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) 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**.*

Work experience

Jan 2017 – Feb 2019

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	Julia, Python (SciPy), C#, JavaScript, OpenGL, IoT
Experienced	MatLab, R, C++, LaTeX, Haskell, Java, git, CI/CD, d3, React, Adobe Flash, Arduino, EAGLE, CAD, LabVIEW, Bash, ffmpeg
Basic knowledge	Clojure, Prolog, PHP, SQL, Lua, NetCDF, CUPS, HTTP, 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*

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

Student Rep.	during restructuring of the first-year curriculum, 2018
Faculty Award	for my supplemental lectures for *Introduction to Mathematics*, 2017
3rd place	My team of three finished third of our university, taking us to the **Benelux Algorithm Programming Contest** finals, 2017
≥100 solved	Project Euler Problems (algorithm/combinatorial challenges), 2015-present
9th place	Dutch Mathematics Olympiad, 2014
13th place	Dutch Physics Olympiad, 2014

Language skills

Dutch	Fluent
English	Fluent (*IELTS* 7.5/9.0)
French	Intermediate (B2, *CEFR* 2018)
German	Basic

Warthestraße 67, Berlin (DE)
+31 6 15141610
f.vanderplas@campus.tu-berlin.de
github.com/fonsp

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, recycled furniture 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.