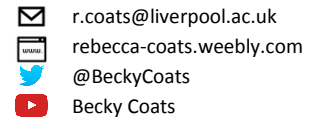




Rebecca Coats



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@BeckyCoats

Becky Coats

Current Position

April 2015 - **Ph.D Experimental Volcanology**

Present The University of Liverpool

'The rheology of crystal-bearing magmas: An experimental approach' Supervisors:
Prof. Yan Lavallée, Dr. Jackie Kendrick, Dr. Silvio de Angelis

Education

2013-2014 **MSc Volcanology and Geological Hazards** (Distinction)

Lancaster University

'Bubbling basalts: vesiculation in the 1918 eruption of Katla, Iceland' Supervisors:
Dr. Hugh Tuffen, Dr. Mike James, Dr. Jaqueline Owen

2009-2013 **BSc (Hons) Geophysics and Meteorology**

The University of Edinburgh

*Quantitatively defining monitoring parameter thresholds for volcanic forecasting:
an application to Mount Etna using BET_EF.* Supervisors: Dr. Andrew Bell, Prof. Ian Main

Memberships

American Geophysical Union (AGU), European Geosciences Union (EGU), Mineralogical Society, International Association of Volcanology and Chemistry of the Earth's Interior (IAVCEI), Royal Astronomical Society (RAS)

Achievements and awards

July 2017 **Awarded VMSG travel grant**

May 2017 **Awarded best oral presentation prize** at Geologists' Association Student Symposium (GASS), London.

May 2017 **Awarded highly commended oral presentation.** Earth, Ocean and Ecology PGR conference, Liverpool

Jan 2017 **Co-convener** for Physical Volcanology session at the Joint Assembly of TSG-VMSG-BGA, Liverpool.

Jan 2017 **Member of the local organising committee** for Joint Assembly of TSG-VMSG-BGA, Liverpool.

2016 **Awarded 2nd best oral presentation prize**, BGA PGRiP meeting, UCL, London

2016 **Awarded EGU travel grant**

Conferences Attended

August 2017 **IAVCEI**, Portland. *Oral Presentation*

May 2017 **Geologists' Association Student Symposium (GASS)**, London.

April 2017 **EGU**, Vienna. *Oral Presentation*

Jan 2017 **Joint Assembly of TSG-VMSG-BGA**, Liverpool. *Poster Presentation*

Sept 2016 **BGA**, PGRiP meeting, UCL, London. *Oral Presentation*

April 2016 **EGU**, Vienna. *Poster Presentation*

Jan 2016 **VMSG**, Dublin. *Poster Presentation*

Training Courses

Jan 2017 Reconstructing geomaterials in 3D using X-ray tomography workshop, Liverpool

April 2016 NERC Numerical Earth Science Modelling (NNESMO) course, Durham

Jan 2016 2-dimensional trace element mapping of igneous minerals by laser-ablation ICP-MS, Trinity College, Dublin

July 2015 Visualisation and quantification of tomographic data course, Diamond

June 2015 Melts, Glasses and Magmas, Prof. D.B. Dingwell, LMU, Munich

Research Experience

- Aug 2017 **User.** Synchrotron Light Source, Diamond. Beamline i12
Dec 2016 **User.** Synchrotron Light Source, Diamond. Beamline i12
2013 **Research Assistant.** The University of Edinburgh, Dr. John Stevenson.
Using a Coulter Counter in the lab to measure the grain size of ash particles.
2012 **Internship: Geoscience Outreach Developer.** The University of Leeds, NERC.
Creating an educational smart phone application based upon volcanoes

Teaching and Outreach

- 2016- Present **Outreach.** The University of Liverpool, Dr. Janine Kavanagh
Volcanoes and Poetry
July 2017 **Exhibitor.** Camp Bestival with the Jurassic Coast Trust
2016- Present **Demonstrator.** The University of Liverpool
Oct 2016 **Exhibitor.** Royal Society Science Exhibition, Manchester
July 2016 **Exhibitor.** Royal Society Summer Science Exhibition, London
2013 **Creator.** Scottish Go For It! Weather for Girl Guiding Scotland.
(<http://www.girlguidingscotland.org.uk/leaders/badges-and-challenges/>)

Key Skills

Lab Based

Rock preparation, UCS testing, Triaxial testing, Experimentation using synchrotron light source, TGA, TMA, STA, FTIR Spectroscopy, Hotstage microscopy, petrology, image analysis, SEM, pycnometry .

Computational

Familiar with Microsoft windows and Linux

Programming and software: Adobe and Office suites, MATLAB, Avizo, Image J, Python, ArcGIS

Significant Field Work

- May 2016 **Mt. Unzen, Japan**
Permeability and strength measurements, sample collection and mapping of the lava dome
April-May 2015 **Ceboruco, Mexico**
Permeability measurements, sample collection and mapping of lava domes
April 2014 **Mount Etna, Sicily**
Observation and interpretation of volcanic features using outcrop observations, mineral identification, geological maps and dip and strike measurements

Selected Conference Proceedings

Coats R., Cai B., Kendrick J.E., Wallace P.A., Hornby A., Miwa T., Ashworth J.D., von Aulock F.W., Godinho J., Atwood R.C., Lee P.D., Lavallée Y. (2017) *An experimental investigation into magma rheology using natural and analogue material.* IAVCEI, Portland 2017

Coats R., Cai B., Kendrick J.E., Wallace P.A., Hornby A., Miwa T., Ashworth J.D., von Aulock F.W., Godinho J., Lee P.D., Lavallée Y. (2017) *An experimental investigation into the effects of pores and crystals on magma rheology.* EGU Vienna 2017.

Coats, R., Kendrick, J. E., Godinho, J., Cai, B., von Aulock, F., Wallace, P.A., Lee, P., Lavallée, Y. (2017) *An investigation of the effect of crystals on magma flow and failure.* TSG-VMSG-BSA Joint Assembly, Liverpool, UK 2017.

Coats, R., Lavallée, Y., Kendrick, J.E., Wallace, P.A., Ashworth, J.D., Hornby, A., Miwa, T. (2016). *The effect of porosity and crystallinity on magma rheology at Unzen volcano, Japan.* EGU Vienna 2016.

Coats, R., Lavallée, Y., Kendrick, J.E., Wallace, P.A., Ashworth, J.D., Hornby, A., Miwa, T., J. Godinho (2016). *What makes magma go tick, tick, boom? An investigation into magma rheology using synthetic and natural material.* VMSG Dublin 2016