

Guido R. Lagos

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EDUCATION

- GEORGIA INSTITUTE OF TECHNOLOGY Atlanta, GA
Ph.D. in Operations Research since 08/2011
School of Industrial & Systems Engineering 3.91 cumulative GPA
- UNIVERSIDAD DE CHILE Santiago, Chile
M.Sc. in Operations Management 2009–2011
Department of Industrial Engineering GPA 6.5 (1.0-7.0 scale)
Mathematical Civil Engineer (M.Sc. in Applied Math equivalent) 2004–2011
Department of Mathematical Engineering GPA 7.0 (1.0-7.0 scale)
B.Sc. in Engineering Sciences, major in Mathematics 2004–2009
Department of Mathematical Engineering GPA 5.5 (1.0-7.0 scale)

EXPERIENCE

- *Graduate Research Assistant, Georgia Tech* since 08/2011
Research topic: advanced simulation algorithms for rare events of heavy-tailed processes. Advisor: Ton Dieker, <http://www.isye.gatech.edu/~adieker3>.
- *Research Assistant, Universidad Adolfo Ibáñez* 08/2010 to 08/2011
Research topic: stochastic inventory models using SAA sampling technique.
- *Consulting Engineer, JRI Ingeniería S.A.; Chile* 11/2010 to 12/2010
Designed an optimal resource allocation method for wagon service pits. Used data analysis tools and queueing models.
- *Graduate Research Assistant, Universidad de Chile* 08/2009 to 08/2011
Research topic: robust and stochastic planning for large scale open-pit mining problems. Advisor: Daniel Espinoza, Universidad de Chile, and Eduardo Moreno, Universidad Adolfo Ibáñez.
- *Intern, Institute for Cell Dinamycs and Biotechnology, Chile* Summer 2009
Programmed several data clustering techniques for use in functional genomics.
- *Intern, Sistemas Integrales Ltda., Chile* Summer 2008
Programmed a graphical calculation method for error estimation in sampling.
- *Intern, Institute for Mining and Metallurgy (IM2), Chile* Summer 2007
Developed and programmed a model for freezing prediction in mining pipelines.

DISTINCTIONS & GRANTS

- *Algorithms & Randomness Center Student Fellowship*, Georgia Tech, Fall 2014.
- *Kiplinger Fellowship*, Georgia Tech, August 2011 and August 2012.
- *Becas Chile-CONICYT Ph.D. abroad scholarship*, Chile, November 2010.
- *Outstanding Student Award*, School of Engineering Sciences, Universidad de Chile, 2004-2005.

PROGRAMMING SKILLS

- JAVA, C (beginner), UNIX Bash shell scripting, PBS scripting for High Performance Computing (HPC) in clusters, Visual Basic
- *Mathematical software:* MATLAB, SCILAB, Mathematica, AMPL, OPL

TEACHING EXPERIENCE

- *Instructor, Georgia Tech*
Course: *Stochastic Manufacturing & Service Systems* (Spring 2015).
- *Graduate Teaching Assistant, Georgia Tech*
Courses: *Engineering Optimization* (Summer 2012), *Probabilistic Models* (Fall 2012) and *Stochastic Manufacturing & Service Systems* (Summer 2014).
- *Undergraduate Teaching Assistant, Universidad de Chile*
Courses: *Linear Algebra* (2007-2008), *Numerical Calculus* (2006-2007) and *Statistics* (2007-2009).

PUBLICATIONS

- D. Espinoza, G. Lagos, E. Moreno and J.P. Vielma (2014). "Restricted risk measures and robust optimization". To appear in *European Journal of Operations Research*.
- D. Espinoza, G. Lagos, E. Moreno and J.P. Vielma (2013). "Risk averse approaches in open-pit production planning under ore grade uncertainty: a Ultimate Pit study". In *Proceedings of APCOM 2013 - Applications of Computers and Operations Research in the Mineral Industry*, pp. 492-501.
- J. Amaya, D. Espinoza, G. Lagos, E. Moreno and J.P. Vielma (2011). *Robust Planning for an Open-Pit Mining Problem under Ore-Grade Uncertainty*". In *Proceedings of LAGOS 2011 VI Latin-American Algorithms, Graphs and Optimization Symposium, Electronic Notes on Discrete Mathematics*, 37, pp. 15-20.

WORKSHOPS & SEMINARS

- *Winter Simulation Conference 2014*, Savannah, GA Dec 7-10, 2014
- *INFORMS Annual Meeting 2014*, San Francisco, CA Nov 9-12, 2014
Title: "Sampling Rare Events of Random Walks with Regularly Varying Increments: A Dichotomy"
- *INFORMS Annual Meeting 2012*, Phoenix, AZ Oct 14-17, 2012
Title: "Robust Planning for an Open-Pit Mining Problem under Ore-Grade Uncertainty"
- *ICCOPT 2010*, Santiago, Chile Jul 24-25, 2010
- *ALIO-INFORMS Meeting 2010*, Buenos Aires, Argentina Jul 6-9, 2010
Title: "Robustness and Recourse for the Single Period Open-pit Problem"
- *Ist Winter School on Discrete Mathematics*, Codegua, Chile Jul 27-29, 2010

EXTRA-CURRICULAR ACTIVITIES

- *Bicycling* since 2007
Founder of the institutional student group *Pedalea! Beauchef* at Universidad de Chile. *Pedalea! Beauchef* has more than 200 affiliated students, and since 2008 provides approx. 10 weekly hours of free bike repair services and tutoring.
- *Swimming* since 2009
Participation in the swimming team of the *Faculty of Physical Sciences and Mathematics* of Universidad de Chile, 2009-2011.
- *Bassoon performing* 1999-2002
Studies of bassoon performing, harmony and musical theory. Winner of the *Fundación de Orquestas Infantiles y Juveniles de Chile* grant.
- *African and afro-latin percussion*, autodidactic hobby since 2005