



# Thibeau Wouters

*curriculum vitae*

## Education

- 2022 – now **Master of Artificial Intelligence**, *KU Leuven*.
- 2020 – 2022 **Master of Theoretical 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*, O.-L.-V.-Waver, *cum Laude*.

## Projects & theses

- title *Holographic RG flows in gauged supergravity*  
supervisor Nikolay Bobev  
summary Master thesis of physics studying the applications of AdS/CFT in four-dimensional 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 the behaviour of spiral wave and target wave phenomena via simulations and dynamical systems theory. ([PDF](#)) ([presentation](#))
- title *On Quantum Harmonic Oscillators, Modularity and Algebraic Number Theory*  
supervisor Valentin Reys  
summary Physics bachelor thesis on modular forms and their appearance in theoretical physics, such as quantum mechanics, quantum field theory and conformal field theory. ([PDF](#))
- title *On Algebraic Geometry and the 27 Lines on Smooth Cubic Surfaces in  $\mathbb{CP}^3$*   
supervisor Feng Hao

*Leuven – Belgium*

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summary Mathematics bachelor thesis on an introduction to algebraic geometry and proof that every smooth cubic surface in  $\mathbb{CP}^3$  contains 27 lines. ([PDF](#))

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## Experience

### Vocational

- 2022 – now **Tutor**, *Spring-stof* ([URL](#)).  
Tutoring group sessions of cognitively strong children and teenagers (age 5 – 18) with tailor-made education, and developing original course material.
- 2021 – now **Tutor**, *Slaagsleutels* ([URL](#)).  
Tutoring one-on-one lessons, from high school to university students, and 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 (2020). Expanding the mathematics (2020) and chemistry (2022) summer school material for new bachelor students in an online  $\text{\LaTeX}$ -environment. Teaching exercise classes to first year bachelor students for the courses *General Physics I* and *Mathematical proofs and reasoning* (2020) and *Biophysics* (2021). Assisting the mathematics and physics exercise sessions of the summer school (2022).
- 2019 – now **Tutor**, *Student* ([URL](#)).  
Tutoring one-on-one physics and mathematics lessons of various levels, from high school to university students.
- 2015 – 2019 **Student employee**, *Delhaize*, Keerbergen.  
All-round employee, including cashier and centre store.

### Miscellaneous

- 2021 **Completed teaching assistant training**, *KU Leuven*.  
Completed the teaching assistant training at the Faculty of Science of KU Leuven.
- 2020 **Peer Assisted Learning tutor**, *KU Leuven*.  
PAL tutor for the *Quantum Mechanics* physics course.
- 2019 – 2020 **Volunteer**, *Pangaea & Home Vesalius*.  
Welcoming new international students and organizing events in student residence.

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## Languages & Computer skills

Dutch	● ● ● ● ●	$\text{\LaTeX}$	● ● ● ● ○
English	● ● ● ● ○	Python	● ● ● ● ○
French	● ● ○ ○ ○	Mathematica	● ● ○ ○ ○

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## Awards

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

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