

Andrés Ignacio Cristi Espinosa

PhD. Student in Engineering Systems

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

Professional Internships.....

Navigo Mining SpA. Reviewing and programming M.L. algorithms for prediction in the Mining Industry.	Santiago, Chile Jan–Feb 2016
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Open Mine Planning Technologies Lab., Universidad Adolfo Ibáñez	Santiago, Chile
Reviewing and assisting the developement 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 <i>Computer Science Workshop.</i>	Hamburg, Germany <i>Sep 2018</i>
Discrete Mathematics Summer School <i>XIII version. Attendant and T.A. of the course of Prof. Kurt Mehlhorn.</i> <i>XII version.</i>	Valparaíso, Chile <i>Jan 2018</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>
International Collaboration Workshop in Algorithms Organized by U.Chile. III version. V version.	Santiago, Chile <i>Jan 2017</i> <i>Jan 2019</i>

Refereed Conference Publications

Published.....

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) *Submitted February 2019.*

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) *Submitted February 2019.*

Better Approximations for General Caching and UFP-Cover Under Resource Augmentation (with A. Wiese) *Submitted February 2019.*

Fixed-Parameter Algorithms for Unsplittable Flow Cover (with A. Wiese) *Submitted February 2019.*

On the Complexity of Anchored Rectangle Packing (with A. Antoniadis, F. Biermeier, C. Damerius, R. Hoeksma, D. Kaaser, P. Kling and L. Nölke) *Submitted February 2019.*