

# AMANDA MATTHES

Website [amanda-matthes.github.io](https://amanda-matthes.github.io)

E-mail [amanda.matthes@gmail.com](mailto:amanda.matthes@gmail.com)



## Education

10/2019 - 09/2023: **University of Oxford** - Oxford, UK

PhD candidate at the EPSRC Centre for Doctoral Training in Autonomous Intelligent Machines and Systems (AIMS CDT) at Keble College

- Course topics included: signal processing, optimisation, online learning and multi-armed bandits, reinforcement learning, AI safety and governance, embedded systems, deep learning, control theory, computer vision, privacy and security, IOT and game theory
- 10-week project with the Satellite Applications Catapult on space debris removal
- Currently working on a low-power GPS receiver for wildlife tracking
- Publicity Officer for the Oxford University Physics Society (2020-2021)

10/2015 - 07/2019: **University of Heidelberg** - Heidelberg, Germany

BSc in physics with emphasis on computer science - Grade: 1.3<sup>1</sup>

- BSc thesis topic: Exploiting Instruction-Level Parallelism - Hardware Structures for a Superscalar Out-of-Order Processor
- Course topics included: linear algebra, calculus, machine learning, hardware design, technical computer science, applied computer science, algorithms and data structures, mechanics, electrodynamics, special relativity, quantum physics and particle physics
- 24 credits  $\approx$  600-700h of laboratory work (executing and documenting over 40 experiments)

09/2017 - 06/2018: **University of Manchester** - Manchester, UK

Erasmus+ year

- Course topics included: quantum computing, applications of quantum physics, philosophy of physics, quantum field theory, lagrangian dynamics, solid-state physics, astrophysics and cosmology, exoplanets and object-oriented programming in C++
- Active member of the Systematic Martial Arts Society and the historical reenactment society Historia Normannis

09/2010 - 07/2015: **St.-Anna-Gymnasium** - Munich, Germany

Abitur (German A-levels) - Grade: 1.4

- Final exam subjects: Maths, Physics, English, German, Economics and Law
- Seminar thesis on “The idea of light as a wave in the 19th century”

<sup>1</sup>German grades work on a scale of 1.0 to 5.0, with 1.0 being the best

- Awarded the DPG-Abiturpreis by the German Physical Society for outstanding performance in physics

09/2013 - 07/2014: **Technical University of Munich (TUM)** - Munich, Germany

Early studies in computer science

- Attended lectures and a seminar as part of a program for motivated students that have not yet finished school

## Additional Experience

07/2019 - 08/2019: **CERN** - Geneva, Switzerland

Summer Intern at the CERN Data Centre

I was involved in writing Python scripts to automate asset management. I also took courses on particle physics and accelerator engineering.

06/2019: **ISC 2019** - Frankfurt, Germany

Student Volunteer at the ISC 2019

03/2019 - 05/2019: **Institute for Computer Engineering (ZITI)** - Heidelberg, Germany

Student research assistant for the Computer Architecture Group

10/2018 - 03/2019: **University of Heidelberg** - Heidelberg, Germany

Tutor for the course “Introduction to technical computer science”

05/2017 - 08/2017: **Google**

Participant in the exclusive development program CodeU for high potential students

Included weekly exercises reviewed by a Google engineer, mock interviews and a two-day in-person summit in London.

01/2011 - 08/2013: **St.-Anna-Gymnasium** - Munich, Germany

School “paramedic”

This involved taking care of minor injuries and illnesses, scheduling and attending training and making sure that our cabinet was always stocked. I was team leader in 2012/2013.

## Skills

Language Skills	German: Native proficiency
	English: Bilingual proficiency
	French: Elementary proficiency
Computer Skills	Data analysis with Python
	Hardware design with Verilog
	Application programming with C++
	Basic knowledge of web programming