Geotechnical Engineer

Experience ***Geotechnical Engineering and Numerical Modeling***

Education

Ph.D (Geotechnical Engineering), 2019
The University of British Columbia, Vancouver, Canada

M.A.Sc. (Geotechnical Engineering), 2005
The University of British Columbia, Vancouver, Canada

Civil Engineering, 2003
Universidad de Chile, Santiago, Chile

Profesional Experience

2018 to date *Itasca S.A., Santiago, Chile – Senior Geomechanics Engineer*

2017 - 2017 *Itasca S.A., Santiago, Chile – Project engineer*

2008 – 2017 *Universidad Diego Portales, Faculty of Engineering, Santiago, Chile*
Assistant Professor

Project Experience

Soil-geosynthetic interaction: Developed a numerical model in FLAC to study the soil-geosynthetic interface interaction in the pullout box. The model allowed to capture the strain softening behavior of the pullout response by allowing the soil-geosynthetic interface to dilate. The numerical model also allowed to quantify the influence of the boundary conditions of the box in the pullout resistance of planar and grid inclusions.

Numerical modeling of geosynthetic reinforced structures: Studied the behavior of geosynthetic reinforced structures through numerical models in FLAC. The results allowed to advance the understanding of the stress and strain development along the inclusions and to analyze the influence of the reinforcement distribution and the dependence of the friction angle with confining pressure in the behavior of the structure.

Dynamic Analysis: Study of the behavior of soils under seismic loading, particularly tailing dams.

Laboratory testing and soil characterization: Has analyzed and interpreted several laboratory test data to for soil characterization and determine soil's strength properties.

Publications

Journals

Rousé, P.C. (2018) "Relation between the critical state friction angle of sands and low vertical stresses in the direct shear test", Soils and foundations, 58, pp. 1282 - 1287

Rousé, P.C. (2014) "Comparison of methods for the measurement of the angle of repose of granular materials", Geotechnical Testing journal", 37, No 1, pp 164-168.

Rousé, P.C., Fannin, R.J. and Taiebat, M. (2014) "Sand strength for back-analysis of pullout tests at large displacement", Geotechnique 64, No 4, pp 320 –324.

Rodas, R., Rousé, P.C. (2010) "Análisis comparativo de métodos para la medición del ángulo de reposo de suelos granulares", Revista de la Construcción, 9, No 1, pp 98-106.

Rousé, P.C., Fannin, R.J., and Shuttle, D.A. (2008) "Discussion: Influence of roundness on the void ratio and strength of uniform sand", Geotechnique 58, No 8, pp. 681.

Rousé, P.C., Fannin, R.J., and Shuttle, DA. (2008) "Influence of roundness on the void ratio and strength of uniform sand", Geotechnique 58, No 3, pp. 227-231.

Peer – reviewed conferences

Rousé, P.C. (2016) "Influencia de la cara frontal y la altura de la caja de arranque en la resistencia al arranque de geosintéticos", IX Congreso Chileno de Ingeniería Geotécnica, Valdivia, Chile

Pavez, D., Rousé, P.C. (2016) "Simulación numérica de un muro reforzado de paramento inclinado: Comparación de modelos con ángulo de fricción constante y variable", IX Congreso Chileno de Ingeniería Geotécnica, Valdivia, Chile

Rojas, V., Rousé, P.C. (2016) "Granulometría digital aplicada a la mecánica de suelos, IX Congreso Chileno de Ingeniería Geotécnica, Valdivia, Chile

Rousé, P.C. (2014) "Modelación numérica de ensayos de arranque de geosintéticos en arenas", VII Congreso Chileno de Geotecnia, Santiago, Chile

Rousé P.C., De los Ríos, C. (2012) "Relación entre el ángulo de fricción de estado crítico y bajas presiones verticales en ensayos de corte directo", VII Congreso Chileno de Geotecnia, Concepción, Chile.

Rousé, P.C. (2012) "Modelación numérica de ensayos de arranque en arena", VII Congreso Chileno de Geotecnia, Concepción, Chile.

Rousé, P.C., D.A. Shuttle, and R.J. Fannin (2006) "Implementation of Critical State Models within FLAC", proceedings Fourth International FLAC Symposium, Madrid, Spain, pp: 379-385.