



UC Berkeley Geosystems Group Wednesday Lecture Series

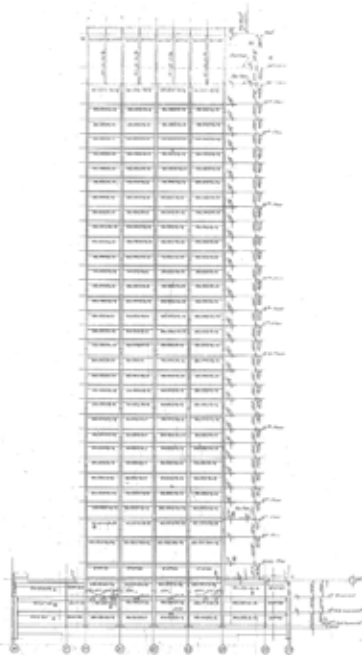
Wednesday, October 11, 2023

12:10 – 1:00 PM

Lecture Room: 406 Davis Hall

Geotechnical Applications in Seismic Retrofits

Chris Nicas, PE and Uri Eliahu, GE
ENGEO, Inc.



Seismic retrofits of existing structures often demand geotechnical and structural engineers to adopt a performance-based approach to analysis and design, particularly for sites in the San Francisco Bay Area with challenging subsurface conditions and high seismicity. In this presentation, we will discuss a variety of performance-based geotechnical applications and challenges in seismic retrofits of existing structures, including geotechnical explorations, assessments of shallow and deep foundation systems, evaluation of basements and buried structures, soil-structure interaction analysis, liquefaction hazard assessment, non-ergodic site-specific seismic-hazard analysis, and optimized design ground motions. We will present these topics as they apply to several recently completed projects in Oakland and San Francisco.

Chris Nicas is a Project Engineer based in ENGEO's Downtown Oakland office. Following his graduation from the UC Berkeley Geosystems graduate program, his experience in consulting has included a wide range of projects from low- to high-rise structures, residential and commercial development, medical, education, public works, shoreline development, and slope stabilization. Chris serves projects throughout California and New Zealand, and specializes in earthquake engineering, including site-specific seismic-hazard analyses, ground-response analyses, and ground motion studies. He also specializes in finite-element analysis with applications in fully dynamic soil-structure interaction, liquefaction assessment, deformation modeling, and landslide mitigation.

Uri Eliahu serves as the President of ENGEO and has over 40 years of experience as a technical leader in geotechnical engineering. Under his leadership, ENGEO has become California's consultant of choice for the most iconic and challenging public and private projects, master-planned, mixed-use development, large-scale earthwork, transportation, urban infill and redevelopment of Brownfields, industrial sites, and military bases. Uri is a Registered Geotechnical Engineer in California and a Registered Civil Engineer in California and Nevada. He is a Founding Director and president of the California Association of Geologic Hazard Abatement Districts (GHADs) and is a member of the Civil and Environmental Engineering Advisory Council.