STT59-07 Room:104 Time:May 20 15:45-16:00

Creating future of solid Earth science with high performance computing (HPC): Introduction

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In this session, we explore scientific and social issues to be solved in Earth science for the next 10-20 years using high performance computing (HPC). We will discuss future problems and prospects in the development of solid Earth science, especially for simulation technology in earthquake and tsunami disaster mitigation, new methods for big data analyses of seismic waves and crustal deformation obtained by high-density observation networks, construction of multi-scale solid Earth model, and so on. We will introduce the contents of the white paper of the future plans for computer science in various fields including solid Earth science.