

**Harvard Medical School
Curriculum Vitae**

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Place of Birth: Santiago, Chile

Education:

2005	BS	Mathematical Engineering	Universidad Católica de Chile
2008	MA	Economics	Universidad de Chile
2011	MA	Statistics	The Wharton School, University of Pennsylvania
2013	PhD	Statistics	The Wharton School, University of Pennsylvania

Faculty Academic Appointments:

07/13-12/13	Instructor (Convertible)	Division of Decision, Risk, and Operations	Columbia Business School
10/13-06/17	Assistant Professor (by courtesy)	Department of Statistics	Columbia University
01/14-06/17	Faculty Affiliate	Data Science Institute	Columbia University
01/14-06/17	Assistant Professor	Division of Decision, Risk, and Operations	Columbia Business School
01/16-06/17	Visiting Assistant Professor	Department of Pediatrics	Universidad Catolica de Chile
07/17-	Assistant Professor	Department of Health Care Policy	Harvard Medical School
07/17-	Faculty Affiliate	Department of Statistics	Harvard University

Other Professional Positions:

2005-2006	Coordinator of Voluntary Teachers	INFOCAP (NGO that provides labor training to low incomes workers; Chile)	<i>52 weeks per year</i>
2005-2006	Research Assistant	Universidad Católica de Chile	<i>12 hrs per week (52 weeks)</i>
2005-2006	Associate Researcher	Observatorio Social, Universidad Alberto Hurtado (Chile)	<i>12 hrs per week (52 weeks)</i>
2007-2008	Coordinator Area of Economic Studies	Observatorio Social, Universidad Alberto Hurtado (Chile)	<i>52 weeks per year</i>
2009	Research Assistant	Center for Promotion of Research Involving Innovative Statistical Methodology, NYU	<i>12 weeks per year</i>
2010-2013	Research Assistant	Department of Statistics, The Wharton School, University of Pennsylvania	<i>20 hrs per week (52 weeks)</i>

Major Administrative Leadership Positions:**Regional**

2016	Conference Organizer	Columbia University Causal Inference Conference on Point Exposures
2016	Conference Organizer	Columbia University Causal Inference Conference on Effect Heterogeneity
2017	Conference Organizer	Columbia University Causal Inference Conference on Longitudinal Studies

National

2013	Assistant Program Director	MIT Media Lab Encuentros Conference
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Committee Service:**Local**

2014-2017	PhD Admissions Committee	Columbia Business School
2015-2017	Faculty Computing Committee	Columbia Business School
2015-2017	Empowering Research Committee	Columbia Business School

National

2015	Thomas R. Ten Have Award Committee	Atlantic Causal Inference Conference
2017	Paper Review Committee	Society for Research on Educational Effectiveness

International

2017	Student Awards Committee	International Conference in Health Policy Statistics
2017	Paper Review Committee	Society for Research on Educational Effectiveness
2016	Session Chair	INFORMS Annual Meeting

Professional Societies:

2011-	American Statistical Association	Member
2011-	International Biometric Society, Eastern North American Region	Member
2011-	Institute of Mathematical Statistics	Member

Editorial Activities:

Ad hoc Reviewer

Annals of Applied Statistics
Annals of Statistics
Annals of Operations Research
Biometrics
Biometrika
Biostatistics
Epidemiology
Epidemiologic Methods
Health and Services and Outcomes Research Methodology
Journal of Causal Inference
Journal of Educational and Behavioral Statistics
Journal of Machine Learning Research
Journal of Research on Educational Effectiveness
Journal of the American Statistical Association, Applications and Case Studies
Journal of the American Statistical Association, Theory and Methods
Journal of the Royal Statistical Society: Series B (Statistical Methodology)

Journal of the Royal Statistical Society: Series C (Applied Statistics)
Management Science
Observational Studies
Operations Research
Psychometrika
Statistica Sinica
Statistical Science
Statistics and Computing
Statistics in Medicine
Trials

Honors and Prizes:

