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Nota di contenuto	THEME 5: SOIL DYNAMICS AND EARTHQUAKE GEOTECHNICAL ENGINEERING -- Effects of Dynamic Loading on Properties of Saturated Sand -- A Study on Mitigation of Tilting Problems in Liquefiable Soils -- Effect of Soil Heterogeneity on Soil Structure Interaction -- Nonlinear 1D Ground Response Analysis of Soil Profile using Different Procedures -- Fuzzy - Probability approach in Seismic Hazard Analysis -- Effect of Saturation on Dynamic Properties of Solani Sand -- Effects of Discontinuities on Rock Slope -- In-Direct Estimation of Local Soil Response in the Light of Past as Well as Recent Earthquakes in the Shillong Plateau -- Development of Predictive Equation for Vibration due to DMC Piling -- Effect of Fines on Pore Pressure Development During Cyclic Loading -- Comparative Study of Dynamic Response Analysis of Shallow Foundation on Layered Soils -- Shake Table Studies on Embankments on Liquefiable Soil -- Development of Design Charts for the Dynamic Active Thrust From C – Soil Backfills -- Pseudo-Static Stability Analysis of MSW Landfills in Goa -- Study of Local Site Effects for Strong Motion Recording Stations of Delhi -- Mitigation of Dynamic Loading Effects on Retaining Walls using Recycled Tire Chips -- An

Experimental Study on Seismic Soil-Pile Foundation-Structure Interaction in Soft Clay -- THEME 8: ANALYTICAL AND NUMERICAL MODELING IN GEOMECHANICS -- Numerical Modelling of Mechanised Tunnelling in Clay -- Numerical Analysis of Stone Columns in Soft Clay with Geotextile Encasement and Lime Stabilisation -- Stability Analysis of a Typical Sunderban Embankment During Diurnal Tidal Cycle -- Rock Mass Slope Stability Analysis Under Static and Dynamic Conditions in Mumbai, India -- Numerical Analysis of MSE Wall using Finite Element and Limit Equilibrium Methods -- Field and Numerical Investigation on Time Dependent Behaviour of Jute Geotextile (JGT) Reinforced Rural Road -- Parametric Study on the Behaviour of Combined Pile Raft Foundation Founded on Multi-Layered Soil Using Plaxis 3D -- Numerical Analysis of Seismic Response of a Piled Raft Foundation System -- Ultimate Pullout Capacity of Isolated Helical Anchor using Finite Element Analysis -- THEME 9: GEOHAZARDS: ANALYSIS, MITIGATION AND MANAGEMENT -- Landslide Risk Assessment and Mitigation - a Case Study -- A Catastrophe Theory for Planar Sliding Slope -- Properties of Sand – Rubber Tyre Shreds Mixtures for Seismic Isolation Applications.

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### Sommario/riassunto

This book gathers selected proceedings of the annual conference of the Indian Geotechnical Society, and covers various aspects of soil dynamics and earthquake geotechnical engineering. The book includes a wide range of studies on seismic response of dams, foundation-soil systems, natural and man-made slopes, reinforced-earth walls, base isolation systems and so on, especially focusing on the soil dynamics and case studies from the Indian subcontinent. The book also includes chapters addressing related issues such as landslide risk assessments, liquefaction mitigation, dynamic analysis of mechanized tunneling, and advanced seismic soil-structure-interaction analysis. Given its breadth of coverage, the book offers a useful guide for researchers and practicing civil engineers alike. .

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