Alice Turner

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ACADEMIC INTERESTS

I am interested in earthquake rupture mechanics and earthquake source seismology, focusing on how we can use seismic activity to understand the workings of planetary interiors and earthquake rupture processes.

EDUCATION

Sep 2019 – Nov 2022	**Ph.D. Earth Sciences, University of Oxford** **Supervisor:** Jessica Hawthorne *"Repeating earthquakes across the Earth-Moon system"*
Sep 2010 – Jun 2014	**MSci Geophysics, 1st Class (79%),** **Department of Earth Sciences, University College London** **Supervisor:** Ana Ferreira *"Source properties of deep earthquakes using a higher-order moments approach"*

PROFESSIONAL EXPERIENCE

2023 - Present	**UTIG,** Postdoctoral Fellow
2020	**UCL,** Summer research assistant
2018	**AECOM,** Geophysics summer internship

AWARDS

2022	UTIG Distinguished Postdoctoral Fellowship
2022	Guralp Award for outstanding progress in postgraduate research
2022	EGU Outstanding Student and PhD candidate Presentation Award
2022	AGU Outstanding Student Presentation Award
2019	The Matthews Prize – awarded for excellence in geophysics.
2018	British Geophysical Association undergraduate prize – awarded for highest geophysics mark.
2017	The Chubb Prize – awarded to a first- or second-year student for 'work of a good honours standard'
2017	Study abroad short-term mobility bursary - awarded to attend the "Summer of applied Geophysical experience (SAGE) ", a geophysical field course in New Mexico.

PUBLICATIONS

PUBLICATIONS

Turner, A. R., Ferreira, A. M., Berbellini, A., Brantut, N., Faccenda, M., & Kendall, E. (2022). Across-slab propagation and low stress drops of deep earthquakes in the Kuril subduction zone. *Geophysical Research Letters*, *49*(16), e2022GL098402.

Turner, A. R., Hawthorne, J. C., & Gaddes, M. (2022). Stresses in the lunar interior: Insights from slip directions in the A01 deep moonquake nest. *Journal of Geophysical Research: Planets, 127*, e2022JE007364. https://doi.org/10.1029/2022JE007364

IN PREP.

Turner, A.R., Hawthorne, J.C. & Cattania, C. (in prep.) Searching for partial ruptures in Parkfield, California. *For submission to Geophysical Research Letters*

Koelemeijer, P., **A. Turner, S**. Stackhouse and H. Marquardt. (in prep). Effect of the iron spin transition in ferropericlase on global tomography.

CONFERENCE PRESENTATIONS AND INVITED TALKS

Sept 2022	**British Seismology Meeting** *"Using Principal Component Analysis to Align Deep Moonquake Waveforms"*
Mar 2022	**EGU** *"Searching for partial ruptures of repeating earthquakes in Parkfield, California"*
JAN 2022	**Invited talk***: **Rice University Current Research in Earth, Environmental and Planetary Science Seminar** ***"****Repeating earthquakes across the Earth-Moon system"*
Dec 2021	**American Geophysical Union Fall Meeting** *"Using Deep Moonquakes To Constrain Lunar Tectonic Stresses"*
Oct 2021	**3rd Cargese school on Earthquakes: Nucleation, Triggering, and Relationships with Aseismic Processes.** **Southern California Earthquake conference** *"The role of partial ruptures in the observed moment-recurrence scaling of repeating earthquakes"*
Mar 2021	**Seismology student workshop** *"Slip directions in the A01 deep moonquake nest from principal component analysis "*
Mar 2021	**Lunar and Planetary Science Conference** "Slip Directions in the A01 Deep Moonquake Nest"
Dec 2019	**American Geophysical Union Fall Meeting** *"Influence of the iron spin transition in ferropericlase on global tomography"*
Dec 2015	**American Geophysical Union Fall Meeting** *"Multi-scale, multi-method geophysical investigations of the Valles Caldera"*

TEACHING EXPERIENCE AND RESEARCH SUPERVISION

UNIVERSITY OF OXFORD	**2021**	**Summer student supervision,** Tanveer Bhamra.
	2021	First- and second-year tutorials (maths, MATLAB, geophysical methods).
	2020	Second year tutorials (Earthquakes and faulting) .
UNIVERSITY OF OXFORD	**2019**	First year tutorials (MATLAB).
	2019	Third year geophysics field trip demonstrator .
UNIVERSITY COLLEGE LONDON	**2017**	First year tutorials (maths).
TAVISTOCK TUTORS	**2016 – 2018**	Private tutor for GCSE and A Level Maths and Science.

DEPARTMENTAL SERVICE

REVIEWER	**2022**	Reviewer for EPSL.
COMET STUDENT MEETING ORGANISER	**2021- 2022**	Committee member organising the student meeting for the NERC COMET research group Student meeting 2022.
BGA PGRiP STUDENT	**2021- 2022**	Committee member organising the British Geophysical Association Post-

MEETING ORGANISER		graduate Research in Progress meeting 2021.
COMMUNCATION COMITEE	**2021- 2022**	Committee member enabling communication during the COVID-19 pandemic.
OXFORD GEOPHYSICS GROUP MEETING ORGANISER	**2021- present**	Organise the weekly global geophysics group meetings at the university of Oxford, including inviting and hosting guest speakers.

RESEARCH EXPERIENCE

FIELDWORK	**2018**	Geophysical techniques at Marble Hill House, Twickenham, London
	2018	Summer of Applied geophysical experience, a field course for a range of geophysical techniques in New Mexico
TRAINING AND CLASSES	**SEPT 2021**	Training school in Earthquakes: Nucleation, Triggering, and Relationship With Aseismic Processes.
	JUN 2021	InSight Seers Programme – observe the NASA InSight meeting
	MAY 2021	STFC Deep learning course.
	MAR 2021	Earth & Planetary Materials & Dynamics course, Centre for Earth Evolution and Dynamics (CEED).

SKILLS

COMPUTING	**Proficient use of *Python***, MATLAB, shell, *Generic Mapping Tools*.
	Document and presentation preparation in LaTeX, *MS Word*, *Excel*, *PowerPoint*, *Inkscape*,
PRACTICAL	**Full Driving License** – manual and automatic.

OUTREACH

2022	International observe the moon night (public outreach on lunar science).
2021	Earthquakes mechanics podcast series.
2021	Passport to the solar system (solar system outreach for children).
2020	Royal Society Lates: Science Fiction Exhibition.
2020	Royal Society Summer Science Exhibition