2005	Maximum Distinction	Universidad Catolica de Chile	Mathematical Engineering
2008-2012 2009-2013	Fulbright Scholarship Graduate Fellow	The Wharton School, University of Pennsylvania	
2011	J. Parker Memorial Bursk Prize	Statistics Department, The Wharton School, University of Pennsylvania	For Excellence in Research
2011	Thomas R. Ten Have Memorial Award	Atlantic Causal Inference Conference	Award for “exceptionally creative or skillful research on causal inference”
2011	Student Paper Award	Health Policy Statistics Section, American Statistical Association	
2012	Deming Scholar Award	American Statistical Society/American Society for Quality	
2012	Young Investigator Award	Statistics in Epidemiology, American Statistical Association	
2012	President Gutmann Leadership Award	University of Pennsylvania	
2013	Student Paper Award	Social Statistics, Government Statistics, and Survey Research Methods Sections, American Statistical Association	
2014	Student Paper Award	International Biometric Society	
2014	Kenneth Rothman Prize	ENAR Epidemiology	For the best paper published in Epidemiology in 2013
2017	Initiative on Data Science Visiting Fellow	Booth School of Business, University of Chicago	
2017	Runner-up Pierskalla Best Paper Award	Health Applications Society, INFORMS	

Report of Funded and Unfunded Projects

Funding Information:

Past

2008-2008 Educational Outcomes of the Children of the Poor: The Chilean Case
United Nations Development Plan
Project PI
In 2006, one out of every five children lived below the poverty line in Chile. That same year, half of the children in the country had suffered poverty at least once during their childhood. This project asks what is the impact of experiencing poverty during childhood on educational outcomes during early adulthood. Addressing this question can enlighten the mechanisms under which poverty is transmitted across generations and help to understand the forces that generate and perpetuate the inequality of the Chilean Society.

Current

2015-2017 New Methods for Causal Inference in Randomized and Observational Studies
Alfred P. Sloan Foundation
Project PI (\$43,767)
Randomized experiments constitute the most reliable device for learning about the effects of treatments, policies or interventions on human subjects. Nonrandomized or observational studies are ubiquitous in the health and social sciences in part because harmful treatments cannot be imposed to individuals for experimentation. The goal of this research program is to develop new statistical methods that improve the design and analysis of both randomized experiments and observational studies of causal effects. The specific objectives of this project are: (i) to develop new statistical methods that improve (i.a.) the degree of control and (i.b.) the efficiency of randomized experiments, while providing a justified basis for statistical inference and (ii) to develop new, alternative statistical methods to those based on model-based estimates of the propensity score to (ii.a) better adjust for observed covariates and (ii.b) yield more stable estimates causal estimates, especially in longitudinal studies of treatment effects.

Report of Local Teaching and Training

Teaching of Students in Courses:

2007-2008	Applied Econometrics Undergraduate Students	Universidad Catolica de Chile, Department of Industrial and Systems Engineering 1.5-hr sessions 2x per week for 12 weeks
2014	Introduction to Econometrics and Statistical Inference PhD Students	Columbia Business School, Division of Decision, Risk, and Operations 1.5-hr sessions 2x per week for 12 weeks
2014-2016	Causal Inference PhD Students	Columbia Business School, Division of Decision, Risk, and Operations 1.5-hr sessions 2x per week for 12

2015-2016	Managerial Statistics MBA Students	weeks Columbia Business School, Division of Decision, Risk, and Operations 1.5-hr sessions 3x per week for 6 weeks (taught 2 sections)
2017-	Methods Seminar PhD Students	Harvard Medical School, Department of Health Care Policy 1-hr sessions 1x month for 4 months
2017-	Health Policy Statistics Reading Course PhD Students	Harvard Medical School, Department of Health Care Policy 1.5-hr session 2x month for 4 months

Mentored Trainees and Faculty:

