

## Open to work from early 2022 Resume

Juan Luis Ayala Torres



Juan Ayala is 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

#### **The University of Western Australia – Perth, Australia**

November of 2018 to date – Ph.D. candidate in geotechnical engineering working in the [TAILLIQ](#) research project. TAILLIQ is a university-industry research project whose purpose is to help better understand and reduce the risk of mine tailings loss of containment from static liquefaction.

#### **Piteau Associates Engineering – Santiago, Chile**

March of 2018 to November 2018 – 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 lecturer for different soil mechanics courses in the civil engineering academic program. Additionally, participates as reviewer in geotechnical related civil engineering bachelor final projects.

#### **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.

### 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.

#### Contact

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[LinkedIn](#)

#### Languages

Spanish and English

#### Education

Doctor of Philosophy (Candidate), The University of Western Australia, Expected to finish by the end of 2021.

Master in geotechnical engineering, two distinction votes, Catholic University of Concepción, 2013.

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

#### Scientific publications

<https://orcid.org/0000-0001-9297-319X>

## Professional affiliations

Australian  
Geomechanics  
Society

Chilean geotechnical  
society (SOCHIGE).

Chilean society for  
rock mechanics  
(SCMR)

## Software

Rocscience: RS2, Dips,  
Slide2, Unwedge, Swedge

Python3.7

Microsoft Office Suite

Google Earth, QGIS,  
Global Mapper, AutoCAD

## Others

Driver license

## 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 in situ 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.

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**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.