Fons van der Plas
Curriculum vitae

EDUCATION

2019 – 2021 **MSc Computer Simulations for Science and Engineering**
TU BERLIN & KTH STOCKHOLM   *Germany & Sweden*

Joint master's programme in **mathematical modelling**, numerical analysis, computer science, high-performance computing and visualisation.

Funding: Erasmus mundus programme.

2015 – 2019 **BSc Mathematics**
RADBOUD UNIVERSITY NIJMEGEN   *The Netherlands*

150 EC in core Mathematics courses (GPA: 9.0/10.0).

54 EC in Physics courses (GPA: 7.7/10.0), with a focus on Astronomy and Environmental Science; 13 EC in Computer Science courses (GPA: 8.0/10.0), although most of my programming skills are self-taught.

My bachelor thesis combined **probability theory** and **algebraic graph theory** with classical **electric power systems modelling** to analyse the effect of **fluctuating renewable energy sources** on failures in Germany's power grid. (grade: 9.0/10.0)

*Graduated **cum laude** (GPA: 8.9/10.0) in July 2019, with 220 EC.*

2018 **Study exchange**
UNIVERSITÉ PARIS DIDEROT   *France*

21 EC in Mathematics courses, **taught in French** (GPA: 18.4/20.0).
Funding: Erasmus+ grant.

2007 – 2015 **Pre-University Education**
JACOB-ROELANDSLYCEUM BOXTEL   *The Netherlands*

Followed a technology-oriented programme. Graduated **cum laude**, with the highest possible grade average in Mathematics (GPA: 10.0/10.0).

WORK EXPERIENCE

JAN 2017 – PRESENT

Teaching assistant (6 courses)

RADBOUD UNIVERSITY

Teaching exercise classes and grading homework for **6 different courses** totalling **63 weeks** in Mathematics and Astronomy.

I was the **senior TA** for *Introduction to Mathematics*, taught by Prof N.P. Landsman, where I wrote an exam question, wrote exercise solutions and **gave supplemental lectures**, leading to the **Faculty Award for teaching**.

SOFTWARE SKILLS

EXPERT	Python (SciPy), C#, Arduino, OpenGL, IoT
EXPERIENCED	Julia, MatLab, R, C++, LaTeX, Haskell, Java, EAGLE, CAD, git, JS, d3, HTML5/CSS3, React, Adobe Flash, Bash, LabVIEW, ffmpeg
BASIC KNOWLEDGE	PHP, SQL, Lua, NetCDF, CUPS, HTTP/1.1, F#, Mathematica

PROJECTS

*These are some of the projects that I have worked on outside of my studies. Everything is **open source** and **open hardware**, available at github.com/fonsp*

✎ | Bloemenburgerhof 5, Nijmegen (NL)
☎ | +31 6 15141610
⊠ | f.vanderplas@student.ru.nl
⚡ | github.com/fonsp

2018 **/printi**
An open source, public, **RESTful API and web server** that allows anyone to turn a thermal receipt printer into a web-enabled (IoT) photo printer. I **reverse engineered** a printer driver; the custom driver is **faster than the factory default**. Written in C#, Python, JS and C.

2016 **/resim**
A real-time, interactive **simulation of various relativistic effects** (e.g. Doppler, light aberration, time dilation and a software event horizon). Produced visuals **similar to software by MIT**. Written in C# with OpenGL.

2015 **/eisinga**
A handheld device that identifies star constellations using accelerometer/magnetometer readings. To this end, I **designed, printed and assembled a PCB**. Designed in EAGLE, written in C++.

ACHIEVEMENTS

FACULTY AWARD	for my supplemental lectures for *Introduction to Mathematics*, 2017
3$^{\text{RD}}$ PLACE	My team of three finished third of our university, taking us to the **Benelux Algorithm Programming Contest** finals, 2017
SUMMA CUM LAUDE	First year's degree in Mathematics, 2017
≥100 SOLVED	Project Euler Problems (algorithm/combinatorial challenges), 2015-present
9$^{\text{TH}}$ PLACE	Dutch Mathematics Olympiad, 2014
13$^{\text{TH}}$ PLACE	Dutch Physics Olympiad, 2014

LANGUAGE SKILLS

DUTCH	Fluent
ENGLISH	Fluent (*IELTS* 7.5/9.0)
FRENCH	Intermediate (B2, *CEFR* 2018)
GERMAN	Basic

VOLUNTEERING

JAN 2016 – AUG 2019

Crafts teacher

Centre for Technical Creativity of Nijmegen
(Technisch Creatief Centrum Nijmegen)

Teaching crafts to **elementary school** children from local schools with projects and experiments.
4-6 hours per week.

JAN 2016 – AUG 2019

Work group supervisor

Centre for Technical Creativity of Nijmegen
(Technisch Creatief Centrum Nijmegen)

Helping high school students work on their technology projects during our weekly meetings. I also advise on **IT education for young teenagers**, using technologies like Arduino and Scratch.
3 hours per week.

APR 2016 – FEB 2017

Personal language tutor

Dutch Council for Refugees
(Vluchtelingenwerk Nederland)

Weekly two-hour meeting with an Eritrean refugee to aid his **linguistic and cultural integration** in The Netherlands.
2 hours per week.

INTERESTS

DIY projects
Most of my projects are software-oriented, but I also like to work on old bikes and electronic devices.

The outdoors
Part of my commitment to renewable energy comes from my love for hiking, camping and canooing. I like working in my parents' garden, and I have worked on a small sheep farm in Peebles (Scotland) for two weeks.