

Education

University of Aberdeen

PhD Geophysics

Aberdeen, UK

Sept 2021 - Current

- **Project:** "Using seismology to image subduction termination in northern Borneo"
- Chaired the British Geophysical Association (BGA) Postgraduate Research in Progress Meeting 2023 committee.
- Selected for the NASA InSightSeer program and attended InSight's Science Team Meeting in Nov 2022.
- Contributor to seismological methods utilizing receiver functions in python3 (Python package).

Durham University

MPhys Physics (2:1)

Durham, UK

2017 - 2021

- **Project:** "Searching for Extra-Terrestrial Intelligence with the Cherenkov Telescope Array" (2021).

The Royal Latin School

A-Levels

Buckingham, UK

2015 - 2017

- Physics: A*, Chemistry: A, Mathematics: A, Further Mathematics: A.

Experience

University of Aberdeen

Demonstrator (MSc Geophysics & BSc Geology)

Aberdeen, UK

Sept 2021 - Present

- Subjects covered include Python, Linux/UNIX, Bash scripting, Generic Mapping Tools (GMT), field skills and geophysical concepts.
- Provided real-time support in problem solving and programming workshops to students with different levels of scientific literacy.
- Praised by students in course feedback forms and surveys.

BGA Postgraduate Research in Progress Meeting

General Chair (Volunteer)

Edinburgh, UK

2023

- Overseeing committee, delegated, contacted speakers, lead branding and publicity (social media, website design etc.), maintained planning documents, set meeting agendas and took minutes and convened sessions.
- Led development of equality, diversity and inclusion (EDI) framework, and authored the EDI Statement and Code of Conduct. Was a primary point of contact for conference attendees regarding accessibility requests.

MyTutor

GCSE Maths Tutor

Online, UK

2021 - 2022

- Online tutor for MyTutor, teaching small groups GCSE Maths.

STFC Rutherford Appleton Laboratory

Public Engagement Department (Placement)

Harwell, UK

2016

- 2-week placement collaborating with particle physicists to accessibly inform the public of their research, teaching on a programming outreach course for children, and giving campus tours to a diverse range of visitors on General Public Access Day.

University of Cambridge

BP Institute and Department of Chemistry (Placement)

Cambridge, UK

2016

- 2 days shadowing PhD students, preparing chemical samples and learning good lab practice.

The Open University

Planetary Sciences Department (Placement)

Milton Keynes, UK

2014

- A week with PhD students performing data analysis via Python and Excel; used GIS, attended talks, and experienced academia.

Skills

Programming & IT Python, GMT, Linux/UNIX, Bash/zsh, LaTeX, Microsoft Office, Jupyter Notebooks, Google Colab, Notion.

Further Technical Data analysis and visualisation, receiver function imaging, general practical and analytical research skills, scientific writing, science outreach, grant applications, seismometer deployment, map reading.

Other Project management; organisation; self-discipline; team leadership and supervision; public speaking.

Awards, Grants and Achievements

2024 **Outstanding Student Presentation Award**, AGU Fall Meeting

San Francisco, USA

2024 **Gray-Milne Travel Bursary**, British Geophysical Association

London, UK

2023 **Austin Endowment for Student Travel**, AGU Fall Meeting

San Francisco, USA

2023 **Conference/Meeting Travel Subsistence Award**, Royal Astronomical Society

London, UK

Publications and Presentations

S. Baker, D. G. Cornwell, A. Gilligan, J. Jenkins, T. Greenfield, N. Rawlinson, F. Tongkul and S. Pilia. 2023. Imaging northern Borneo's Complex Mantle Transition Zone with P-to-S Receiver Functions. AGU Fall Meeting, Dec 2023, San Francisco, USA. (2 Presentations)

S. Baker, D. G. Cornwell, A. Gilligan, J. Jenkins, T. Greenfield, N. Rawlinson, F. Tongkul and S. Pilia. 2023. Receiver Function Imaging of Sabah's complex mantle transition zone. BGA Postgraduate Research in Progress Meeting, Sep 2023, Edinburgh, UK. (Presentation)

A. Gilligan, E. Watt, D. Hawthorn, R. Clark, **S. Baker**, D. G. Cornwell, L. G. Inuwa, H. Kennedy, K. Löer, and A. Madani. 2022. Probing Into the Crust Through eastern Scotland: seismological constraints on the Highland Boundary Fault. EGU General Assembly, Apr 2023, Vienna, Austria. (Poster)

J. R. Morris, L. R. Schurmeier, N. L. Wagner, **S. Baker**, C. Bill, S. Mohanna, N. Roth, H. Sanderson, S. Sridhar, S. Woodley, I. J. Daubar, B. Fernando, C. Newman, and M. Panning. 2023. InSightSeers: Peering Into Invited Student Participation of a Mission Science Team Meeting. LPSC, Mar 2023, Houston, USA. (Poster)

S. Baker, D. G. Cornwell, A. Gilligan, J. Jenkins, T. Greenfield, N. Rawlinson, F. Tongkul and S. Pilia. 2023. Receiver Function Imaging of Sabah's complex mantle transition zone. University of Aberdeen School of Geosciences PGR Conference, Jan 2023, Aberdeen, UK. (Poster)

A. Gilligan, E. Watt, D. Hawthorn, R. Clark, **S. Baker**, D. G. Cornwell, L. G. Inuwa, H. Kennedy, K. Löer, and A. Madani. 2022. Probing into the crust through eastern Scotland. British Seismology Meeting, Sep 2022, Cambridge, UK; AGU Fall Meeting, Dec 2022, Chicago, USA. (Poster)

S. Baker, D. G. Cornwell, A. Gilligan, J. Jenkins, T. Greenfield, N. Rawlinson, F. Tongkul and S. Pilia. 2022. Unveiling Sabah's complex mantle transition zone with nBOSS. British Seismology Meeting & BGA Postgraduate Research in Progress Meeting, Sep 2022, Cambridge, UK. (Poster)

Interests

Gardening, DIY and outdoor activities	I am at ease outdoors and can use a variety of DIY tools. Member of Secret Garden Society (Social Media Officer 2022-23) and Conservation Society at the University of Aberdeen, and Josephine Butler College (JB) Allotment Society (President 2019-21), JB Mixed Lacrosse (2018-20), and the Astronomical Society (Treasurer 2018-19) at Durham University.
Arts, Crafts and Creative Pursuits	My artwork is currently on loan to Josephine Butler College, Durham. I enjoy creative challenges, and have previously recorded an audiobook, taken an online puppetry course, and started a casual heritage crafts preservation group. I am a self-taught seamstress and have a strong interest in fashion and textile history (modern to prehistoric). I write for leisure and am published in The Gaudie (University of Aberdeen's student newspaper).
Other Clubs and Activities	Durham University (DU) Physics Society (Publicity Officer 2018-19), DU Art and Life Drawing Society (2019-20), JB Freshers Rep (2018), DU Archery (2017-19), JB Women's Basketball (2020-21).

References Available

Dr David Cornwell

Senior Lecturer in the School of Geosciences

- 141 Meston Building, Old Aberdeen Campus, Meston Walk, AB24 3UE
- d.cornwell@abdn.ac.uk
- +44 (0)1224 273448

Dr Amy Gilligan

Lecturer in the School of Geosciences

- 138 Meston Building, Old Aberdeen Campus, Meston Walk, AB24 3UE
- amy.gilligan@abdn.ac.uk