

Foreword

Twenty five years have passed since the first volume of the Bulletin of Earthquake Resistant Structure Research Center was published. Emeritus Professor S. Okamoto advocated establishing this center, and a voluntary association of researchers of three different departments in this Institute was the start of this center. In those days around 1967, dynamic response analysis using response spectra was growing in popularity, and many researchers were involved in studies on damping of structures and observations of their seismic responses to develop the method into practical one. Social demand and rapid development in many research fields including not only soil mechanics, material engineering and structural engineering but also electronics, sensing technology and so on accelerated the development of the earthquake engineering, and expanded its coverage.

It goes without saying that we still have so many unsolved problems including estimation of nonstationary earthquake occurrence, properties of strong motions, estimation of seismic disaster risk from a social point of view and so on. And we must pile up experience upon experience to solve these difficult problems. On the other hand, it seems that we now have many sophisticated tools for dynamic structural analyses. And the earthquake engineering in this field seems to be nearing completion. However, when we come to put our knowledges in this field to practical use, I regret to say we will come to know again that many phenomena still remain unexplained. Important problems in the field of structural dynamics such as stability of foundations and soil-structure interaction should be reviewed and investigated thoroughly in their broader aspects in order to carry our knowledges into the next new step of development.



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