

Contents

1	Surrealism in Facing the Earthquake Risk	1
	Mete A. Sözen	
2	Rapid Seismic Assessment Procedures for the Turkish Building Stock	15
	Ahmet Yakut, M. Altuğ Erberik, Alper Ilki, Haluk Sucuoğlu, and Sinan Akkar	
3	Post-Earthquake Risk-Based Decision Making Methodology for Turkish School Buildings	37
	Ufuk Yazgan and Reşat Atalay Oyguc	
4	Proposed Vulnerability Functions to Estimate the Real Damage State of RC Buildings After Major Turkish Earthquakes	47
	Ulgen Mert Tugsal and Beyza Taskin	
5	Probabilistic Path Finding Method for Post-Disaster Risk Estimation	61
	Florin Leon and Gabriela M. Atanasiu	
6	Seismic Behavior of Thin-Bed Layered Unreinforced Clay Masonry Shear Walls Including Soundproofing Elements	77
	Christophe Mordant, Matt S. Dietz, Colin A. Taylor, André Plumier, and Hervé Degée	
7	Assessing Seismic Vulnerability of Unreinforced Masonry Walls Using Elasto-Plastic Damage Model	95
	Basheer H. Al-Gohi, Cem Demir, Alper Ilki, Mohammed H. Baluch, and Muhammad K. Rahman	

8	Implementation of Experimentally Developed Methodology for Seismic Strengthening and Repair of Historic Monuments	115
	Veronika Shendova, Zoran T. Rakicevic, Mihail Garevski, Roberta Apostolska, and Zivko Bozinovski	
9	Shaking Table Tests of a Full-Scale Two-Storey Pre-Damaged Natural Stone Building Retrofitted with the Multi-Axial Hybrid Textile System “Eq-Grid”	155
	Lothar Stempniewski and Moritz Urban	
10	Application of Mesh Reinforced Mortar for Performance Enhancement of Hollow Clay Tile Infill Walls	171
	Pourang Ezzatfar, Barış Binici, Özgür Kurç, Erdem Canbay, Haluk Sucuoğlu, and Güney Özcebe	
11	Shake Table Tests on Deficient RC Buildings Strengthened Using Post-Tensioned Metal Straps	187
	Reyes Garcia, Iman Hajirasouliha, Kypros Pilakoutas, Yasser Helal, Yaser Jemaa, Maurizio Guadagnini, Mihail Petkovski, Philippe Mongabure, Mihaela Anca Ciupala, Nicholas Kyriakides, Christis Z. Chrysostomou, Alper Ilki, M. Saiid Saiidi, Lluís Torres, Nicolae Taranu, and Mihai Budescu	
12	Bond Strength of Lap Splices in FRP and TRM Confined Concrete: Behavior and Design	203
	Dionysios Bournas and Thanasis Triantafyllou	
13	Finite Element Modeling of Seismic Performance of Low Strength Concrete Exterior Beam-Column Joints	221
	Danish Ahmed, Mohammed H. Baluch, Muhammad K. Rahman, and Alper Ilki	
14	FRP Local Retrofit of Non-Conforming RC Beam-Column Joints	243
	Andrea Prota, Marco Di Ludovico, Alberto Balsamo, Claudio Moroni, Mauro Dolce, and Gaetano Manfredi	
15	Seismic Rehabilitation of Concrete Buildings by Converting Frame Bays into RC Walls	261
	Michael N. Fardis, Antonis Schetakis, and Elias Strepelias	
16	Pseudo-Dynamic Tests of 4-Storey Non-Ductile Frames with RC Infilling of the Bay	281
	Elias Strepelias, Xenophon Palios, Stathis N. Bousias, and Michael N. Fardis	
17	RC Infilling of Existing RC Structures for Seismic Retrofitting	303
	Christis Z. Chrysostomou, Nicholas Kyriakides, Martin Poljanšek, Fabio Taucer, and Francisco Javier Molina	

18 Hybrid Control of a 3-D Structure by Using Semi-Active Dampers	329
Gürsoy Turan	
19 Substructure Pseudo-Dynamic Tests on Seismic Response Control of Soft-First-Story Buildings	341
Hideto Kanno, Tetsuya Nishida, and Jun Kobayashi	
20 Towards Robust Behavioral Modeling of Reinforced Concrete Members	355
Kutay Orakcal	
21 Earthquake Engineering Experimental Facility for Research and Public Outreach	379
Ece Eseller-Bayat, Seda Gokyer, and Mishac K. Yegian	
22 Physical Modeling for the Evaluation of the Seismic Behavior of Square Tunnels	389
Grigorios Tsinidis, Charles Heron, Kyriazis Pitilakis, and Gopal Madabhushi	
23 Susceptibility of Shallow Foundation to Rocking and Sliding Movements During Seismic Loading	407
Charles Heron, Stuart Haigh, and Gopal Madabhushi	
24 Centrifuge Modeling of Liquefaction Effects on Shallow Foundations	425
Andreia Sofia Pedroso da Silva Marques, Paulo Alexandre Lopes de Figueiredo Coelho, Stuart Haigh, and Gopal Madabhushi	
25 Stability Control of Rafted Pile Foundation Against Soil Liquefaction	441
Ahmed Mohammed Youssef Mohammed and Koichi Maekawa	
26 Experimental Assessment of Seismic Pile-Soil Interaction	455
Armando L. Simonelli, Luigi Di Sarno, Maria Giovanna Durante, Stefania Sica, Subhamoy Bhattacharya, Matt S. Dietz, Luiza Dihoru, Colin A. Taylor, Roberto Cairo, Andrea Chidichimo, Giovanni Dente, Arezou Modaressi, Luìs A. Todo Bom, Amir M. Kaynia, George Anoyatis, and George Mylonakis	
27 Experimental Investigation of Dynamic Behavior of Cantilever Retaining Walls	477
Panos Kloukinas, Augusto Penna, Anna Scotto di Santolo, Subhamoy Bhattacharya, Matt S. Dietz, Luiza Dihoru, Aldo Evangelista, Armando L. Simonelli, Colin A. Taylor, and George Mylonakis	
Index	495

Seismic Evaluation and Rehabilitation of Structures

Ilki, A.; Fardis, M.N. (Eds.)

2014, XIX, 497 p. 359 illus., 169 illus. in color.,

ISBN: 978-3-319-00458-7