2014-2015	Nikhil Bhat, PhD in Decision, Risk, and Operations, Columbia University Dissertation Committee Member
2014-2016	Cinar Kilcioglu, PhD in Decision, Risk, and Operations, Columbia University Co-Advisor Published manuscript in the <i>Annals of Applied Statistics</i>
2014-2016	Zach Shahn, PhD in Statistics, Columbia University Oral Exam and Dissertation Committee Member One manuscript in preparation
2014-2017	Wengi Hu, PhD in Decision, Risk, and Operations, Columbia University Co-Advisor Published manuscript in <i>Manufacturing & Service Operations Management</i> <i>*Finalist for the Pierskalla Best Paper Award, 2017 (awarded by the Health Applications Society of INFORMS for research excellence in the field of health care management science)</i> <i>*Finalist for the MSOM Student Paper Award, 2017 (awarded by the MSOM Society of INFORMS for papers judged to be the best in the field of operations management)</i>
2014-2017	Maria Resa, PhD in Statistics, Columbia University Co-Advisor Published manuscript in <i>Statistics in Medicine</i> <i>*Winner of the 2017 Student Paper Award of the Social Statistics, Government Statistics and Survey Research Methods Sections of the American Statistical Association</i>
2014-	Susanna Makela, PhD Candidate in Statistics, Columbia University Oral Exam and Dissertation Committee Member One manuscript in preparation
2015-	David Hirshberg, PhD Candidate in Statistics, Columbia University Three manuscripts in preparation
2015-	Yixin Wang, PhD Candidate in Statistics, Columbia University Two manuscripts in preparation
2015-	Giancarlo Visconti, PhD Candidate in Political Science, Columbia University One manuscript in preparation
2015-	Magdalena Bennett, PhD Candidate in Education, Columbia University One manuscript in preparation
2017-	Juan Díaz, PhD Candidate in Statistics, Harvard University One manuscript in preparation

Formal Teaching of Peers:

No presentations below were sponsored by outside entities

2014	New Methods for Causal Inferences in the Health and Social Sciences Columbia Global Center/Univer	2-day course Santiago, Chile
2015	Design of Observational Studies International Workshop on Applied Statistics	4-day course Bogota, Colombia
2016	Optimal Designs for Causal Inference Using Integer Programming Center for Mathematical Studies	2-day course Northwestern University
2017	United Kingdom Causal Inference Meeting	0.5-day course University of Essex, England
2017	Atlantic Causal Inference Conference	0.5-day course University North Carolina at Chapel Hill

Report of Regional, National and International Invited Teaching and Presentations

No presentations below were sponsored by outside entities

Regional

2012	Matching Methods in Observational Studies Statistics Department, Columbia University	
2012	Effect of the 2010 Chilean Earthquake on Posttraumatic Stress: Illustrating New Matching Methods for Clinical, Epidemiological and Health Outcomes Research Department of Psychiatry, Columbia University	
2012	Designing an Observational Study to be Less Sensitive to Unmeasured Biases: Effect of the 2010 Chilean Earthquake on Posttraumatic Stress Department of Biostatistics, Columbia University	
2013	New Statistical Methods for Causal Inference in Observational Studies with Applications to the Social Sciences and Health Policy Columbia Business School, Columbia University	
2013	Using Mixed Integer Programming for Matching in Observational Studies: Effect of the 2010 Chilean Earthquake on Posttraumatic Stress Teachers College, Columbia University	
2013	Designing an Observational Study to be Less Sensitive to Unmeasured Biases: Effect of the 2010 Chilean Earthquake on Posttraumatic Stress Department of Biostatistics, Johns Hopkins University	
2013	Designing an Observational Study to be Less Sensitive to Unmeasured Biases: Effect of the 2010 Chilean Earthquake on Posttraumatic Stress Booth School of Business, University of Chicago	
2013	Designing an Observational Study to be Less Sensitive to Unmeasured Biases: Effect of the 2010 Chilean Earthquake on Posttraumatic Stress Sociology Department, University of Pennsylvania	
2013	Using Mixed Integer Programming for Matching in Observational Studies: Effect of the 2010 Chilean Earthquake on Posttraumatic Stress Heinz College, Carnegie Mellon University	
2013	Using Mixed Integer Programming for Matching in Observational Studies: Effect of the 2010 Chilean Earthquake on Posttraumatic Stress Department of Statistics, Harvard University	

