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	Nota di contenuto	Fundamentals of Seismic Loading on Structures; Contents; Preface; Acknowledgements; 1 Introduction to Earthquakes; 1.1 A Historical Perspective; 1.1.1 Seismic Areas of the World; 1.1.2 Types of Failure; 1.1.3 Fault Movement and its Destructive Action; 1.2 The Nature of Earthquakes; 1.3 Plate Tectonics; 1.3.1 Types of Plate Boundaries; 1.3.2 Convergent and Divergent Boundaries; 1.3.3 Seismicity and Plate Tectonics; 1.4 Focus and Epicentre; 1.5 Seismic Waves; 1.5.1 Body Waves; 1.5.2 Surface Waves; 1.6 Seismometers; 1.6.1 Early Seismographs; 1.6.2 Modern Developments
		1.6.3 Locating the Epicentre1.7 Magnitude and Intensity; 1.7.1 Magnitude Scales; 1.7.2 Seismic Moment; 1.7.3 Intensity Scales; 1.8 Reid's Elastic Rebound Theory; 1.9 Significant Milestones in Earthquake Engineering; 1.10 Seismic Tomography; 1.10.1 The Challenges Ahead; 1.11 References; 2 Single Degree of Freedom Systems; 2.1 Introduction; 2.2 Free Vibration; 2.2.1 Equations of Motion with Damping; 2.2.2 Damping Ratio; 2.2.3 Treatment of Initial Conditions; 2.3 Periodic Forcing Function; 2.3.1 Magnification Factors; 2.3.2 Damping; 2.3.3 Support Motion; 2.4 Arbitrary Forcing Function
		2.4.1 Duhamel Integral2.4.2 Numerical Evaluation; 2.4.3 Worked

Sommario/riassunto	This book provides a practical guide to the basic essentials of earthquake engineering with a focus on seismic loading and structural design. Benefiting from the author's extensive career in structural and earthquake engineering, dynamic analysis and lecturing, it is written from an industry perspective at a level suitable for graduate students. Fundamentals of Seismic Loading on Structures is organised into four major sections: introduction to earthquakes and related engineering problems, analysis, seismic loading, and design concepts.From a practical perspective, reviews lin