Record Nr. UNINA9910919647703321 Autore Cheng Xinglei Titolo Dynamic Analysis of Offshore Wind Turbine Foundations in Soft Clays / / by Xinglei Cheng, Dechun Lu, Piguang Wang Singapore:,: Springer Nature Singapore:,: Imprint: Springer,, 2025 Pubbl/distr/stampa **ISBN** 9789819794546 9819794544 Edizione [1st ed. 2025.] Descrizione fisica 1 online resource (262 pages) Collana **Engineering Series** Altri autori (Persone) LuDechun WangPiguang Disciplina 627.98 Soggetti Offshore structures Wind power Offshore Engineering Wind Energy Lingua di pubblicazione Inglese **Formato** Materiale a stampa Monografia Livello bibliografico Introduction -- A simple single bounding surface model of undrained Nota di contenuto saturated clays -- A cyclic p-y elastoplastic model applied to lateral loaded pile in soft clays -- Lateral cyclic responses of OWT monopile in soft clavs -- Seismic response of OWT monopile in clavs -- Dynamic responses of OWT tripod pile in clays -- Seismic responses of OWT monopod suction bucket in clays -- Lateral cyclic responses of OWT tripod suction bucket in clays -- Seismic responses of OWT tripod suction bucket in clays -- Summary and prospect. This open access book. This book primarily introduces the dynamic Sommario/riassunto analysis of typical offshore wind turbines foundations in soft clays under marine environmental loads. The dynamic behaviors and bearing performance of offshore wind turbines foundations will be interesting to students and researchers in offshore geotechnical engineering. This book systematically elaborates on numerical analysis methods and dynamic response laws of offshore wind turbine foundations using the

calculation flowchart, numerical model diagram, and displacement vector diagram, etc. It can guide readers to apply numerical methods to explore dynamic behavior of offshore foundations, and address the

challenges in the design of offshore wind turbine foundation.