

Robert George Green

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Date of Birth: 5th March 1990
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Research Interests – Areas of expertise

Subsurface seismic velocity structure of volcanic regions. Ambient noise interferometry and surface wave tomography. Volcano-monitoring with micro-earthquakes and seismic noise using relative velocity variations. Crustal structure and rift tectonics of extensional regions.

Appointments

Humboldt Research Fellow – Deutsches GeoForschungsZentrum – GFZ Potsdam – Sektion 2.4 Seismologie

- Investigating the seismic structure and volcanic processes of the Klyuchevskoy Volcanic group, Kamchatka, Russia.

Research Associate in Seismology – University of Cambridge

- Investigating the seismic structure and volcanic rifts systems of Iceland, using ambient noise tomography, receiver functions, and earthquake constraints from both regional events and array based methods.

Education

PhD in Seismology – University of Cambridge (October 2012 – March 2016)

- The structure and seismicity of Icelandic rifts (2nd place RAS Keith Runcorn thesis Prize for UK based Geophysics PhDs)

MSci Natural Sciences – University of Cambridge (July 2012) : **First Class**

- Geological Sciences. Seismology thesis: Microseismicity and faulting between volcanic systems in Iceland

BA Natural Sciences – University of Cambridge (July 2011) : **First Class**

Awards

Best Presentation – British Geophysical Association PGRiP meeting – September 2015

Nature Communications Early Career Scientist prize for best presentation – January 2017

RAS Keith Runcorn thesis prize for 2016 runner up – May 2017

Grants/Funding Awards

2017 – Humboldt Research Fellowship

2016 – Geological Society of London Research Grant - £1500

2016 – European Geophysical Union travel grant award - €400

2015 – School of Physical Sciences Fieldwork Award - £1500

2013 – Co-author on SEISUK Seismometer Loan for 8 broadband seismometers

2012 – NERC funded PhD studentship with BP CASE award

2012–2015 – St John's College - College Prize (Scholarship for 1st Class degree) - £1200

2012 – Scholarship from BP.plc - £1000

2011 – St John's College - The Wright Prize (Scholarship for 1st Class degree with special merit) - £500

2011–2016 – St Johns College travel grants for expeditions and geological fieldwork > £1500

2010 – Centre for Latin American Studies award (Grant for geological mapping research in Chile) - £6000

2010 – St John's College Undergraduate Research Grant - £1000

Community activity

-Peer reviewer for international journals and international funding organisations.

-Public outreach project, designing, producing and presenting a public science exhibition at the prestigious Royal Society Summer Science Exhibition in London (2017).

-Active media contributor during volcanic events and on release of publications.

Publications (peer reviewed)

Web of knowledge H-Index of 6. Average citations 26.3 (2019.01 - 28 months postdoctoral experience)

Crustal formation on a spreading ridge above a mantle plume: receiver function imaging of the Icelandic crust. Jenkins, J., Maclennan, Green, R.G., Cottaar, S., Deuss, A.F., White, R.S. *Journal of Geophysical Research*, **123**, 5190–5208 (2018).

Schöpa, A., Chao, W., Lipovsky, B. Hovius, N., White, R. S., Green, R. G., Turowski, J. M. Dynamics of the Askja caldera July 2014 landslide, Iceland, from seismic signal analysis: precursor, motion and aftermath. *Earth Surf. Dynam.*, **6**, 467–485 (2018).

Seismic Amplitude Ratio Analysis of the Bárðarbunga-Holuhraun dike propagation and eruption. Caudron. C., White. R. S., Green. R. G., Woods. J., Ágústsdóttir. Th., Donaldson. C., Greenfield. T., Rivalta. E., Brandsdóttir. B. *Journal of Geophysical Research*, **123**, 264–276 (2018).

Deep crustal melt plumbing of Bárðarbunga volcano, Iceland. Hudson. T. S., White. R. S., Greenfield. T., Ágústsdóttir. Th., Brisbane. A., Green. R. G. *Geophysical Research Letters*, **44**, 8785–8794 (2017).

Relative seismic velocity variations correlate with deformation at Kilauea volcano. Donaldson. C., Caudron. C., Green. R. G., Thelen. W. A., White. R. S. *Science Advances*, **3**, e1700219 (2017).

Ambient noise tomography reveals upper crustal structure of Icelandic rifts. Green. R. G., Priestley. K. P., White. R. S. *Earth and Planetary Science Letters*, **466**, 20–31 (2017).

Strike-slip Faulting during the 2014 Bárðarbunga-Holuhraun Dike Intrusion, Central Iceland. Ágústsdóttir. Th., Woods. J., Greenfield. T., Green. R. G., White. R. S., Winder. T., Brandsdóttir. B., Steinthórsson. S., Soosalu. H. *Geophysical Research Letters*, **43** (2016).

Triggered earthquakes suppressed by an evolving stress shadow from a propagating dyke. Green. R. G., Greenfield. T., White. R. S. *Nature Geoscience*, **8**, 629–633 (2015).

Segmented lateral dyke growth in a rifting event at Bárðarbunga volcanic system, Iceland. Sigmundsson, F., Hooper, A., Hreinsdóttir, S., Vogfjörð, K.S., Ófeigsson, B.G., Heimisson, E.R., Dumont, S., Parks, M., Spaans, K., Gudmundsson, G.B., Drouin, V., Árnadóttir, T., Jónsdóttir, K., Gudmundsson, M.T., Högnadóttir, T., Fridriksdóttir, H.M., Hensch, M., Einarsson, P., Magnússon, E., Samsonov, S., Brandsdóttir, B., White, R.S., Ágústsdóttir, T., Greenfield, T., Green, R.G., Hjartardóttir, Á.R., Pedersen, R., Bennett, R.A., Geirsson, H., La Femina, P.C., Björnsson, H., Pálsson, F., Sturkell, E., Bean, C.J., Möllhoff, M., Braidon, A.K., Eibl, E.P.S. *Nature*, **517**, 191–195 (2015).

Motion in the north Iceland volcanic rift zone accommodated by bookshelf faulting. Green. R. G., White. R. S. & Greenfield. T. *Nature Geoscience*, **7**, 29–33 (2014).

Selected Presentations

2019 – EGU, Vienna – Ambient Noise Tomography of the Klyuchevskoy Volcanic Group, Kamchatka - Russia. Robert G. Green, Christoph Sens-Schönfelder, Frederick Tilmann, Jennifer Dreiling, Nikolai Shapiro, Ivan Koulakov, Andrey Jakovlev, Ilyas Abkadyrov, Evgeny Gordeev, Birger Luehr.

2017 – BGA/VMSG/TSG joint assembly, Liverpool. – Seismic velocity structure of volcanic rift zones in Iceland. Robert G. Green, Keith F. Priestley, Robert S. White - **Winner of Nature Communications Early Career Scientist Award**

2016 – AGU fall meeting – Triggered earthquakes suppressed by an evolving stress shadow from a propagating dyke; Bárðarbunga volcano, Iceland. - Robert G. Green, Tim Greenfield, Robert S. White

2016 – Geophysics Colloquium, ETH Zurich (invited) – Triggered earthquakes and seismic structure in the volcanic rift zones of central Iceland. Robert G. Green, Tim Greenfield, Keith F. Priestley, Robert S. White

2015 – British Geophysical Association PGRI Meeting - Triggered earthquakes suppressed by an evolving stress shadow from a propagating dyke. Robert G. Green, Tim Greenfield, Robert S. White - **Winner of Best Presentation Award**