Preface to the Special Issue on "Strong Ground Motion Prediction and Earthquake Tectonics in Urban Areas"

The Tokyo and Kansai metropolitan areas in Japan have been repeatedly devastated by large earthquakes along subduction zones or on nearby active faults. For example, the 1923 Kanto earthquake caused more than 100,000 fatalities in the Tokyo metropolitan area, and the 1995 Kobe (Hyogo-ken Nanbu) earthquake caused more than 6,000 fatalities in the Kansai metropolitan area. In order to mitigate these kinds of earthquake disasters, a five-year project called "Regional Characterization of the Crust in Metropolitan Areas for Prediction of Strong Ground Motion" started in 2002. This project is the first part of the "Special Project for Earthquake Disaster Mitigation in Urban Areas" ("DaiDaiToku Project I" in Japanese) supported by the Ministry of Education, Culture, Sports, Science and Technology (MEXT) of Japan.

During the project, two international workshops on "Strong Ground Motion Prediction and Earthquake Tectonics in Urban Areas" were held in 2004 and 2005 at the Earthquake Research Institute (ERI), University of Tokyo, and another on "Earthquakes in Urban Areas" was held in 2006 at Oxnard, California under the academic cooperation agreement between the ERI and Southern California Earthquake Center (SCEC). We thank help given by the MEXT, Disaster Prevention Research Institute (DPRI) of Kyoto University, and National Research Institute for Earth Science and Disaster Prevention (NIED), who jointly conducted the DaiDaiToku Project I.

This special issue consists of papers based on the extended abstracts of presentations and public lectures in the second international workshop. Their topics include earthquake sources, seismic profiling of faults and tectonic setting, earthquake observation, GPS measurements, strong ground motion predictions, seismic hazard assessments, and other related issues in urban areas. We believe them to advance studies on the earthquake disaster mitigation in urban areas of Japan and California at opposite ends of the Pacific ocean.

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