Publication List (December 2016 to present)

Tectonics

Naliboff, J., S. Brune, S.J.H. Buiter, Application of the open-source mantle convection code ASPECT to long-term tectonic simulations. American Geophysical Union Fall Meeting, San Francisco, CA, December, 2016.

Naliboff, J., A. Glerum, S. Brune, 3D numerical simulations of multiphase continental rifting, T51C-0480 American Geophysical Union Fall Meeting, New Orleans, LA, Dec. 2017

Rajaonarison, T., D.S. Stamps, and S. Fishwick, The Malagasy lithosphere-asthenosphere system constrained by independent initial temperature conditions: implications for extensional processes, American Geophysical Union Fall Meeting, San Francisco, CA, December, 2016.

Mantle Convection

Citron, R.I., M. Manga, and E. Tan, The Martian crustal dichotomy: a hybrid origin, The 48th Lunar and Planetary Science Conference, The Woodlands, TX, March, 2017.

He, Y., E.G. Puckett and M. Billen, A discontinuous Galerkin method with a bound preserving limiter for stable advection of non-diffusive fields in computational geodynamics, *Physics of the Earth and Planetary Interiors*, in press, DOI 10.1016/j.pepi.2016.12.001, 2016.

He, Y., E. Puckett and M. Billen, and L. Kellogg, Discontinuous Galerkin (DG) Method for solving time dependent convection-diffusion type temperature equation : Demonstration and Comparison with Other Methods in the Mantle Convection Code ASPECT, American Geophysical Union Fall Meeting, Dec., San Francisco, CA, 2016.

Puckett, E.G., D.L. Turcotte, L. H. Kellogg, H.V. Lokavarapu, Y. He and J.M. Robey, New numerical approaches to thermal convection in a compositionally stratified fluid, DI23A-2589, American Geophysical Union Fall Meeting, San Francisco, CA, Dec., 2016.

Puckett, E.G., D.L. Turcotte, Y. He, H.V. Lokavarapu, J. Robey and L.H. Kellogg, New numerical approaches for modeling thermochemical convection in a compositionally stratified fluid, DI43A-0339, American Geophysical Union Fall Meeting, New Orleans, LA, Dec.

Geodynamo

Featherstone, N. A., Design Aspects of the Rayleigh Convection Code, NG21-0144, American Geophysical Union Fall Meeting, New Orleans, LA, Dec., 2017.

Matsui, H., E. Heien, J. Aubert, J.M. Aurnou, M. Avery, B. Brown, B.A. Buffett, F. Busse, U.R. Christensen, C.J. Davies, N. Featherstone, T. Gastine, G.A. Glatzmaier, D. Gubbins, J.-L. Guermond, Y.-Y. Hayashi, R. Hollerbach, L. J. Hwang, A. Jackson, C.A. Jones, W.

Jiang, L.H. Kellogg, W. Kuang, M. Landeau, P. Marti, P. Olson, A. Ribeiro, Y. Sasaki, N. Schaeffer, R.D. Simitev, A. Sheyko, L. Silva, S. Stanley, F. Takahashi, S. Takehiro, J. Wicht, and A.P. Willis, Performance benchmarks for a next generation numerical dynamo model, *Geochem. Geophys. Geosys*, **17**, DUI:10.1002/2015GC006159, 2016.

Matsui, H. and B.A. Buffett, Implementation of dynamic sub-grid scale (SGS) model for dynamo simulations in a rotating spherical shell, GP23C-1354, American Geophysical Union Fall Meeting, San Francisco, CA, Dec., 2016.

Matsui, H., Lateral temperature variation through ICB to CMB in geodynamo simulations, JpGU-AGU Joint Meeting 2017, SIT22-35, Chiba, May 2017.

Matsui, H. and B.A. Buffett, Investigation of Sub-Grid Scale (SGS) terms for dynamo simulations in a rotating spherical shell, JpGU-AGU Joint Meeting 2017, MIS15-03, Chiba, May 2017.

Matsui, H. and B.A. Buffett, Comparison of Large eddy dynamo simulation using dynamic sub-grid scale (SGS) model with a fully resolved direct simulation in a rotating spherical shell, DI33A-0399, American Geophysical Union Fall Meeting, New Orleans, LA, Dec., 2017.

Noda, S, M. Ishiwatari, K. Nakajima, Y.O. Takahashi, S. Takehiro, M. Onishi, G.L. Hashimoto, K. Kuramoto, and Y.-Y. Hayashi, The circulation pattern and day-night heat transport in the atmosphere of a synchronously rotating aquaplanet: Dependence on planetary rotation rate, *Icarus*, **282**, 1–18, doi:10.1016/j.icarus.2016.09.004, 2017.

Takehiro, S., Sasaki, Y., Penetration of steady fluid motions into an outer stable layer excited by MHD thermal convection in rotating spherical shells, *Phys. Earth Planet. Inter.*, in press, doi:10.1016/j.pepi.2017.03.001, 2017.

Sasaki, Y., S. Takehiro., M. Ishiwatari, M. Yamada., Effects of radial distribution of thermal diffusivity on critical modes of anelasticthermal convection in rotating spherical shells, JpGU-AGU Joint Meeting 2017, SIT22-32, Chiba, May 2017.

Takehiro, S., Sasaki, Y., Penetration of compositional convection into the upper stably stratified layer in the Earth's outer core, JpGU-AGU Joint Meeting 2017, MG132-P93, May 21, Chiba, Japan, May 2017.