7. References

1

Shijie Zhong, David A. Yuen, Louis N. Moresi, and G. Schubert. Numerical methods for mantle convection. *Treatise on geophysics*, 7:227–252, 2007.

2

Thomas JR Hughes. The finite element method: linear static and dynamic finite element analysis. Courier Corporation, 2012.

3

Jean Braun. Pecube: a new finite-element code to solve the 3d heat transport equation including the effects of a time-varying, finite amplitude surface topography. *Computers & Geosciences*, 29(6):787–794, 2003.

4

C Thieulot. Elefant: a user-friendly multipurpose geodynamics code. *Solid Earth Discussions*, 6(2):1949–2096, 2014.

5

Paul J Tackley and Scott D King. Testing the tracer ratio method for modeling active compositional fields in mantle convection simulations. *Geochemistry*, *Geophysics*, *Geosystems*, 2003.

6

Thomas JR Hughes. The finite element method: linear static and dynamic finite element analysis. Courier Corporation, 2000.

7

Olgierd Cecil Zienkiewicz and Robert Leroy Taylor. *The finite element method, vol. 2.* Butterworth-Heinemann, 2000.

8

Thomas JR Hughes. A multidimentional upwind scheme with no crosswind diffusion. *Finite Element Methods for Convection Dominated Flows*, AMD 34, 1979.

9

Thomas JR Hughes. A theoretical framework for petrov-galerkin methods with discontinuous weighting functions: application to the streamline-upwind procedure. *Finite element in fluids*, 4:Chapter–3, 1982.

Boris JP Kaus, Hans Mühlhaus, and Dave A May. A stabilization algorithm for geodynamic numerical simulations with a free surface. *Physics of the Earth and Planetary Interiors*, 181(1-2):12–20, 2010.

11

Louis Moresi and Viatcheslav Solomatov. Mantle convection with a brittle lithosphere: thoughts on the global tectonic styles of the earth and venus. *Geophysical Journal International*, 133(3):669–682, 1998.

12

James D Byerlee. Brittle-ductile transition in rocks. *Journal of Geophysical Research*, 73(14):4741–4750, 1968.

13

Daniel Charles Drucker and William Prager. Soil mechanics and plastic analysis or limit design. *Quarterly of applied mathematics*, 10(2):157–165, 1952.

14

Viatcheslav S Solomatov and L-N Moresi. Scaling of time-dependent stagnant lid convection: application to small-scale convection on earth and other terrestrial planets. *Journal of Geophysical Research: Solid Earth*, 105(B9):21795–21817, 2000.

15

Victor Sacek. Post-rift influence of small-scale convection on the landscape evolution at divergent continental margins. *Earth and Planetary Science Letters*, 459:48–57, 2017.

16

Shun-ichiro Karato and Patrick Wu. Rheology of the upper mantle: a synthesis. *Science*, 260(5109):771–778, 1993.

17

Gayle C Gleason and Jan Tullis. A flow law for dislocation creep of quartz aggregates determined with the molten salt cell. *Tectonophysics*, 247(1-4):1–23, 1995.

18

PE Van Keken, SD King, H Schmeling, UR Christensen, D Neumeister, and M-P Doin. A comparison of methods for the modeling of thermochemical convection. *Journal of Geophysical Research: Solid Earth*, 102(B10):22477–22495, 1997.

19

F Crameri, H Schmeling, GJ Golabek, T Duretz, R Orendt, SJH Buiter, DA May, BJP Kaus, TV Gerya, and PJ Tackley. A comparison of numerical surface topography calculations in geodynamic modelling: an evaluation of the 'sticky air'method. *Geophysical Journal International*, 189(1):38–54, 2012.

Louis Moresi, Frédéric Dufour, and H-B Mühlhaus. A lagrangian integration point finite element method for large deformation modeling of viscoelastic geomaterials. *Journal of computational physics*, 184(2):476–497, 2003.

21

Paul J Tackley. Effects of strongly temperature-dependent viscosity on time-dependent, three-dimensional models of mantle convection. *Geophysical Research Letters*, 20(20):2187–2190, 1993.

22

Taras V Gerya and David A Yuen. Characteristics-based marker-in-cell method with conservative finite-differences schemes for modeling geological flows with strongly variable transport properties. *Physics of the Earth and Planetary Interiors*, 140(4):293–318, 2003.