○
Python ● ● ● ● ○
Java ● ● ● ○ ○

Awards

- *KU Leuven Physics prize 2022*: highest grade among physics master students.
- 2nd place *Flemish Astronomy Olympiad 2017* ([see article](#)).
- 1st place *Flemish Astronomy Olympiad 2016* ([see article](#)).

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