

Andrés Ignacio Cristi Espinosa

PhD. Student in Engineering Systems

Departamento de Ingeniería Industrial, Domeyko 2338 – Santiago, Chile

📞 +56998962028 • ✉️ acristi@dim.uchile.cl

Research Interests

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

Education

Universidad de Chile <i>PhD. Student in Engineering Systems</i>	Santiago, Chile 2018–Present
Universidad de Chile <i>M.Sc. Operations Management</i> Thesis Title: <i>Estabilidad y Aleatoriedad en Admisión Escolar</i> Advisor: Prof. José Rafael Correa (Department of Industrial Engineering)	Santiago, Chile 2016–2018
Universidad de Chile <i>B.Sc. Engineering Mathematics</i>	Santiago, Chile 2011–2016

Experience

Research Visits	
Mathematics Department - London School of Economics <i>Visiting Paul Dütting</i>	London, United Kingdom Oct–Dec 2018
Institute of Mathematics - TU Berlin <i>1 week visiting the COGA group</i>	Berlin, Germany Oct 2018
Max Planck Institut for Informatics <i>Visiting Antonios Antoniadis</i>	Saarbrücken, Germany May–Jul 2017 and Sep 2018

Teaching Assistance	
Department of Industrial Engineering - Universidad de Chile <i>Game Theory</i> , with Prof. José Rafael Correa	Fall 2018
<i>Stochastic Models for Engineering Systems</i> , with Prof. José Rafael Correa	Spring 2017
Department of Mathematical Engineering - Universidad de Chile <i>Online Algorithms and Scheduling</i> , with Prof. Andreas Wiese	Fall 2018
<i>Linear Algebra</i> , with Prof. Jaime Ortega	Spring 2016
<i>Stochastic Simulation</i> , with Prof. Joaquín Fontbona	Spring 2015
<i>Markov Processes</i> , with Prof. Servet Martínez	2015–2016
<i>Statistics</i> , with Prof. Raúl Gouet	2014–2015
<i>Probability and Statistics</i> , with Prof. Servet Martínez	Spring 2014
<i>Introduction to Calculus</i> , with Prof. Jorge San Martín and Raúl Gormaz	2013–2016

Professional Internships.....

Navigo Mining SpA.	Santiago, Chile
Reviewing and programming M.L. algorithms for prediction in the Mining Industry.	<i>Jan–Feb 2016</i>
Open Mine Planning Technologies Lab., Universidad Adolfo Ibáñez	Santiago, Chile
Reviewing and assisting the development of algorithms for open pit mine planning.	<i>Jan 2015</i>
Antofagasta Minerals S.A.	Santiago, Chile
Developing a predictive model of the seismic vulnerability of a mineral processing plant.	<i>Jan 2014</i>

Leadership

Universidad de Chile Student Federation	
<i>Graduate Students Delegate</i>	<i>2017</i>
<i>Student Federation Council Member</i>	<i>2015</i>
Mathematical Engineering Student Union - Universidad de Chile	
<i>President</i>	<i>2016</i>
<i>Department Representative</i>	<i>2013–2014</i>
<i>Course Representative</i>	<i>2011</i>

Proficiencies

Languages: Native Spanish speaker, fluent in English.

Computer: MS Windows, Linux, Mac OS | MS Office, Libre Office, \LaTeX | Python, Matlab, Scilab, R, AMPL (CPLEX), git.

Scholarships and Awards

CONICYT (national agency for science and technology) PhD. Grant	<i>2018</i>
CONICYT Scholarship for M.Sc. Students	<i>2017</i>
Outstanding Student	<i>2011, 2012, 2014, 2015</i>
‘Andrés Bello’ Scholarship for Academic Excellence	<i>2011–2016</i>
Bronze Medal, XV Ibero-American Physics Olympiad, Panama	<i>2010</i>
Gold Medal, Chilean Physics Olympiad	<i>2010</i>

Attended Conferences, Workshops and Summer Schools

11th International Symposium on Algorithmic Game Theory (SAGT).	Beijing, China
	<i>Sep 2018</i>
Match-Making Workshop U.Hamburg-U.Chile	Hamburg, Germany
<i>Computer Science Workshop.</i>	<i>Sep 2018</i>
Discrete Mathematics Summer School	Valparaíso, Chile
<i>XIII version. Attendant and T.A. of the course of Prof. Kurt Mehlhorn.</i>	<i>Jan 2018</i>
<i>XII version.</i>	<i>Jan 2017</i>
Highlights of Algorithms (HALG).	Berlin, Germany
	<i>Jun 2017</i>
Workshop on Models and Algorithms for Planning and Scheduling Problems (MAPSP).	Seeon-Seebruck, Germany
	<i>Jun 2017</i>

Research

Refereed Conference Publications.....

A Near Optimal Mechanism for Energy Aware Scheduling (with A. Antoniadis) *International Symposium on Algorithmic Game Theory, SAGT'18, Beijing, China.*

SUPERSET: A (Super)Natural Variant of the Card Game SET (with F. Botler, R. Hoeksma, K. Schewior and A. Tönnis) *International Conference on Fun with Algorithms, FUN'18, La Maddalena, Italy.*

Under Review.....

On the Price of Anarchy for flows over time (with J. Correa and T. Oosterwijk).

School Choice in Chile (with J. Correa, R. Epstein, J. Escobar, I. Rios, B. Bahamondes, C. Bonet, N. Epstein, N. Aramayo, M. Castillo and B. Epstein).

Negative Prices in Network Pricing Games (with M. Schröder).

Better Approximations for General Caching and UFP-Cover Under Resource Augmentation (with A. Wiese).

Fixed-Parameter Algorithms for Unsplittable Flow Cover (with A. Wiese).

On the Complexity of Anchored Rectangle Packing (with A. Antoniadis, F. Biermeier, C. Damerius, R. Hoeksma, D. Kaaser, P. Kling and L. Nölke).