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Autore	Madabhushi Gopal
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Altri autori (Persone)	KnappettJonathan HaighStuart
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Nota di contenuto	1. Performance of pile foundations. 1.1. Introduction. 1.2. Performance of pile foundations during earthquake loading. 1.3. Soil liquefaction and lateral spreading. 1.4. Performance of pile foundations in past earthquakes. 1.5. Modes of pile failure in liquefiable soils. 1.6. Summary -- 2. Inertial and kinematic loading. 2.1. Pile behaviour under earthquake loading. 2.2. Analysis of laterally loaded piles under static conditions. 2.3. Analysis of laterally loaded piles under earthquake loading. 2.4. Kinematic response in level ground. 2.5. Kinematic loading in laterally spreading soil. 2.6. Inertial response. 2.7. p-y analysis of piles. 2.8. Limit equilibrium analysis of piles subjected to earthquake loading. 2.9. Provisions in Eurocode 8. 2.10. Summary -- 3. Accounting for axial loading in level ground. 3.1. Liquefaction as a foundation hazard. 3.2. Influence of axial loading on pile failure. 3.3. Axial load transfer due to liquefaction. 3.4. Pile settlement. 3.5. Guidelines for designing against bearing failure. 3.6. Instability of

	single piles and pile groups. 3.7. Bearing vs. buckling failure. 3.8. Summary -- 4. Lateral spreading of sloping ground. 4.1. Liquefaction-induced lateral spreading. 4.2. Simple methods to estimate the extent of lateral spreading. 4.3. Effects of lateral spreading on pile foundations. 4.4. Recommendations on estimation of lateral loads for pile design -- 5. Axial loading on piles in laterally spreading ground. 5.1. Introduction. 5.2. Phasing of loads. 5.3. Peak lateral response of piled foundations. 5.4. Residual lateral response of piled foundations. 5.5. Validation of effects of axial pile load. 5.6. Recommendations for designing piles in laterally spreading ground -- 6. Design examples. 6.1. Introduction. 6.2. Design of piles under static loading. 6.3. Inertial and kinematic loading on piles in level ground. 6.4. Design of piles in level liquefiable ground. 6.5. Design of piles in sloping liquefiable ground. 6.6. Summary of inclusive design procedure.
Sommario/riassunto	Pile foundations are the most common form of deep foundations that used both onshore and offshore to transfer large superstructure loads into competent soil strata. This book provides many case histories of failure of pile foundations due to earthquake loading and soil liquefaction.