Introduction

Technology development is essential for advancing science. It provides tools for collecting new data set and analyzing new/old data set. In many cases, development of new technologies in collection and analysis of samples and data has closely linked to the breakthrough of scientific achievement. With this realization, IFREE has made great efforts to develop and innovate scientific technologies and techniques for the purpose of better understanding of the dynamics of the Earth including "deep and shallow", "geosphere and biosphere", and "present and past" of the Earth’s system. In this report, these progresses achieved by IFREE members during 2003-2008 are presented as individual articles. These articles are sectioned into Sampling and sample analysis, Seafloor observation, Geophysical networking, and Database technology.