[EJ] Evening Poster | M (Multidisciplinary and Interdisciplinary) | M-AG Applied Geosciences

[M-AG32]Marine Earth Informatics

convener:Seiji Tsuboi(JAMSTEC, Center for Earth Information Science and Technology), Keiko Takahashi(Japan Agency for Marine and Earth Science and Technology), Masaki Kanao(国立極地研究所)
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In advancing the research of marine Earth science, observation and computer simulation is an essential element. In recent years, the performance of the observation apparatus is dramatically improved, along with the means of observation is diversified. It is becoming possible to observe in a resolution, which was not imaginable so far. Such data to be generated from the observation is tremendously large in quantity and its quality is drastically improved. To handle these huge and high quality dataset for data analysis, we need to have a high speed and large memory computer system but such a system now becomes within reach in our hands by the recent dramatic improvement of high performance computer system. On the other hand, researchers who can use this kind of large-scale computer in their studies are still quite limited. In this session, we try to review the situation of observation data that has undergone a dramatic change regarded with both quality and quantity in recent years of marine Earth science research. We also try to review the situation from a professional standpoint of simulation about the status of the high performance computer system to analyze these 'big data'. Also we focus on the state of the art data analysis technique and aim to share the outlook from the professional standpoint of computational science and professional position of observation science about the future direction of the marine Earth informatics research.

[MAG32-P05]CAVELibWrapper: Development of a CAVELib Compatible Library for HMD-type VR Systems

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A C++ library is developed to facilitate porting the application software for CAVE-type VR systems to HMD-type VR systems (Oculus Rift and HTC VIVE). It is developed using Oculus SDK and OpenVR, and it emulates the function calls of CAVELib which is a commercial library for developing application software executable on CAVE-type VR systems. By using this library, users can develop application software for HMD-type VR systems by a function name same as CAVELib and it is possible to develop programs for CAVE-type VR systems and HMD-type VR systems with almost the same source code. As an example, porting of VFIVE which is an interactive visualization software for CAVE-type VR systems is introduced. Furthermore, other examples of software porting using this library will also introduces.