IAN ROSE

Computational geodynamicist

PERSONAL INFORMATION

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EDUCATION AND WORK

	2016-2017 The University of California, Berkeley
Postdoctoral Fellow	Berkeley Institute for Data Science Core developer for Project Jupyter, developing the next-generation frontend for Jupyter notebooks: JupyterLab
	2009-2016 The University of California, Berkeley
Ph.D.	Earth and Planetary Science Thesis: *True polar wander on convecting planets* Advisor: Professor Bruce Buffett
	2005-2009 Yale University
B.S.	Geology and Physics Thesis: *Paleomagnetism of Mafic Dikes in the Northern Pilbara Craton, Western Australia* Advisor: Professor Dave Evans Thesis: *Mantle rheology and the scaling of bending dissipation in plate tectonics* Advisor: Professor Jun Korenaga

PUBLICATIONS

Swanson-Hysell, N., Ramezani, J., Fairchild, L., and Rose, I.. *Failed rifting and fast drifting: Midcontinent Rift development, Laurentia's rapid motion and the driver of Grenvillian orogenesis.* Submitted to the Geological Society of America Bulletin

Rose, I. and Buffett, B.. *Scaling for rates of true polar wander in convecting planets and moons.* Physics of the Earth and Planetary Interiors, Volume 273. 2017.

Rose, I., Buffett, B., and Heister, T. *Stability and accuracy of free surface time integration in viscous flows.* Physics of Earth and Planetary Interiors, volume 262. 2017

Cottaar, S., Heister, T., Rose, I., and Unterborn, C.. *BurnMan: A lower mantle mineral physics toolkit.* Geochemistry, Geophysics, Geosystems, 2014.

COMPUTING

Languages	C, C++, Javascript, Typescript, Python, MATLAB/Octave, bash, awk, HTML
Software	LaTeX, vim, git, node, Jupyter notebooks, standard *nix tools
Operating systems	Linux, Mac OS X, Windows

SOFTWARE PROJECTS

ASPECT   Finite element software for mantle and lithospheric dynamics simulation. (frequent contributor)

BurnMan   Python library for generating thermodynamic and thermoelastic models of planetary materials. (co-author)

Interactive Earth   Educational software for teaching about the physics of planetary interiors, including thermal and thermochemical convection and seismic tomography. (author)

JupyterLab   Next generation front-end for Jupyter. (core developer)

buckinghampy   Small educational Python module for performing dimensional analysis. (author)

TEACHING

EPS 50: Planet Earth. TA: Fall 2011, Fall 2012

EPS 109: Computer Simulations in Earth and Planetary Science. TA: Fall 2013

EPS 108: History and Evolution of Planet Earth. TA: Spring 2014

TALKS AND CONFERENCE PROCEEDINGS

Colbert, C., Granger, B., and Rose, I. *JupyterLab, the next-generation Jupyter frontend*, JupyterCon, 2017

Colbert, C., Granger, B., and Rose, I. *JupyterLab + Realtime Collaboration*, PyData Seattle, 2017

Rose, I. *Interactive investigations into planetary interiors*. Talk, AGU Fall Meeting 2015

Rose, I., Buffett, B., and Heister, T. *Stable time integration of a free surface in geodynamics simulations*. Poster, AGU Fall Meeting 2015

Rose, I. *True polar wander in convecting planets*. Computational Math seminar, Clemson University, April 2014

Cottaar, S., Heister, T., Rose, I., and Unterborn, C., *An introduction to BurnMan*. Computational Infractructure for Geodynamics Webinar, October 2015

Rose, I. and Buffett, B.. *Continents and Earth's rotational stability*. Poster, AGU Fall Meeting 2014

Rose, I. and Buffett, B.. *Rates of true polar wander in convecting planets*. Poster, SEDI meeting 2014

Rose, I. and Buffett, B.. Poster, AGU Fall Meeting 2012

Rose, I. and Buffett, B.. Poster, AGU Fall Meeting 2011

Rose, I. and Manga, M.. Poster, AGU Fall Meeting 2010

October 30, 2017