- 2013 Using Mixed Integer Programming for Matching in Observational Studies: Effect of the 2010 Chilean Earthquake on Posttraumatic Stress
Department of Statistics, Columbia University
- 2014 Design and Analysis of Observational Studies
Kellogg School of Management, Northwestern University
- 2015 Stable Weights that Balance Covariates for Causal Inference and Estimation with Incomplete Data
Institution for Social and Policy Studies, Yale University
- 2015 Stable Weights that Balance Covariates for Causal Inference and Estimation with Incomplete Data
Robert H. Smith School of Business, University of Maryland
- 2015 Stable Weights that Balance Covariates for Causal Inference and Estimation with Incomplete Data
Heinz College, Carnegie Mellon University
- 2015 Stable Weights that Balance Covariates for Causal Inference and Estimation with Incomplete Data
Biostatistics Department, Johns Hopkins University
- 2016 New Matching Methods for Causal Inference and Impact Evaluation using Mathematical Programming
MEDS Kellogg School of Management, Northwestern University
- 2016 Measuring the Effect of the Experience of Incarceration on Reoffending
Social Enterprise Leadership Forum, Columbia Business School, Columbia University
- 2017 New Matching Methods for Causal Inference and Impact Evaluation using Mathematical Programming
Department of Health Care Policy, Harvard Medical School
- 2017 New Matching Methods for Causal Inference and Impact Evaluation using Mathematical Programming
Booth School of Business, University of Chicago
- 2017 New Matching Methods for Causal Inference and Impact Evaluation using Mathematical Programming
Booth School of Business, University of Chicago
- 2017 New Matching Methods for Causal Inference and Impact Evaluation using Mathematical Programming
Operations Research Center, Massachusetts Institute of Technology
- 2017 New Matching Methods for Causal Inference and Impact Evaluation using Mathematical Programming
Columbia Business School
- 2017 Building Representative Matched Samples in Large-Scale Observational Studies with Multivalued Treatments
Department of Statistics, Harvard University
- 2017 Methods for Causal Inference to Advance Research in Health Care and Public Policy
Department of Statistics, Harvard University

National

- 2011 Contrasting Evidence Within and Between Institutions that Supply Treatment in an Observational Study of Alternative Forms of Anesthesia/Invited Presentation
Joint Statistical Meetings, Miami FL

- 2012 Using Mixed Integer Programming for Matching in Observational Studies: Effect of the 2010 Chilean Earthquake on Posttraumatic Stress
Atlantic Causal Inference Conference, Johns Hopkins University
- 2012 Designing an Observational Study to be Less Sensitive to Unmeasured Biases: Effect of the 2010 Chilean Earthquake on Posttraumatic Stress
Joint Statistical Meetings, San Diego, CA
- 2013 Using Mixed Integer Programming for Matching in Observational Studies: Effect of the 2010 Chilean Earthquake on Posttraumatic Stress
Department of Statistics, Stanford University
- 2014 Optimal Matching with Direct Covariate Balance Using Integer Programming
Kaiser Permanente, San Francisco
- 2014 Stable Weight Adjustment for Causal Inference and Estimation with Incomplete Data
Eastern and North American Region/International Biometric Society Spring Meeting, Baltimore, MD
- 2014 Stable Weight Adjustment for Causal Inference and Estimation with Incomplete Data
Joint Statistical Meetings, Boston, MA
- 2014 Stronger Instrumental Variables Via Integer Programming for Healthcare Research
INFORMS, San Francisco, CA
- 2015 Stable Weights that Balance Covariates for Causal Inference and Estimation with Incomplete Data
Statistics Department, Duke University
- 2015 Optimal Multilevel Matching in Clustered Observational Studies: A Case Study of the School Voucher System in Chile
SREE, Washington, DC
- 2015 Covariate Balanced Restricted Randomization: Optimal Designs, Exact Tests, and Asymptotic Results
INFORMS, San Francisco, Ca
- 2016 designmatch: Construction of Matched Samples for Randomized Experiments and Observational Studies that are Balanced by Design
Uber, California
- 2016 Stable Weights that Balance Covariates for Causal Inference and Estimation with Incomplete Data
Methods Workshop, University of California at Berkeley
- 2016 designmatch: Construction of Matched Samples for Randomized Experiments and Observational Studies that are Balanced by Design
Atlantic Causal Inference Conference, New York, NY
- 2016 Maximizing the Information Content of a Balanced Matched Sample
Joint Statistical Meetings, Chicago, IL
- 2016 Large-scale Optimal Matching for Design-based Inference Using Integer Programming
INFORMS, Nashville, TN
- 2017 New Matching Methods for Causal Inference and Impact Evaluation Using Mathematical Programming/Marketplace Optimization Data Science Symposium
Uber, San Francisco

