

Implementation of Frontier Technology for Seismic Protection (Session Hosted by JAEE)
S05-01 Spectacular Projects of Base-Isolated Buildings

Conveners:

Akira Wada, Professor, Tokyo Institute of Technology
Toru Kobori, Principal, Nikken Sekkei inc.

Description:

Japan Association for Earthquake Engineering (JAEE) is pleased to propose hosting special sessions for the 14th World Conference on Earthquake Engineering. The sessions address progress of frontier technologies to effectively mitigate seismic disaster. One of the most significant examples of such technologies would be the base-isolation scheme for buildings that controls both seismic accelerations and story drift of the superstructure. Another would be the passive control that is known to be an alternative effective scheme for a wide range of building types such as tall buildings, large span structures, and residential houses. Currently most major buildings, and even many individual houses in Japan utilize either of these schemes. The other scheme, which is rapidly growing and can significantly benefit the society would be the early earthquake warning system. The system will be brought into actual use nationwide in Japan from October 2007.

This proposed session refers to the first scheme mentioned above. Because Japan has had most implementations of the base-isolation scheme in the world, JAEE would like to take a liberty of hosting the session called “Part 1 - Spectacular Projects of Base-Isolated Buildings”. The intent is to present very unique and outstanding projects that are significant extension of the base-isolation scheme, thereby promoting its use for enhancing safety of structurally challenging building projects in seismically active regions. Moreover, presentations include buildings requiring high seismic performance, such as headquarter buildings, computer centers, hospitals, and super high-rise buildings. In addition, standard base-isolation design method will be summarized in order to promote the use of scheme for regular buildings as well.