



CURSOS PRECONGRESO PRECONFERENCE COURSES



Ramón Verdugo

Licuación estática en el contexto del estado crítico y su aplicación en la estabilidad de presas de jales

The phenomenon of static liquefaction within the critical state framework: its role in tailings dam stability.

Ingeniero Civil de la Universidad Católica de Chile (1983), Master y Ph.D. de la Universidad de Tokio, Japón (1989 y 1992, respectivamente). Estadía de post doctorado en el Instituto Geotécnico Noruego (1996). Ha sido Director, Secretario y Presidente de la Sociedad Chilena de Geotecnia, Sochige. Después del mega-evento sísmico de magnitud, $Mw = 8.8$, que afectó Chile en febrero de 2010, lideró el equipo de profesionales que modificó la clasificación sísmica de sitio de la normativa chilena. En la actualidad es el presidente del Comité Técnico de la Sociedad Internacional de Mecánica de Suelos e Ingeniería de Fundaciones, TC221, sobre relaves y desechos mineros (Tailings and Mine Waste). Es socio fundador de la empresa consultora de ingeniería geotécnica CMGI Ltda. (Caracterización y Modelamiento Geotécnico Ingenieros), la que aborda problemas geotécnicos complejos, especialmente asociados con la estabilidad sísmica de obras de suelos, tanto en proyectos civiles, como industriales y mineros. En estos últimos se llevan a cabo la caracterización geotécnica y los análisis numéricos de estabilidad sísmica de depósitos de jales.

Civil Engineer from Catholic University of Chile (1983), Master and Ph.D. from the University of Tokyo, Japan (1989 and 1992, respectively). Postdoctoral fellowship at the Norwegian Geotechnical Institute (1996). He has served as Director, Secretary, and President of the Chilean Geotechnical Society (Sochige). Following the mega-seismic event of magnitude $Mw = 8.8$ that hit Chile in February 2010, he led the team of professionals that modified the seismic site classification in Chilean regulations. He is currently the Chair of the Technical Committee of the International Society of Soil Mechanics and Geotechnical Engineering, TC221, on Tailings and Mine Waste. He is a founding partner of the Chilean geotechnical engineering consulting firm CMGI Ltda. (Characterization and Geotechnical Modeling Engineers), which addresses complex geotechnical problems, especially those associated with the seismic stability of soil structures, in civil, industrial, and mining projects. Within the mining industry, CMGI has performed numerous geotechnical analyses, including characterizations and numerical modeling, to assess the seismic stability of tailings storage facilities.



Dr. David Solans

Incorporación de investigación de campo y monitoreo en el modelamiento numérico de presas de jales mediante elementos finitos.

Incorporating site-specific ground investigation and monitoring in FE modelling of tailings dams.

After earning his BSc and MSc in Civil Engineering from the University of Chile in 2010, Dr Solans spent over a decade in the industry as a project engineer and geotechnical lead, focusing on soil characterization and advanced numerical modelling for earth dams, tailings dams, and underground structures. In 2016, he joined the Department of Civil Engineering at Imperial College London, where he completed a MSc in Soil Mechanics and Engineering Seismology, followed by a PhD in Computational Geomechanics in 2023. His research focused on the seismic performance of tailings dams using finite element method with advanced constitutive models.

From late 2022 to 2024, he served as a Teaching Fellow in Geotechnics at Imperial College London, delivering undergraduate and postgraduate modules in geotechnics. Currently, Dr Solans is Geotechnical Consultant in the Mine Waste group at WSP Chile, specializing in advanced numerical modelling of geotechnical infrastructure under static and seismic loading conditions, and site-specific characterization of tailings materials.

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