

SANTIAGO R. BALSEIRO

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RESEARCH INTERESTS

Pricing & Revenue Management, Digital Markets, Online Display Advertising, Stochastic Modeling, Stochastic Optimal Control, Dynamic Games, Mechanism Design, Approximation Algorithms.

EDUCATION

- 2008 - 2013 **Columbia University**, New York, NY
Ph.D. in **Decision, Risk, and Operations**, Graduate School of Business
Advisors: Prof. Omar Besbes and Prof. Gabriel Y. Weintraub
Dissertation: “Competition and Yield Optimization in Ad Exchanges”
- 2001 - 2007 **Universidad de Buenos Aires**, Argentina
Bachelor and Master degrees in **Industrial Engineering**

PROFESSIONAL EXPERIENCE

- 07/2017 - Present **Graduate School of Business**, Columbia University, New York, NY
Assistant Professor - Decision, Risk, and Operations
- 07/2013 - 6/2017 **Fuqua School of Business**, Duke University, Durham, NC
Assistant Professor - Decision Sciences Area
- 06/2011 - 07/2011 **Google**, New York, NY
Research Intern - Market Algorithms and Optimization Team
- 06/2010 - 09/2010 **Google**, New York, NY
Research Intern - Market Algorithms and Optimization Team

RESEARCH

- *Advertiser Learning in an Internet Ad Network*, with C.F. Mela and J.M.T. Roos. In preparation.
- *Learning in Repeated Auctions with Budgets: Regret Minimization and Equilibrium*, with Y. Gur. Under review.
 - Conference Version: 18th ACM Conference on Economics and Computation, 2017.
- *Multi-Agent Mechanism Design without Money*, with H. Gurkan and P. Sun. Under review.
- *Budget Management Strategies in Repeated Auctions*, with A. Kim, M. Mahdian, and V. Mirrokni. Working paper.
 - Conference Version: 26th International World Wide Web Conference, 2017.

- *Static Routing in Stochastic Scheduling: Performance Guarantees and Asymptotic Optimality*, with D.B. Brown and C. Chen. Under review.
- *Dynamic Mechanisms with Martingale Utilities*, with V. Mirrokni and R. Paes Leme. Management Science (forthcoming).
 - Conference Version: 18th ACM Conference on Economics and Computation, 2017.
- *Approximations to Stochastic Dynamic Programs via Information Relaxation Duality*, with D.B. Brown. Under review.
- *Dynamic Mechanism Design with Budget Constrained Buyers under Limited Commitment*, with O. Besbes and G. Weintraub. Under review.
 - Conference Version: 17th ACM Conference on Economics and Computation, 2016.
- *Multi-stage Intermediation in Online Advertising*, with O. Candogan and H. Gurkan. Under review.
- *Optimal Contracts for Intermediaries in Online Advertising*, with O. Candogan. Operations Research (forthcoming).
- *Repeated Auctions with Budgets in Ad Exchanges: Approximations and Design*, with O. Besbes and G. Weintraub. Management Science. January 2015.
 - Conference Version: 14th ACM Conference on Economics and Computation, 2013.
- *Yield Optimization of Display Advertising with Ad Exchange*, with J. Feldman, V. Mirrokni, and S. Muthukrishnan. Management Science. December 2014.
 - Conference Version: 12th ACM Conference on Economics and Computation, 2011.
- *Bounds on the Welfare Loss of Moral Hazard with Limited Liability*, with F. Balmaceda, J.R. Correa, and N.E. Stier-Moses. Games & Economic Behavior. January 2016.
 - Conference Version: Workshop on Internet & Network Economics, 2010.
- *An Ant Colony Algorithm hybridized with insertion heuristics for the Time Dependent Vehicle Routing Problem with Time Windows*, with I. Loiseau and J. Ramonet. Computers & Operations Research. 2011.

