



Juan Ayala it's a civil engineer with a geotechnical engineering master's degree from the Catholic University of Concepción, Chile. Since 2013 his professional experience has been focused in rock and soil mechanics, whereas worked mainly in the mining and hydro electric industry.

General professional experience

Piteau Associates Engineering – Santiago, Chile

March of 2018 to the date – Work as Intermediate Geotechnical Engineer

Ausenco – Santiago, Chile.

March of 2017 to February of 2018 – Work as “B” Geotechnical Engineer

Andrés Bello University – Santiago, Chile

March of 2016 to July of 2017 – Work as laboratory and software teacher for different soil mechanics courses at the civil engineering academic program. Plus, participates as reviewer in geotechnical related civil engineering bachelor thesis.

IDIEM University of Chile – Santiago, Chile.

September of 2016 to March of 2017 – Work as project engineer in the geotechnical engineering division.

Golder Associates S.A. – Santiago, Chile.

May of 2013 to August of 2016 – Work as project engineer in the rock mechanics area. He made is internship on the same area in 2012.

Catholic University of Concepción – Concepción, Chile.

2006 to 2012 – Work as teacher assistant at the civil engineering academic program in the courses of Foundations, Soil mechanics 2, Materials science, Rational mechanics, Graphic design in engineering, General physics 1 and Introduction to physics.

Education

Geotechnical engineering master of science, two distinction votes, Catholic University of Concepción, 2013.

Civil engineering, one distinction vote, Catholic University of Concepción, 2013.

Languages

English and Spanish

Professional affiliations

Chilean geotechnical society (SOCHIGE).

Chilean society for rock mechanics (SCMR)

Young member's presidential group (YMPG) of the ISSMGE (2013-2017).

Contact

jlalatal@gmail.com

+56 9 8906 7289

+61 414 265 002

Skype: [juan.ayala.t](https://www.skype.com/user/juan.ayala.t)

www.a2geotecnia.com

[LinkedIn](#)

Publications in journals and conference proceedings

- Ayala, J. L., Villalobos, F. A., and Alvarado, G., 2017. "Study of the Elastic Shear Modulus of Bío Bío Sand Using Bender Elements in an Oedometer," Geotechnical Testing Journal, <https://doi.org/10.1520/GTJ20150116>. ISSN 0149-6115., United States. [Link](#)
- Ayala, Juan, Villalobos, Felipe and Alvarado, Giovanni. 2014. Study of travel time measurements of shear waves using bender elements in Bío Bío sand. Sixth International Symposium on Deformation Characteristics of Soils, November 2015, Buenos Aires, Argentina. [Link](#)
- Ayala, Juan, Felipe Villalobos and Alejandro Alejo. 2013. Measurements of the travel time of shear waves in granular soils using bender elements. 5th International Young Geotechnical Engineer's Conference - 5th iYGEC 2013 Edited by Y.-J. Cui et al. © 2013. The authors and IOS Press. doi:10.3233/978-1-61499-297-4-477, August. Paris, France. [Link](#)

Academic References

- [Felipe Villalobos PhD](#), Catholic University of Concepción - avillalobos@ucsc.cl
- [Pedro Tume PhD](#), Catholic University of Concepción - ptume@ucsc.cl

Software

*Rocscience: Phase2,
Dips, Slide, Unwedge,
Swedge, Examine2D*

Map3D

Flac, Flac3D

Geostudio 2012: Slope/W

Matlab, Scilab

Autocad 2014, DraftSight

Geovia Surpac 6.6

*M. Office: Word, Excel,
Power Point, Project*

*Google Earth, Global
Mapper 12, Garmin
Basecamp*

*Xmind 2012, Grapher 8,
Panorama Maker 3.0,
Jetphoto Studio*

Others

Driver license

Principal project in Piteau Associates

Barrick – Pueblo Viejo – Dominican Republic – 2018

Laboratory testing for open pit slope stability analysis.

Principal projects in Ausenco

BHP - Escondida – Antofagasta region – 2018-2017

Soil nailing wall design (SNAP-2) and stability verification (Phase 2) for the HPPS4 in the EWS expansion.

Teck - Quebrada Blanca – Tarapacá region – 2018-2017

Characterization and geotechnical design for detail engineering in the phase 2 project at Quebrada Blanca mine. Which consist in a tailing transport system, copper concentrated and desalted water transport piping. Laboratory control and interpretation of results, slope stability and foundation design.

Principal projects in IDIEM

Chilean hydraulics works direction – Alluvium study in Alto del Carmen – Atacama region – 2017

Geotechnical characterization in the project “Design of alluvial control and fluvial works at the El Carmen and Huasco river”.

Chilean hydraulics works direction – Murallas Viejas Dam – Coquimbo region – 2017-2016

Technical support for different trial pits and borehole tests (Lugeon, Lefranc-Mandel, Porchet, Sand cone, etc.). Drilling additives cutting solutions tests. Meeting with clients.

Principal projects in Golder Associates

Chilean hydraulics works direction – Chacrillas Dam – Valparaíso region – 2016

Geotechnical mapping of rock cores for injection curtains in the reservoir.

MMG Limited - Antamina – Ancash region, Perú – 2016-2015

Rock and soil slope stability, support alternatives design and mitigations on unstable wedges. Cinematic and limit equilibrium stability analysis for anisotropic slopes.

Teck - Quebrada Blanca – Tarapacá region – 2016-2015

Geotechnical mapping and rock cores orientation in diamantine drilling with REFLECT ACT II system.

Anglo American and Glencore - Collahuasi – Tarapacá region – 2015

Reconstruction, orientation and mapping of banks in the Rosario pit by means of photogrammetry with the Sirovision 6 software.

Teck - Quebrada Blanca – Tarapacá region – 2015

Waste dumps and stockpiles stability, deterministic and probabilistic analysis.

Pacific Hydro - La Higuera – O'higgins region – 2014

Support in overcoring test inside the hydroelectric tunnel, drilling supervision and rock core mapping, stress cell installation and lecture of data and posterior biaxial tests.

Water monitoring in the surface along the tunnel path, instrumental readings and Insitu surveys like piezometers and inclinometers.

CAP - CMP – Atacama region – 2014

Geotechnical characterization and generation of two-dimensional numerical models to obtain the settlements produced by the advance of the pit.

BHP Billiton and Rio Tinto - Escondida – Antofagasta region – 2014

Design verification of underground excavations for the pump station and intake-outfall structures and the Coloso Port.

Teck - Quebrada Blanca – Tarapacá region – 2014-2013

Detailed geotechnical mapping of the tailing transport system, copper concentrated and desalted water transport piping in the phase 2 project of the mine. Roads geotechnical evaluation.

Pacific Hydro - La Confluencia - O'Higgins region – 2013

Inspection and technical review of the cracks observed at the high stress tunnel, between the manifold-power house and the concrete lining.

Geotechnical related reviewer for civil engineering thesis at Andrés Bello University in Santiago

- ***Study of shoring piles supported laterally in the gravel of Santiago*** – Rocío Alejandra Vergara Soto, Andrés Bello University, 2017.
- ***Analytical study of slope stability in rocky masses controlled by plane and wedge fault mechanisms*** – Macarena Camila Ulloa Monsalve, Andrés Bello University, 2016.
- ***Seismic design for slope performance projected based on static stability criteria*** – Cristian Pablo Opazo Guerra, Andrés Bello University, 2016.