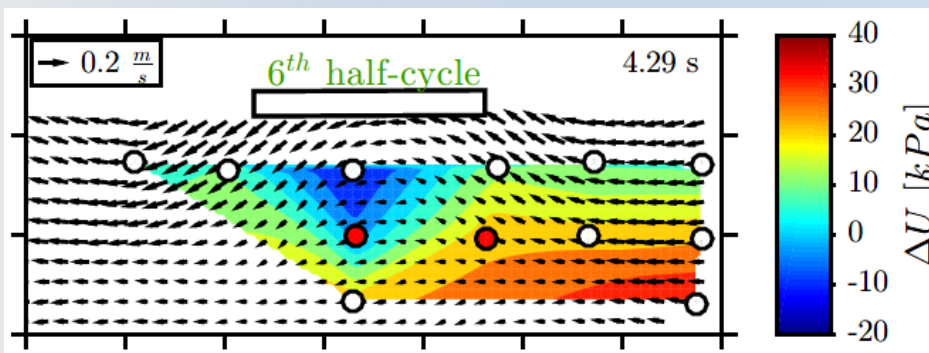




SHALLOW FOUNDATIONS ON LIQUEFIABLE SOILS: EVOLUTION OF DEFORMATION MECHANISMS AND NUMERICAL CONSIDERATIONS

Dr. Orestis Adamidis, Associate Professor of Engineering Science
University of Oxford and Tutorial Fellow at St Catherine's College Oxford

Structures with shallow foundations resting on liquefiable layers can suffer excessive displacements in the event of an earthquake. Recent advancements have significantly improved the tools available to engineers for settlement and rotation estimation. However, uncertainty remains in such tools, which are often heavily reliant on numerical simulations. In this seminar, the response of shallow-founded structures resting on liquefiable layers will be examined, using results from experimental and numerical campaigns. In the first part, the deformation mechanisms that develop under a structure will be presented, as captured from a series of dynamic centrifuge experiments. The focus will be on the formation and evolution of mechanisms during an earthquake. In the second part, results from numerical modelling of the problem will be presented, outlining the merits and limitations of this approach.



2018 Hokkaido Eastern Iwate EQ, Reuters

Dr. Orestis Adamidis



Orestis studied Civil Engineering at NTU Athens, before moving to the University of Cambridge for doctoral studies. He then joined ETH Zurich as a Research Fellow until he was appointed Associate Professor at the University of Oxford in 2020. His research interests are in earthquake and offshore geotechnics.



(*) Registrati all'evento per ottenere il link

seguici su: <https://gruppogeotecniciroma.wordpress.com>

 <https://www.linkedin.com/groups/8591089>

 <https://www.facebook.com/GruppoGeotecniciRoma/>