Curriculum Vitae

YOSHIDA Masaki, Ph.D.

Senior Scientist,
Japan Agency for Marine-Earth Science and Technology (JAMSTEC), Japan

Born April, 1974 (Showa 49) in Tokushima Prefecture, southwest Japan

Specialties: Solid-earth dynamics/Geophysics/Geodynamics/Plate tectonics

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Professional positions

- Apr. 2019 – present
  Senior Scientist, Research Institute for Marine Geodynamics, Japan Agency for Marine-Earth Science and Technology
- Apr. 2010 – Mar. 2019
  Senior Scientist, Institute for Research on Earth Evolution/Department of Deep Earth Structure and Dynamics Research, Japan Agency for Marine-Earth Science and Technology
- Apr. 2006 – Mar. 2010
  Research Scientist, Institute for Research on Earth Evolution, Japan Agency for Marine-Earth Science and Technology
- Apr. 2003 – Mar. 2006
  Research Scientist, Earth Simulator Center, Japan Marine Science and Technology Center

Education

- Mar. 2003
  Ph.D. (Geophysics), Department of Earth and Planetary Science, Graduate School of Science, The University of Tokyo
- Mar. 2000
  M.S. (Geophysics), Department of Earth and Planetary Systems Science, Graduate School of Science, Hiroshima University
- Mar. 1998
  B.S. (Geology/Geophysics), Department of Earth and Planetary Systems Science, Faculty of Science, Hiroshima University

Publications

The complete publication list can be found at https://yoshida-geophys.jp/e/.

Curriculum Vitae

Selected first-author articles

1. Yoshida, M. and Yoshizawa, K., Continental drift with deep cratonic roots, *Annu. Rev. Earth Planet. Sci.*, 49, 117–139, 2021.
2. Yoshida, M., Formation of a future supercontinent through plate motion-driven flow coupled with mantle downwelling flow, *Geology*, 44(9), 755–758, 2016.
3. Yoshida, M. and Hamano, Y., Pangea breakup and northward drift of the Indian subcontinent reproduced by a numerical model of mantle convection, *Sci. Rep.*, 5, 8407, 2015.
4. Yoshida, M. and Santosh, M., Supercontinents, mantle dynamics and plate tectonics: A perspective based on conceptual vs. numerical models, *Earth-Sci. Rev.*, 105(1–2), 1–24, 2011.
5. Yoshida, M. Preliminary three-dimensional model of mantle convection with deformable, mobile continental lithosphere, *Earth Planet. Sci. Lett.*, 295(1–2), 205–218, 2010.
6. Yoshida, M. and Kageyama, A., Application of the Yin-Yang grid to a thermal convection of a Boussinesq fluid with infinite Prandtl number in a three-dimensional spherical shell, *Geophys. Res. Lett.*, 31(12), L12609, 2004.

Selected co-author articles

7. Katayama, I., Yoshida, M., and Hirauchi, K., Effects of rheological stratification and elasticity of lithosphere on subduction initiation, *Front. Earth Sci.*, 10, 988320, 2022.
8. Tajima, F., Yoshida, M., and Ohtani, E., Conjecture with water and rheological control for subducting slab in the mantle transition zone, *Geosci. Front.*, 6(1), 79–93, 2015.
9. Adam, C., King, S.D., Vidal, V., Rabinowicz, M., Jalobeanu, A., and Yoshida, M., Variation of the subsidence parameters, effective thermal conductivity, and mantle dynamics, *Earth Planet. Sci. Lett.*, 426, 130–142, 2015.
10. Seno, T. and Yoshida, M., Where and why do large shallow intraslab earthquakes occur?, *Phys. Earth Planet. Int.*, 141(3), 183–206, 2004.

About my research

I am engaged in research on solid-earth dynamics, in particular global tectonics and mantle dynamics, using geophysical approaches such as numerical experiments/simulations, theoretical analyses, and geophysical data analyses, in collaboration with seismologists, geologists, petrologists, mineralogists, and geochemists. My research is aimed at understanding the (i) thermal, mechanical, and compositional evolution of the mantle, (ii) onset conditions and mechanisms of plate tectonics, (iii) behaviour of subducted plates/crusts in the deep mantle, (iv) mechanisms and driving forces of the supercontinental cycle and continental drift, (v) coupling modes between mantle convection and core convection, (vi) tectonic and geological conditions for great earthquakes and trench migration, and (vii) dynamic links between surface tectonics and mantle convection, both on a global scale and in specified target areas.