International

- 2007 A First Household Panel Survey in Chile: Methodological Considerations

- 2008 Institute of Social and Economic Research, University of Essex, England
How Income Stratification is Perpetuated Across Generations? The Contribution of Longitudinal Surveys
Expansiva Workshop, Santiago, Chile
- 2011 Contrasting Evidence Within and Between Institutions that Supply Treatment in an Observational Study of Alternative Forms of Anesthesia
International Conference on Health Policy Statistics, Cleveland, OH
- 2012 Estimation of the Effect of Prophylactic CPAP on Very Low Birth Weight Infants Using Matching
Neocosur Conference, Buenos Aires, Argentina
- 2012 Using Mixed Integer Programming for Matching in Observational Studies: Effect of the 2010 Chilean Earthquake on Posttraumatic Stress
Department of Statistics, Warwick University, England
- 2012 Designing an Observational Study to be Less Sensitive to Unmeasured Biases: Effect of the 2010 Chilean Earthquake on Posttraumatic Stress
Department of Biostatistics and Epidemiology, McGill University
- 2013 Matching for Balance, Pairing for Heterogeneity in an Observational Study of Effectiveness of For-profit and Not-for-profit High Schools in Chile
Joint Statistical Meetings, Montreal, CA
- 2013 Using Mixed Integer Programming for Matching in Observational Studies: Effect of the 2010 Chilean Earthquake on Posttraumatic Stress
Department of Statistics, University of Oxford, England
- 2013 Using Mixed Integer Programming for Matching in Observational Studies: Effect of the 2010 Chilean Earthquake on Posttraumatic Stress
Department of Statistics, London School of Economics, England
- 2013 Using Mixed Integer Programming for Matching in Observational Studies: Effect of the 2010 Chilean Earthquake on Posttraumatic Stress
Statistical Laboratory, University of Cambridge, England
- 2013 Estimation Strategies in Observational Studies
Neocosur Conference, Buenos Aires, Argentina
- 2013 Effect of Prophylactic CPAP in Very Low Birth Weight Infants in South America
Neocosur Conference, Buenos Aires, Argentina
- 2014 Instrumental Variable for Causal Inference in the Health Sciences
Neocosur Conference, Buenos Aires, Argentina
- 2015 Stable Weights that Balance Covariates for Causal Inference and Estimation with Incomplete Data
Statistical Laboratory, University of Cambridge, England
- 2015 Stable Weights that Balance Covariates for Causal Inference and Estimation with Incomplete Data
UK Causal Inference Meeting, University of Bristol, England
- 2015 Stable Weights that Balance Covariates for Causal Inference and Estimation with Incomplete Data
International Workshop on Applied Statistics, Bogota, Colombia
- 2016 Causal Inference and Impact Evaluation in Observational Studies: New Matching Methods to Approximate a Randomized Experiment
Pediatrics Division, PUC, Santiago, Chile
- 2016 Toward an Evaluation of the Comparative Effectiveness of the Intensive Care Units of the Neocosur Network
Neocosur Conference, Buenos Aires, Argentina
Economics Department, University of Chile
- 2017 Comparative Effectiveness of the Intensive Care Units of the Neocosur Network

through Weighted Samples
Neocosur Conference, Buenos Aires, Argentina

Report of Scholarship

Peer-Reviewed Scholarship in print or other media:

