

Editorial Preface

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Happy New Year to our readers, contributors, Associate Editors and Editorial Board Members, to many independent referees, to members of the Editorial team. We wish everyone a happy and prosperous 2018.

This issue, 9(1), has 6 key papers focusing on the behaviour of foundations and infrastructure subjected to dynamic/seismic loads. The papers selected in this issue include numerical and analytical methods, field and laboratory testing and case studies.

The manuscript on ‘Free-Field Seismic Response Analysis: The Piazza dei Miracoli in Pisa’ presents the one-dimensional site response analysis for Pizza dei Miracoli in Pisa. The elastic response spectra have been compared with the Italian Building codes. The paper also highlights the importance of the inclusion of few key parameters on building codes.

The study on ‘Behavior of Flexible Buried Pipes under Geocell Reinforced Subbase Subjected to Repeated Loading’ investigate the performance of geocell reinforcement on the behaviour of buried pipe. The laboratory experiments and numerical model clearly captured the role of geocell in controlling the vibration and pressure on buried pipes.

The paper titled ‘Benefits of Probabilistic Soil-Foundation-Structure Interaction Analysis’ discuss the beneficial effect of considering soil and structural parameters in the soil-structure response of foundations. The consideration of these parameters has a significant influence on damping of the coupled system.

The study on ‘Seismic Bearing Capacity Factor Considering Composite Failure Mechanism using Pseudo-Dynamic Approach’ presents the pseudo-dynamic approach considering the time-dependent effect of earthquake loading on foundations. The paper demonstrates the effect of soil friction angle and seismic peak horizontal ground acceleration on the seismic bearing capacity of the foundation.

The paper titled ‘Importance of Site-Specific Dynamic Soil Properties for Seismic Ground Response Studies: Ground Response Analysis’ highlights the implication of site-specific properties on seismic ground response studies. The analysis discusses the importance of conducting ground response analysis of any region considering the dynamic properties of soils in that region.

The article on ‘Seismic Protection of Buildings by Rubber-Soil Mixture as Foundation Isolation’ presents the potential of rubber soil mixture as foundation isolation. The numerical simulations result clearly demonstrate a reduction in the horizontal ground acceleration on the application of scrap type.

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