Andrés Ignacio Cristi Espinosa | PhD. Student in Engeneering Systems

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Education

Universidad de Chile **Santiago, Chile**
PhD. Student in Engineering Systems *2018–Present*

Universidad de Chile **Santiago, Chile**
M.Sc. Operations Management *2016–2018*
Thesis Title: *Estabilidad y Aleatoriedad en Admisión Escolar*
Advisor: Prof. José Rafael Correa (Department of Industrial Engineering)

Universidad de Chile **Santiago, Chile**
B.Sc. Engineering Mathematics *2011–2016*

Experience

Research

Max Planck Institut for Informatics **Saarbrücken, Germany**
Research Internship *May–July 2017*
Visiting Antonios Antoniadis, funded by the MPII-UChile Collaborative Grant CONICYT: Fast Approximation Algorithms for Massive Data Sets.

Center for Mathematical Modeling, FCFM Universidad de Chile **Santiago, Chile**
Research Assistant *Spring 2015*
Working in the Astroinformatics Laboratory on problem 'Multiobjective optimization for scheduling of the LSST', under supervision of Francisco Förster, researcher of CMM.

Teaching

Universidad de Chile
Teaching Assistant - Stochastic Models for Engineering Systems *Spring 2017*
As assistant of Prof. José Rafael Correa (Department of Industrial Engineering).

Universidad de Chile
Teaching Assistant - Linear Algebra *Spring 2016*
As assistant of Prof. Jaime Ortega (Department of Mathematical Engineering).

Universidad de Chile
Teaching Assistant - Stochastic Simulation *Spring 2015*
As assistant of Prof. Joaquín Fontbona (Department of Mathematical Engineering).

Universidad de Chile
Teaching Assistant - Markov Processes *2015 and 2016*
As assistant of Prof. Servet Martínez (Department of Mathematical Engineering).

Universidad de Chile
Teaching Assistant - Statistics *2014 and 2015*
As assistant of Prof. Raul Gouet (Department of Mathematical Engineering).

Universidad de Chile
Teaching Assistant - Probability and Statistics *Spring 2014*
As assistant of Prof. Servet Martínez (Department of Mathematical Engineering).

Universidad de Chile
Teaching Assistant - Introduction to Calculus *2013, 2014, 2015 and 2016*
As assistant of Prof. Jorge San Martín and Prof. Raúl Gormaz (Department of Mathematical Engineering).

Professional Internships

Navigo Mining SpA. **Santiago, Chile**
Third Professional Internship *January and February 2016*
Reviewing and programming Machine Learning algorithms for prediction in the Mining Industry.

Open Mine Planning Technologies Lab., Universidad Adolfo Ibáñez **Santiago, Chile**
Second Professional Internship *January 2015*
Reviewing and assisting the developement of algorithms for open pit mine planning.

Antofagasta Minerals S.A. **Santiago, Chile**
First Professional Internship *January 2014*
Collaborating in the process of developing a predictive model of the seismic vulnerability of a mineral processing plant.

Other Experience

Universidad de Chile Student Federation
Graduate Students Delegate *2017*

Engineering Mathematics Student Union, Universidad de Chile
President of the Engineering Mathematics Student Union *2016*

Universidad de Chile Student Federation
Student Federation Council Member *2015*

Universidad de Chile
Department Representative, Engineering Mathematics *2013 and 2014*

Universidad de Chile
Course Representative *2011*

Research Interests

- Operations Research, Algorithmic Game Theory, Mechanism Design, Stochastic Processes, Optimization Algorithms, Randomized Algorithms.

Proficiencies

Languages

Spanish: Native

English: Fluent

Computer

Microsoft Windows, Linux, Mac OS.

Microsoft Office, Libre Office, LaTeX.
Python, Matlab, Scilab, R, AMPL (CPLEX), git

Scholarships and Awards

CONICYT (Chilean national agency for science and technology) PhD. Grant, 2018.
CONICYT Scholarship for M.Sc. Students, 2017.
Engineering Mathematics Outstanding Student, 2014 and 2015.
Common Engineering Programme Outstanding Student, 2011 and 2012.
'Andrés Bello' Scholarship for Academic Excellence, 2011–2016.
Bronze Medal, XV Ibero-American Physics Olympiad, Panama 2010.
Gold Medal, Chilean Physics Olympiad, 2010.

Attended Conferences, Workshops and Summer Schools

XIII Discrete Mathematics Summer School — **Valparaíso, Chile**
Attendant and T.A. of the course of Prof. Kurt Mehlhorn. — *January 2018*

Highlights of Algorithms — **Berlin, Germany**
(HALG). — *June 2017*

Workshop on Models and Algorithms for Planning and Scheduling Problems *(MAPSP).* — **Seeon-Seebruck, Germany**
June 2017

International Collaboration Workshop in Algorithms — **Santiago, Chile**
January 2017

XII Discrete Mathematics Summer School — **Valparaíso, Chile**
January 2017

Working Papers (under submission)

A Near Optimal Mechanism for Energy Aware Scheduling (with A. Antoniadis) *Under submission to conference: International Colloquium on Automata, Languages, and Programming (ICALP)*

SUPERSET: A (Super)Natural Variant of the Card Game SET (with F. Botler, R. Hoeksma, K. Schewior and A. Tönnis) *Under submission to conference: International Conference on Fun with Algorithms (FUN)*