IAN ROSE

Computational geodynamicist

PERSONAL INFORMATION

email	ian.r.rose@gmail.com
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EDUCATION

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

2009-2016 The University of California, Berkeley

Ph.D. Earth and Planetary Science
Thesis: *True polar wander on convecting planets*
Advisor: Professor Bruce Buffett

PUBLICATIONS

Rose, I. and Buffett, B.. *Scaling for rates of true polar wander in convecting planets and moons*. Geophysical Journal International, in review.

Rose, I. and Buffett, B.. *Stability and accuracy of free surface time integration in viscous flows*. Physics of Earth and Planetary Interiors, in review.

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

COMPUTING

Languages	C, C++, Python, MATLAB/Octave, bash, awk, HTML
Software	LaTeX, vim, git, IPython 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)

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

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

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