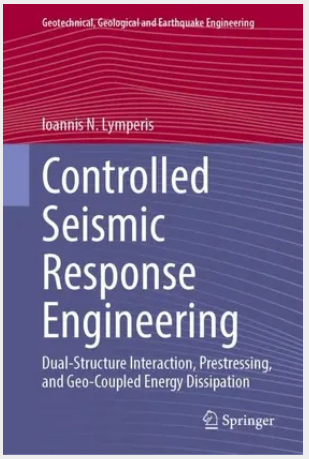
Lymperis

Controlled Seismic Response Engineering

Dual-Structure Interaction, Prestressing, and Geo-Coupled Energy Dissipation

This book presents an alternative framework for seismic response control based on geo-coupled structural interaction and controlled seismic energy redistribution. The proposed system combines a prestressed, ground-anchored inner core with an elastic external frame, enabling controlled energy dissipation, reduction of relative displacement, and transfer of inertial demand into the surrounding geomass. The approach integrates theoretical mechanics, numerical simulation, and experimental investigation to formulate a coherent design philosophy aimed at reducing seismic damage while maintaining structural integrity. Emphasis is placed on physical transparency, reproducibility of simulations, and practical relevance for contemporary seismic engineering.

This book presents an alternative framework for seismic response control based on geo-coupled structural interaction and controlled seismic energy redistribution. The proposed system combines a prestressed, ground-anchored inner core with an elastic external frame, enabling controlled energy dissipation, reduction of relative displacement, and transfer of inertial demand into the surrounding geomass. The approach integrates theoretical mechanics, numerical simulation, and experimental investigation to formulate a coherent design philosophy aimed at reducing seismic damage while maintaining structural integrity. Emphasis is placed on physical transparency, reproducibility of simulations, and practical relevance for contemporary seismic engineering.



139,09 €
129,99 € (zzgl. MwSt.)

vorbestellbar, Erscheinungstermin ca. August 2026

Artikelnummer: 9783032297259
Medium: Buch
ISBN: 978-3-032-29725-9
Verlag: Springer Nature Switzerland AG
Erscheinungstermin: 29.08.2026
Sprache(n): Englisch
Auflage: Erscheinungsjahr 2026
Serie: Geotechnical, Geological and Earthquake Engineering
Produktform: Gebunden
Gewicht: 645 g
Seiten: 293
Format (B x H): 160 x 241 mm

Kundenservice Verlag Dr. Otto Schmidt KG
Neumannstraße 10, 40235 Düsseldorf | kundenservice@otto-schmidt.de | 0221-93738-997 (Inland)