

PERSONAL DETAILS

Birth December 20, 1994
Email williamjsdavis@berkeley.edu

EDUCATION

PhD. Earth and Planetary Sciences, in progress **2017-Present**

University of California, Berkeley

Relevant topics:

Geodynamics, Fluid Mechanics, Magnetohydrodynamics, Geophysical Fluid Dynamics, Seismology.

MSci. Geophysics, First Class Honours **2013-2017**

University College London

Relevant topics:

Geodynamics and Global Tectonics, Fluid Mechanics, Geophysical Fluid Dynamics, Ocean Physics & Climate Change, Seismology I, Seismology II.

WORK EXPERIENCE

BGI Summer Internship **June-July 2016**

Bavarian Research Institute of Experimental Geochemistry and Geophysics (BGI)

Working with Prof. Dr. Dan Frost on developing and calibrating a majorite garnet geobarometer. Included hands-on experimental work with multi-anvils, SEM, and microprobe. Currently continuing this work.

Mining Consultancy Work Experience **July 2014**

Wardell Armstrong, Mining Consultancy

Working with the Mining Engineering department, using data from core samples to create wireframe models and blockmodels of ore grade.

RESEARCH INTERESTS

D" structure

I recently undertook a small project with the aim of mapping the thickness of the D" region using seismogram data. Using differential arrival times in the S-wave coda, I was able to use inverse modelling to estimate D" boundary depth for a source-receiver pair. Eventually, I would aim to create a world map of D" thickness.

In addition to this, my Masters project (with Dr Ana Ferreira) concerns mapping isotropic and anisotropic structures in the D".

Application of Fluid Dynamics to Earth Processes

My studies in the module 'Geodynamics and Global Tectonics' - as well as various fluid mechanics modules - have spurred my interests in the dynamics of fluids in the Earth. I took particular interest in methods of modelling conduction and convection, and recently attended a hands-on demonstration of mantle convection code StagYY. I would be interested in expanding my knowledge of the dynamics of the mantle, and how this drives Earth processes.

SKILLS

Teaching Assistant

Sept 2016 - Present

University College London

Currently I have a paid teaching assistant role for a module at UCL, for 1.5 hours per week. I teach, assist teaching, and run help workshops for 1st year Earth Sciences students taking the "Earth Sciences - Matlab" course.

Computing Skills

2014 - Present

University College London and others

Throughout my studies in UCL, I have become familiar with Matlab, Bash, and SAC (Seismic Analysis Code).

During June-July 2016, I attended lectures in finite difference modelling and coding efficiency from Prof. Gregor Golabek, at the Bavarian Research Institute of Experimental Geochemistry and Geophysics.

ACHIEVEMENTS & OTHER

Dean's List

2017

University College London

Awarded a place on the UCL Dean's list for work that constitutes the top 5% of undergraduate students.

Matthews Prize

2017

University College London

Awarded for overall excellence in Geophysics in the Department of Earth Sciences.

Student Academic Representative - Earth Sciences

2013 - 2017

University College London

Appointed position in the Earth Sciences department to represent students' views to UCL. This involves attending meetings at a programme, faculty, and University level.

Treasurer - Mountaineering Club

2015 - 2016

University College London

Treasurer for the UCL Mountaineering Club. Involved organisation of club funds and working with the University Union.

REFERENCES

Prof. Carolina Lithgow-Bertelloni

c.lithgow-bertelloni@ucl.ac.uk

University College London
Professor of Earth Sciences

Prof. Lidunka Vočadlo

l.vocadlo@ucl.ac.uk

University College London
Professor of Mineral Physics, Personal Tutor