1. Record Nr. UNINA9910299390803321

Titolo	Advances in Indian Earthquake Engineering and Seismology : Contributions in Honour of Jai Krishna / / edited by M. L. Sharma, Manish Shrikhande, H. R. Wason
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2018
ISBN	3-319-76855-7
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (XL, 431 p. 210 illus., 23 illus. in color.)
Disciplina	551
Soggetti	Natural disasters Environmental sciences Engineering geology Engineering—Geology Foundations Hydraulics Buildings—Design and construction Building Construction Engineering, Architectural Fire prevention Environmental engineering Biotechnology Natural Hazards Environmental Science and Engineering Geoengineering, Foundations, Hydraulics Building Construction and Design Fire Science, Hazard Control, Building Safety Environmental Engineering/Biotechnology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Part I: Engineering Seismology -- Chapter1. Engineering Seismology --

Chapter2. Developments in Seismological Instrumentation -- Chapter3. Strong Motion Instrumentation Programme in India. Chapter4. Strong Motion Studies -- Chapter5. New Regression Relations for Magnitude Conversion -- Chapter6. Tsunami Hazard Assessment -- Part 2: Geotechnical Earthquake Engineering -- Chapter7. Recent Developments in Liquefaction, stability analysis of retaining structures, shallow foundations and pile foundations -- Chapter8. Seismic Analysis and Design of Retaining Walls and Shallow Foundations -- Chapter9. Ground Improvement for Mitigating Liquefaction Hazard -- Chapter10. Recent Advances in Soil Dynamics -- Part 3: Structural Dynamics -- Chapter11. Developments in Earthquake Resistant Design of Bridges -- Chapter12. Developments in Earthquake Resistant Design of Reinforced Concrete Buildings -- Chapter13. Earthquake Resistant Design of Masonry Buildings -- Chapter14. Developments in Seismic Analysis and Displacement Based Design -- Chapter15. A Template for the Earthquake Resistant Design Code -- Chapter16. System Identification in Structural Dynamics -- Chapter17. A Review of the Response Spectrum Method.

Sommario/riassunto

This edited volume is an up-to-date guide for students, policy makers and engineers on earthquake engineering, including methods and technologies for seismic hazard detection and mitigation. The book was written in honour of the late Professor Jai Krishna, who was a pioneer in teaching and research in the field of earthquake engineering in India during his decades-long work at the University of Roorkee (now the Indian Institute of Technology Roorkee). The book comprehensively covers the historical development of earthquake engineering in India, and uses this background knowledge to address the need for current advances in earthquake engineering, especially in developing countries. After discussing the history and growth of earthquake engineering in India from the past 50 years, the book addresses the present status of earthquake engineering in regards to the seismic resistant designs of bridges, buildings, railways, and other infrastructures. Specific topics include response spectrum superposition methods, design philosophy, system identification approaches, retaining walls, and shallow foundations. Readers will learn about developments in earthquake engineering over the past 50 years, and how new methods and technologies can be applied towards seismic risk and hazard identification and mitigation.