

## Preface of Special Issue on “Reconnaissance Report on the 2003 Bam Earthquake in Southeastern Iran”

This is a reconnaissance report on the Bam earthquake ( $M_w=6.5$ ), which occurred in southeastern Iran on December 26, 2003. This earthquake caused catastrophic damage to Bam city and neighboring villages with a collective population of about 142,000. 26,271 persons were killed [*Statistics Center of Iran*] and tens of thousands of people were injured. This means that about 19% of the population in and around Bam city were killed. The well-known historic citadel Arg-e-Bam, which was the biggest adobe (mud brick) complex in the world and recently added to the list of World heritage sites by UNESCO, was also severely damaged by the Bam earthquake (Fig. 1 next page). The main reason for such massive damage is the weakness of adobe and brick houses. However, the damage was disproportionately and unexpectedly large in comparison with the magnitude of the earthquake. The Bam fault (Fig. 2 next page), which was well known before the earthquake, extends along the west side of Baravat village, about 5 km southeast of Bam city. Just after the earthquake it was supposed that the mainshock had occurred in the geological Bam fault. However, clear evidence of big dislocation on this fault could not be found (Okumura *et al.* in this volume). The earthquake has drawn strong interest among researchers and those who are concerned about earthquake disaster mitigation in Japan, because earthquakes with such a magnitude have occurred in the past and will occur in the near future under urban areas in Japan.

To investigate seismological and geological issues, earthquake damage to buildings and lifelines, and rescue and relief, Japanese reconnaissance teams were dispatched to Bam city mainly with grand-in aid for scientific research (No. 15800013) from Monbu-Kagaku-Sho (The Ministry of Education, Culture, Sports, Science and Technology of Japan). This special issue presents the papers of those investigations. We thank the Earthquake Research Institute (Dr. Makoto Ueshima in charge of Scientific Report Committee), the University of Tokyo for allowing presentation of these papers in this special issue of the Bulletin of the Earthquake Research Institute.

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Fig. 1. The historic citadel sites Arg-e-Bam, which was added to the list of world heritage on July, 2004, after the Bam earthquake. Photograph by Sadaomi Suzuki on February 6, 2004.



Fig. 2. The Bam scarp (Bam fault) southwest of Baravat village at the Loc. 4 in the report by Okumura *et al.* (See the text in this volume). Here the scarp is about 15m high and partly buried with recent alluvial fan deposit from a stream cutting into the scarp. Members of the post-earthquake survey are measuring the profile of the scarp with RTK-GPS. Photograph by Koji Okumura on January 31st, 2004.