

## Foreword

2017 will be the jubilee year for the ERS, which was founded in the IIS in 1967.

The members of ERS have steadily developed and disseminated the technology of earthquake resistant and seismic retrofit engineering since then. After the Kobe earthquake in 1995, the seismic activity around Japan has seemed to become more active than before. We actually have had several major earthquakes, more frequently than before. These earthquakes have provided the opportunity to the Japanese earthquake resistant technology to be tested, checked and improved. As the result, with tremendous effort of Japanese researchers, engineers and authorities, the number of collapsed structures by the seismic impacts has been gradually reduced. However, on the other hand, damage to non-structural components or failure due to geotechnical phenomena have come to be more visible and recognized.

The various and dire calamities, such as Tsunami after the East Japan Earthquake in 2011, the double main shocks of intensity seven and the huge land slide at Kumamoto this year never allow us to be relieved with feeling that our preparedness is enough. Japan is geographically located at the place to be attacked by various natural disasters. In such a place on the earth, being beaten by devastating natural catastrophes endlessly, Japanese people have survived for long time. They have learned how to live with and recover themselves from these unavoidable hardships. They appreciate and admire the blessing of nature with beautiful seasons. This way of life requires obedient, tough and positive mind, and inherited amnesia. We should say that only the people who have gens of this feature could survive in this country.

In such a country, the members of ERS have been continuing the effort to mitigate the loss of the country and protect the life of people, as much as they can, with the most advanced knowledge and technology.

Dr. Toshikata Sano, the father of the earthquake resistant design, had initiated so-called the seismic design a hundred years ago. It has been so successful that the number of collapsed houses and the casualties has been clearly reduced. Now the focus of the problem shifted from how to prevent the collapse to how to recover the daily life of people even after the huge impact of major earthquakes. The technology of earthquake resistance has become rather standard now. We need to progress our steps to the next stage of damage control engineering in order to lead the society more resilient and peaceful. The mission of the ERS continues to the next stage.

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