

Andrés Gómez

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RESEARCH INTERESTS

Mixed-integer optimization, Optimization under uncertainty, Conic optimization, Combinatorial optimization, Vehicle routing, Revenue management

ACADEMIC EMPLOYMENT

University of Pittsburgh, Pittsburgh, PA Fall 2017 -Present
Department of Industrial Engineering
Assistant Professor

EDUCATION

University of California, Berkeley, CA 2013-2017
Ph.D., Industrial Engineering and Operations Research
M.S., Industrial Engineering and Operations Research
Advisor: Alper Atamtürk

Universidad de los Andes, Bogotá, Colombia 2006-2012
B.S., Mathematics
B.S., Computer Science

PAPERS

Atamtürk, A. and Gómez, A. (2016). Maximizing a class of utility functions over the vertices of a polytope. *Operations Research*, 65:433-445.

Atamtürk, A., Gómez, A and Küçükyavuz, S. (2016). Three-partition inequalities for constant capacity fixed-charge network flow problems. *Networks*, 67:299-315.

Gómez, A., Mariño, R., Akhavan-Tabatabaei, R., Medaglia, A. and Mendoza, J. (2015). On modeling stochastic travel and service times in vehicle routing. *Transportation Science*, 50:627-641.

Atamtürk, A. and Gómez, A. Polymatroid inequalities for p-order conic mixed 0-1 optimization. *Submitted*.

Atamtürk, A. and Gómez, A. Simplex QP-based methods for minimization of a conic quadratic function over polyhedra. *Submitted*.

TALKS

Discrete conic quadratic optimization: formulations, relaxations and algorithms

- Universidad de los Andes, Bogotá, Colombia, February 2017
- Cornell University, Ithaca, NY, January 2017
- University of Pittsburgh, Pittsburgh, PA, January 2017

Polymatroid inequalities for p-order conic mixed 0-1 optimization

- INFORMS Annual Meeting, Nashville, TN, November 2016

Maximizing a class of utility functions over the vertices of a polytope

- INFORMS Annual Meeting, Philadelphia, PA, November 2015

Three-partition inequalities for constant capacity fixed-charge network flow problems

- ISMP, Pittsburgh, PA, July 2015
- INFORMS Annual Meeting, San Francisco, CA, November 2014
- Mixed-integer Programming Workshop (poster), Columbus, OH, July 2014

A unified framework for vehicle routing problems with stochastic travel and service times

- TRISTAN VIII, San Pedro de Acatama, Chile, June 2013

Motion learning problem in robotics using bayes networks

- IADIS Multi-conference on Computer Science and Information Systems, Rome, Italy, July 2011

HONORS & AWARDS

Katta Murty Best Paper Prize, University of California Berkeley, 2017
 IEOR First Year Faculty Fellowship, University of California Berkeley, 2014
 Colfuturo Fellowship, Colfuturo and Colciencias, 2013
 Best Paper Award, IADIS Multi-conference, 2011

TEACHING EXPERIENCE

University of California, Berkeley, CA Spring 2017
Teaching assistant
 Nonlinear and Discrete Optimization (IEOR undergraduate-level course)

Universidad de los Andes, Bogotá, Colombia Spring 2012
Teaching assistant
 Stochastic Processes (Industrial Engineering graduate-level course)

Universidad de los Andes, Bogotá, Colombia Spring 2012
Teaching assistant
 Introduction to Stochastic Processes (Industrial Engineering undergraduate-level course)

Universidad de los Andes, Bogotá, Colombia Fall 2011
Teaching assistant
 Calculus (Mathematics undergraduate-level course)

Universidad de los Andes, Bogotá, Colombia Spring 2011
Teaching assistant
 Calculus (Mathematics undergraduate-level course)

RESEARCH EXPERIENCE

University of California, Berkeley, CA 2014 - 2017
 Department of Industrial Engineering and Operations Research
Graduate Student Researcher

Universidad de los Andes, Bogotá, Colombia 2012
 Department of Industrial Engineering
Research group: COPA

Universidad de los Andes, Bogotá, Colombia 2011
 Department of Computer Science
Research group: IMAGINE

VOLUNTEER EXPERIENCE

Social work with Universidad de los Andes, Bogotá, Colombia Spring 2008
 Taught weekly computer training courses to school students from low-income families

Social work with Universidad de los Andes, Bogotá, Colombia Spring 2009
Taught weekly science courses to school students from low-income families

PROFESSIONAL Member: INFORMS
ACTIVITIES

2014 - Present

Reviewer:

- Discrete Optimization
- RAIRO - Operations Research
- IEEE Transactions on Sustainable Energy
- IISE Transactions

Co-founder of YOI, Bogotá, Colombia

2013-2016

Built a Revenue Management Software for hotels, including forecasting, overbooking and bid price modules.

Revenue manager, Blue Doors Hotels, Bogotá, Colombia

2012-2013