

EDUCATION

MSc Computational Physics of Complex Systems

University of Amsterdam

2022 - 2024

Amsterdam, Netherlands

Study on the emergent phenomena in complex many-body and nonlinear systems, using a wide range of computational methods. Thesis: Exploring the Helmholtz Free Energy as a Potential Characteristic for Identifying Macroscopic Structural Properties of Simplicial Complexes.

MSc minor Space Physics

The Arctic University of Norway

2022 - 2023

Svalbard, Norway

Plasma- and statistical physics specialised to interaction between solar activity and the Earth's magnetosphere in the High Arctic atmosphere.

MSc minor Film Studies

University of Amsterdam

2021 - 2022

Amsterdam, Netherlands

MSc level minor in the Film and Documentary track of the Media Studies Research Master at the University of Amsterdam to improve my skills in science communication, final grade 8.0.

BSc Physics and Astronomy

University of Amsterdam/VU University

2018 - 2021

Amsterdam, Netherlands

Study with focus on classical physics, modern physics and astronomy, aiding the development of analytical, critical and mathematical thinking skills.

BSc Medical Natural Sciences

VU University

2017 - 2021

Amsterdam, Netherlands

Study combining exact sciences and the biomedical field, developing knowledge on medical innovations and (patho)physiology to serve as a bridge connecting fundamental research with clinical practice.

BSc Molecular Life Sciences

Radboud University

2016 - 2017

Nijmegen, Netherlands

Interdisciplinary study of Science, Mathematics and Computation, strongly connected to the Radboudumc Research Institute for Medical Innovation. After a year of study, I came to the realization that I yearned for a deeper understanding of physical theory.

WORKSHOPS, SCHOOLS AND CONFERENCES

Higher-Order Interactions and Complex Systems school

October 2025

BeyondTheEdge and Runes (joint)

Marseille, France

BeyondTheEdge and Runes organized a 2-day scientific workshop followed by a 3-day school, both on the physics of Higher Order Networks.

International School and Conference on Network Science

June 2025

The Network Science Society

Maastricht, Netherlands

The International School and Conference on Network Science (NetSci 2025)

High Order Interactions BrainMod workshop

May 2025

Institute of Advanced Study

Amsterdam, Netherlands

Workshop on Brain Modeling and High-Order Interactions with the use of Information Theory

Brain Simulation workshop

June 2024

The Human Brain Project

Bilbao, Spain

5-day workshop on new techniques in neural network simulation by EBRAINS, Europe's Research Infrastructure for Brain Research.

EXPERIENCE

PhD Hypergraph versus Graph Metrics

Oct 2024 - present

University of Zaragoza

Zaragoza, Spain

Studying complexity through the intersection of dynamical systems theory and information theory. Specifically, understanding how multivariate information measures captures high order interactions in coupled oscillators on hypergraphs.

Research Internship <i>Bilbao Centre of Applied Mathematics</i> Internship at the Bilbao Centre of Applied Mathematics exploring Bayesian Inference, Information Homology, Free Energy, and Topological Data Analysis of the brain.	Feb 2024 - Jun 2024 <i>Bilbao, Spain</i>
Highschool teacher <i>Huygens College Amsterdam</i> High school teacher in Physics and Mathematics at Huygens College Amsterdam	Sep 2023 – Feb 2024 <i>Amsterdam, Netherlands</i>
Elementary tutor <i>Bijles Academie</i> Individual tutoring in mathematics for children in elementary school.	Sep 2023 – Feb 2024 <i>Amsterdam, Netherlands</i>
Personal Mentor/Teaching Assistant <i>University of Amsterdam</i> For two years, I guided students with extreme study delays due to personal issues and mental health problems.	Sep 2020 – Sep 2022 <i>Amsterdam, Netherlands</i>
Nutritionist Patient Care <i>Canisius Wilhelmina Hospital</i> During my tenure at the hospital, I dedicated myself to delivering comprehensive patient care, with a primary focus on monitoring and tailoring nutritional intake to improve the physical and mental recovery process.	Sep 2015 – Sep 2017 <i>Nijmegen, Netherlands</i>

EXTRA-CURRICULAR ACTIVITIES

AE-E Aesthetics, Entrepreneurship	2016 - present
Musical endeavor dedicated to fostering the growth of the Dutch post-punk scene. High activity during 2020-2021, including a debut-tour of 42 shows travelling across the Netherlands, the United Kingdom, Belgium, and Germany.	

LANGUAGES

Dutch proficiency, C2 (Native) <i>Issued Sep 2016</i>
English proficiency, C2 (ETS TOEFL 110/120) <i>Issued Feb 2022</i>
French proficiency, B1 (NLQF 4+ / EQF 4) <i>Issued Sep 2016</i>
Spanish proficiency, A2 (NLQF 1 / EQF 1) <i>Issued Nov 2024</i>

TECHNICAL SKILLS

Languages: Python, Matlab, Mathematica, R
Packages and DataCamp courses: Shell, Bash, Pandas, NetworkX, Gudhi, Neuron
Supercomputing: Use of the Dutch supercomputer Snellius and the European Fenix research infrastructure

CERTIFICATIONS

Suicideprevention Gatekeeper, 113 Suicide Prevention <i>Issued Sep 2022</i>
First Aid Essentials, Red Cross <i>Issued Oct 2023</i>
DataCamp courses <i>Issued Oct 2023</i>