

## Introduction

When large earthquakes, like the **1995 Great Hanshin-Awaji (Kobe) earthquake**, hit populated areas, no matter where on the Globe, they yield casualties, sorrow, and destruction, and leave deep and everlasting signs in the lives of survivors. However, for scientists, the occurrence of large earthquakes is the only way for testing present knowledge on earthquakes. At the same time it provides a new impulse toward a better understanding of these disastrous events.

The **1995 Great Hanshin-Awaji (Kobe) earthquake** gave start to new programs in all earthquake related disciplines from traditional seismology to earthquake engineering and geology. The geological study of active faults for the purpose of understanding their seismic potential (recently defined as earthquake geology) is a relatively young discipline, mainly developed in the Western United States and Japan during the past two decades.

The principal aims of this discipline are (i) describing the seismic source from its geologic and geomorphic signature, and (ii) extending back in time, up to thousands of years, the historical (rarely longer than 1000 yr) and instrumental (less than 100 yr long) catalogues of seismicity, by recognizing and characterizing earthquakes of the past in the geologic records.

Thus, earthquake geology allow us to observe several seismic cycles on the same fault. On one hand, this is a contribution to the understanding of the seismogenic processes and particularly of the recurrence of large earthquakes. On the other hand, it has a direct social impact because of its direct applicability for seismic hazard assessment. The **1995 Great Hanshin-Awaji (Kobe) earthquake** increased substantially our awareness of the need for active faulting studies in earthquake-prone countries and it is following this lesson that we are organizing the **Hokudan International Symposium and School on Active Faulting**.

During the **1995 Great Hanahin-Awaji (Kobe) earthquake**, the Nojima fault ruptured the ground surface of Hokudan town in Awaji Island as a primary part of the seismogenic fault. This surface faulting was the first significant rupture for modern Japanese seismology. At the same time, the fault was the source of the severest earthquake hazard in Japan since *1923 Kanto earthquake*. The scientific significance together with the harsh disaster evoked phenomenal national attention on active faulting. Since then, Japanese federal and local governments have made concentrated efforts to understand and evaluate seismic risks from active faults. Meantime, in international context, the *1989 Loma Prieta*, *1992 Landers*, and *1994 Northridge earthquakes* and consequent hazards pushed active fault studies forward to carry out substantial seismic hazard assessment not only in California but also in entire United States, Europe, and other areas in the world. The disaster caused by the earthquakes in August and November 1999 in Turkey, and September 1999 in Taiwan evidently demonstrated the needs for active fault research and hazard assessment.

The Nojima fault is a symbolic landmark for the people who devoted for, suffered from, and live together with active faults, and will be a milestone of the research for the new millenium. Hokudan town, Japanese scientists and International Lithosphere Program deeply recognized the significance of this and invite those who concerned about active faulting to the **Hokudan International Symposium and School on Active Faulting**.

The objective of the **Hokudan International Symposium and School on Active Faulting** is to present the latest results on active fault research in Japan and all over the world to international audience including the sufferers of Kobe earthquake, scientists, engineers, and practitioner from developing countries in Asia and Pacific regions. The hottest research topics will be reviewed for the strategy to mitigate hazard in better international and multidisciplinary cooperation. The strategy to benefit the community in large from active fault research will also be an important objective. The school aims to provide the participants from Asia and Pacific regions as well as from Japan and other countries with information and techniques on the fundamental as well as sophisticated applications of the active fault research.

*Daniela Pantosti, David P. Schwartz, and Koji Okumura*