Record Nr. UNINA9911006653203321 Dynamic soil-structure interaction: current research in China and **Titolo** Switzerland / / edited by Zhang Chuhan and John P. Wolf Pubbl/distr/stampa Amsterdam: New York: Elsevier, 1998 **ISBN** 1-281-11955-5 9786611119553 0-08-053058-3 Descrizione fisica 1 online resource (335 p.) Collana Developments in geotechnical engineering;;83 ZhangChuhan Altri autori (Persone) WolfJohn P Disciplina 624.1/5136 Soggetti Soil-structure interaction Soil-structure interaction - Research - China Soil-structure interaction - Research - Switzerland Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Proceedings of the Chinese-Swiss Workshop on Soil-Structure Interaction, held July 14-18, 1997, at Tsinghua University, Beijing. Nota di bibliografia Includes bibliographical references and index. Nota di contenuto Front Cover: Dynamic Soil-Structure Interaction: Copyright Page: Preface; Contents; Chapter 1. Simple Physical Models for Foundation Dynamics; Chapter 2. The Scaled Boundary Finite-Element Method-Alias Consistent Infinitesimal Finite-Element Cell Method-for Unbounded Media: Chapter 3. Effects of Soil-Structure Interaction on Nonlinear Response of Arch Dams; Chapter 4. Application of Transmitting Boundaries to Non-Linear Dynamic Analysis of an Arch Dam-Foundation-Reservoir System; Chapter 5. A Decoupling Numerical Simulation of Wave Motion Chapter 6. Scattering of Plane SH Waves by Cylindrical Surface Topography of Circular-Arc Cross-SectionChapter 7. Applications of Infinite Elements to Dynamic Soil-Structure Interaction Problems; Chapter 8. Non-Reflecting Boundary Conditions for Wave Propagation Problems and Their Stability Analysis; Chapter 9. Boundary Element Method for SH Waves in Elastic Half Plane with Stochastic and Heterogeneous Properties; Chapter 10. Effects of Soil-Structure

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Sommario/riassunto

Dynamic Soil-structure interaction is one of the major topics in earthquake engineering and soil dynamics since it is closely related to the safety evaluation of many important engineering projects, such as nuclear power plants, to resist earthquakes. In dealing with the analysis of dynamic soil-structure interactions, one of the most difficult tasks is the modeling of unbounded media. To solve this problem, many numerical methods and techniques have been developed. This book summarizes the most recent developments and applications in the field of dynamic soil-structure interaction, both in