PIM NELISSEN

Computational Physics student in Nuclear Science

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EDUCATION

M.Sc. Computational Science, Physics

Lund University

Sep 2024 – ***exp. Jun 2026*** | Lund, Sweden

- My thesis is on developing a Python library for simulating primary gamma source localization scenarios in the context of emergency preparedness. The generated data will be used for testing a Bayesian localization algorithm.
- Completed a large independent research project, developing an advanced statistical model for radioisotope concentrations in seaweed as a response to liquid seawater discharge of radioactive effluent.

ODE/PDEs | Radioecology | Reactor physics | Dataviz | Time series | Bayesian statistics | Machine learning

B.Sc. Physics

Lund University

Sep 2020 – Jun 2024 | Lund, Sweden

- My thesis involved machine learning applied to Monte Carlo simulated data of radioactive decays from superheavy nuclei.

Monte Carlo | Nuclear Physics

EXPERIENCE

Teaching Assistant

Lund University

Sep 2025 – Dec 2025 | Lund, Sweden

- Assisted the first-year undergraduate students in mathematics and physics in the introductory scientific programming course "Computational Programming with Python".

VOLUNTEERING

Digital Literacy Instructor

City Library Oss

Sep 2013 –Jun 2014 | Oss, Netherlands

- I hosted an education program for promoting digital skills (e.g. use email, search and save information) within the local community, particularly aimed at the elderly.

PUBLICATIONS

Bachelor's Thesis

- P. Nelissen, *Scrutinizing the Schmidt Test and Exploring the Use of Machine Learning for Statistical Assessment of Radioactive Decay Chains...* Lund University Publications, 2024. [Online]. Available: http://lup.lub.lu.se/student-papers/record/9168893.

SUMMER SCHOOLS

ENEN# Nuclear Summer School

Budapest University of Tech. and Econ. (BME)

Sep 2025 | Budapest, Hungary

- An intensive 1-week school including hands-on experiments and analysis of obtained data. Participated on scholarship from the European Nuclear Education Network.

HIGHLIGHTED COURSES

Computational Reactor Physics
Uppsala University. Fundamental reactor engineering concepts in Python/OpenMC.

Simulation Methods of Radiation Transport
Uppsala University. Detector simulation in FLUKA, Serpent and Geant4.

Core Modeling For Core Design
GRE@T-PIONEeR. Deterministic and Monte Carlo methods for LWR design.

Reproducible data science and statistical learning
Lund University. FAIR principles, Data visualization, Bayesian statistics.

Modern Subatomic Physics
Lund University. Course on the current research frontier of high energy physics and neutron science.

ONLINE WORKSHOPS

HPC with Python
Jülich Supercomputing Centre (Jun 2025)

Intermediate Bash and Linux
HPC2N, Umeå University (Jun 2025)

Git, code testing and documentation
EPFL, CECAM, BioNT (Feb 2025)

TOOLKIT

Python | Linux | R (programming) | Git | FLUKA | OpenMC | Serpent | Geant4 | SQL | MATLAB | C# | TensorFlow

LANGUAGES

Dutch (Native)
English (C1, IELTS Certified)
German (A2)
Swedish (A2)