GRANTS AND AWARDS

- Google Faculty Research Award, Summer 2015
- George B. Dantzig Dissertation Award, First Place, 2014
- George Nicholson Student Paper Competition, Honorable Mention, 2014
- Summer Grant; Networks, Electronic Commerce, and Telecommunications (NET) Institute; 2012
- Deming Doctoral Fellowship, Columbia University, 2011
- Google Engineering Intern Scholarship, 2010
- Full Tuition and Fellowship, Graduate School of Business, Columbia University, 2008-2013

INVITED TALKS AND CONFERENCE PRESENTATIONS

- *Learning in Repeated Auctions with Budgets: Regret Minimization and Equilibrium*
 - 18th ACM Conference on Economics and Computation, Cambridge, MA, June 2017
- *Dynamic Mechanisms with Martingale Utilities (formerly titled “Bundling Over Time and Martingale Auctions”)*
 - Google’s Market Algorithms Workshop, New York, NY, January 2016
 - 11th Utah Winter Operations Conference, Snowbird, UT, February 2016
 - Marketplace Innovation Workshop, New York, NY, June 2016
 - INFORMS Annual Meeting, Nashville, TN, November 2016
 - 18th ACM Conference on Economics and Computation, Cambridge, MA, June 2017
- *Multi-stage Intermediation in Display Advertising*
 - 15th Annual Revenue Management & Pricing Section Conference, New York, NY, June 2015
 - INFORMS Annual Meeting, Philadelphia, PA, November 2015
- *Dynamic Mechanism Design with Budget Constrained Buyers under Limited Commitment*
 - INFORMS Manufacturing & Service Operations Management Conference, Seattle, WA, June 2014
 - INFORMS Annual Meeting, San Francisco, CA, November 2014
 - INFORMS Applied Probability Society, Istanbul, Turkey, July 2015
 - INFORMS Annual Meeting, Philadelphia, PA, November 2015
 - Columbia Business School (2015), Google Research Seminar Series (2015)
 - 11th Utah Winter Operations Conference, Snowbird, UT, February 2016
- *Bidding under Budget Constraints in Online Advertising: Shading versus Throttling*
 - INFORMS Annual Meeting, Minneapolis, MN, October 2013
- *Repeated Auctions with Budgets in Ad Exchanges: Approximations and Design (formerly titled “Auctions for Online Display Advertising Exchanges: Approximations and Design”)*
 - INFORMS Annual Meeting, Phoenix, AZ, 2012
 - INFORMS Manufacturing & Service Operations Management Conference, New York, NY, 2012
 - 21st International Symposium on Mathematical Programming, Berlin, Germany, 2012
 - Tuck School of Business (2012), Kellogg School of Management (2012), Singapore Management University (2012), SUTD (2012), The Wharton School (2013), NYU Stern (2013), Fuqua School of Business (2013), IESE (2013), UC Irvine (2013), Stanford Graduate School of Business (2013), UT Austin (2013), University of Rochester (2013), UT Dallas (2013), Cornell ORIE (2013), USC Marshall School of Business (2013)
 - 45th ACM Symposium on the Theory of Computing (STOC), Stanford University, June 2013
- *Yield Optimization of Display Advertising with Ad Exchange*
 - 12th ACM Conference on Electronic Commerce, San Jose, CA, 2011
 - 11th Annual Revenue Management & Pricing Section Conference, New York, NY, 2011
 - INFORMS Annual Meeting, Charlotte, NC, 2011
- *Bounds on the Welfare Loss of Moral Hazard with Limited Liability (formerly titled “The Cost of Moral hazard and Limited Liability in the Principal-Agent Problem”)*
 - 6th Workshop on Internet & Network Economics, Stanford University, 2010

- INFORMS Annual Meeting, Austin, TX, 2010
- *Revenue Management of Consumer Options for Sporting Events*
 - Google Seminar Series, New York, NY, 2011
 - ALIO-INFORMS Joint International Meeting, Buenos Aires, Argentina, June 2010
- *Integrated Planning Models for Capacity Planning and Call Routing in Call Center Networks with General SLAs*
 - INFORMS Annual Meeting, Austin, TX, 2010
- *An Ant Colony Algorithm hybridized with insertion heuristics for the Time Dependent Vehicle Routing Problem with Time Windows*
 - LVII Annual Meeting of the Argentine Mathematical Union, Cordoba, Argentina, 2007