

Luuk van Agtmaal

PHD STUDENT

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“Change begins with yourself. Carry it with you, and inspire.”

Summary

Enthusiastic and cheerful MSc geological/geophysical specialist with programming and modelling skills and interests. A friendly researcher with a broad skillset who thrives when given a challenging problem to solve, while also able to pin down the problem itself. Aims to make a difference in the fight against anthropogenic climate change.

Education

UU (Utrecht University)

Utrecht, the Netherlands

MSc. EARTH SCIENCES (GEOLOGY & GEOPHYSICS)

Sep. 2018 - Oct. 2020

- MSc thesis on numerical geodynamic modelling (STM) of the Central Alps, supervised by dr. Ylona van Dinther and dr. Ernst Willingshofer. Quantified horizontal and vertical forces to test validity of slab rollback orogeny model for the Central Alps. Adapted input files, made and/or checked minor changes to source code, wrote various post-processing scripts. Did quantitative analysis of continental collision
- Did a month of structural geology fieldwork in the metamorphic basement of the Internal Betics in SE Spain.
- Successfully completed a six-months internship at the geothermal/heat storage company IF Technology in Arnhem, the Netherlands.
- Followed courses on signal processing, geodynamics, tectonophysics, paleomagnetism and analogue and numerical modelling of geological processes.

VU (Vrije Universiteit Amsterdam)

Amsterdam, the Netherlands

BSc. EARTH SCIENCES (SOLID EARTH TRACK)

Sep. 2015 - Jul. 2018

- Followed a broad variety of geology-focused courses in the fields of tectonics, structural geology, sedimentology, petrology/mineralogy, geophysics, geomorphology, climatology and hydrology. Average grade 7.9/10
- Went on 5 fieldworks (3 in Spain, 1 in NL, 1 in Belgium): started with geological/geomorphological mapping and later focused more on answering an own structural geological research question.
- Completed an Honours programme of 31 ETCS of both interdisciplinary and disciplinary courses at various universities: Environmental toxicology and The Life and Science of Albert Einstein at Amsterdam University College, Designing innovations for Sustainability and a volcanologic study of plagioclase from Saba at the VU, Geodynamics of basins and orogens at University of Bergen, Norway
- Did a BSc thesis under supervision of Prof. dr. Wouter Schellart and dr. Dr. Vincent Strak on the effect of a laterally thinning salt layer on fold-and thrust belt deformation in the Ainsa Oblique Zone, Southern Central Pyrenees, Spain using analogue models. Mark 8.3/10

Stedelijk Gymnasium Leiden

Leiden, the Netherlands

GRAMMAR SCHOOL/PRE-UNIVERSITY EDUCATION (NATURE/TECHNOLOGY TRACK)

Sep. 2009 - Jul. 2015

- Did research project on the formation of the Pyrenees (grade 9.0/10). Identified 40 rock samples using information in available encyclopedia. Got background information from ir. Igor van der Wal
- Followed both mathematics B (analytical math) and D (deeper level statistics, series, ellipsoid analytics, complex algebra and vector algebra/analysis)
- Other subjects: geography, physics, chemistry, English, Dutch, French, Greek, Economics (“on contract”, i.e. completed without attending classes)
- Average grade 7.6/10

Presentation

GEOtrecht2020 Earth scientific conference

Utrecht, the Netherlands

CONTRIBUTOR AND PRESENTER FROM UTRECHT UNIVERSITY

Aug. 2020

- Presented the results of MSc thesis about numerical modelling of continental collision to better understand the present-day geodynamics of the Central Alps.
- Explained how the Slab Rollback Orogeny model can be quantified and applied to the Central Alps.

NAC 2021 Earth scientific conference

Utrecht, the Netherlands

CONTRIBUTOR AND PRESENTER FROM UTRECHT UNIVERSITY AND ETH ZÜRICH

April 2021

- Presented the key points of the MSc thesis about numerical modelling of continental collision in a process-oriented way.
- Explained that the Slab Rollback Orogeny model is not fully applicable to the Central Alps.

EGU 2021 General Assembly (Earth scientific conference)

online

CONTRIBUTOR AND PRESENTER FROM ETH ZÜRICH

April 2021

- Presented the first results of 3D coupled numerical models of the India-Eurasia collision.
- Discussed the effects of mass diffusivity and Indian indentation velocity.

Extracurricular Activity

UU (Utrecht University)

Utrecht, the Netherlands

CO-SUPERVISOR BSc STUDENT

Apr. 2020 - Jul. 2020

- Provided assistance with making changes to the geodynamic code of a BSc student, and gave other programming, visualisation and general advise when the student ran into problems.

GeoVUsie study organisation

Amsterdam, the Netherlands

MEMBER

Aug. 2015 - present

- Participated in some social activities, but mostly used membership to attend symposia and seminars.

Work Experience

IF Technology B.V.

Arnhem, the Netherlands

GEOTHERMAL INTERN

Aug. 2019 - Feb. 2020

- Created and tested a workflow for reprocessing of existing 3D seismic data, which improved efficiency significantly.
- Self-learned the C++ language and made the first important steps in developing a spectral interpolation program.
- Gained a lot of experience in OpendTect seismic interpretation software and in seismology.
- Presented the results in front of the whole company including the board of directors.

Bistro Smaakboutique

Hilversum, the Netherlands

WAITER/HOST

Okt. 2018 - present

- Make guests comfortable, serve foods and pour drinks. Plan the evening in such a way that the chef is not overloaded while also managing the time guests need to wait for their orders. Also able to guide and help new recruits.

StudentsPlus

The Hague, the Netherlands

TUTOR

Nov. 2015 - Okt. 2018

- Helped students with understanding the material. The strategy was to focus on getting them to see their progress to boost their confidence, allowing the students to succeed.
- Tutored in the subjects Mathematics, physics and English at all levels of high school

Hoogvliet B.V.

Leiden, the Netherlands

CASHIER

Okt. 2014 - May 2015

- Performed the general cashier tasks.

Skills

Programming Python, Matlab, C/C++

Earth Sciences Analogue/numerical modelling, Seismic interpretation/reprocessing, fieldwork (sedimentary and/or metamorphic areas

Tools I3ELVIS, I2ELVIS (STM), LaTeX, git, MS Office, Slack, Teams

Dutch: native language, fully proficient in both writing and speech; **English:** fluent in writing and speech; **Norwegian** : able to

Languages read most texts. Basic conversation and writing skills; **French** : able to read and understand. Basic speech capabilities; **German:** basic reading/listening skill. Limited speech level