

Creating future of solid Earth science with HPC: Discussion

*Takane Hori¹

1. R&D Center for Earthquake and Tsunami, Japan Agency for Marine-Earth Science and Technology

Due to the development in computer science and computational science, large-scale or many times forward simulations and/or inversion analyses have become available recently. In solid Earth science, large-scale seismic wave propagation and crustal deformation with high fidelity model based on high resolution observation data have been demonstrated; uncertainty in crustal deformation caused by material properties and structures can be investigated based on many-time calculations for different material properties and structures; fault slip inversion analyses for non-Gaussian error distribution, etc. Thus, we invited researchers who are facing problems in forward simulations and inversion analyses. In this talk, we will discuss how to solve such problems by the collaboration between computer & computational sciences and solid Earth science.

Keywords: high performance computing, high fidelity model, data analysis