Research Investigations

- 1) **Zubizarreta JR**, Reinke CE, Kelz RR, Silber JH, Rosenbaum PR. Matching for Several Sparse Nominal Variables in a Case Control Study of Readmission Following Surgery. *The American Statistician* 2011. 65: 229-238.
- 2) **Zubizarreta JR**, Neuman MD, Silber JH, Rosenbaum PR. Contrasting Evidence Within and between Institutions that Supply Treatment in an Observational Study of Alternative Forms of Anesthesia. *Journal of the American Statistical Association* 2012. 107: 901-915.
- 3) **Zubizarreta JR**. Using Mixed Integer Programming for Matching in an Observational Study of Acute Kidney Injury after Surgery. *Journal of the American Statistical Association* 2012. 107: 1360-1371.
- 4) Reinke CE, Kelz RR, **Zubizarreta JR**, Lanyu M, Saynisch P, Kyle FA, Even-Shoshan O, Fleisher LA, Silber JH. Obesity and Readmission in Elderly Surgical Patients. *Surgery* 2012. 152: 355-362.
- 5) **Zubizarreta JR**, Small DS, Goyal NK, Lorch SA, Rosenbaum PR. Stronger Instruments Via Integer Programming in an Observational Study of Late Preterm Birth Outcome. *Annals of Applied Statistics* 2013. 7: 25-50.
- 6) **Zubizarreta JR**, Cerda M, Rosenbaum PR. Effect of the 2010 Chilean Earthquake on Posttraumatic Stress: Reducing Sensitivity to Unmeasured Bias Through Study Design. *Epidemiology* 2013. 24: 79-87 (with discussion). Winner of the Rothman Prize for the best paper published in *Epidemiology* in 2013.
- 7) Goyal NK, **Zubizarreta JR**, Small DS, Lorch SA. Length of Stay and Readmission Risk for late Preterm Infants: An Instrumental Variable Approach. *Hospital Pediatrics* 2013. 3: 7-15.
- 8) Kelz RR, Reinke CE, **Zubizarreta JR**, Wang M, Saynisch P, Reese P, Even-Shoshan O, Reese PR, Fleisher LA, Silber JH. Acute Kidney Injury, Renal Function, and the Elderly Obese Surgical Patient: A Matched Case-Control Study. *Annals of Surgery* 2013. 258: 359-363.
- 9) Yang F, **Zubizarreta JR**, Small DS, Lorch SA, Rosenbaum PR. Dissonant Conclusions When Testing the Validity of an Instrumental Variable. *The American Statistician* 2014. 68: 253-263.
- 10) **Zubizarreta JR**, Paredes RD, Rosenbaum PR. Matching for Balance, Pairing for Heterogeneity in an Observational Study of the Effectiveness of For-Profit and Not-for-profit High Schools in Chile. *Annals of Applied Statistics* 2014. 8: 2096-2121.
- 11) **Zubizarreta JR**, Small DS, Rosenbaum PR. Isolation in the Construction of Natural Experiments. *Annals of Applied Statistics* 2014. 8: 2096-2121.
- 12) Neuman MD, Rosenbaum PR, Ludwig JM, **Zubizarreta JR**, Silber JH. Anesthesia Technique, Mortality, and Length of Stay After Hip Fracture Surgery. *Journal of the American Medical Association* 2014. 311: 2508-2517.
- 13) Keele L, Titiunik R, **Zubizarreta JR**. Enhancing a Geographic Regression Discontinuity Design Through Matching to Estimate the Effect of Ballot Initiatives on Voter Turnout. *Journal of the Royal Statistical Society: Series A* 2015. 178: 223-239.
- 14) Hsu J, **Zubizarreta JR**, Small DS, Rosenbaum PR. Strong Control of the Family-Wise Error

Rate in Observational Studies that Discover Effect Modification by Exploratory Methods. *Biometrika* 2015. 102: 767-782.

- 15) **Zubizarreta JR**. Stable Weights that Balance Covariates for Estimation with Incomplete Outcome Data. *Journal of the American Statistical Association* 2015. 110: 910-922.
- 16) Resa MA, **Zubizarreta JR**. Evaluation of Subset Matching Methods and Forms of Covariate Balance. *Statistics in Medicine* 2016. 35: 4961-4979.
- 17) Kilcioglu C, **Zubizarreta JR**. Maximizing the Information Content of a Balanced Matched Sample in a Study of the Economic Performance of Green Buildings. *Annals of Applied Statistics* 2016. 10: 1997-2020.
- 18) **Zubizarreta JR**, Lorch SA, Marshall G, D'Apremont I, Tapia JL. Effect of Prophylactic CPAP in Very Low Birth Weight Infants in South America. *Journal of Perinatology* 2016. 36: 629-634.
- 19) **Zubizarreta JR**, Keele L. Optimal Multilevel Matching in Clustered Observational Studies: A Case Study of the School Voucher System in Chile. *Journal of the American Statistical Association* 2017. In press.
- 20) Hirshberg, DA, **Zubizarreta JR**. On Two Approaches to Weighting in Causal Inference. *Epidemiology* 2017. In press.
- 21) Rosellini AJ, Dussailant F, **Zubizarreta JR**, Kessler R, Rose S. Predicting Post-traumatic Stress Disorder Following a Natural Disaster. *Journal of Psychiatric Research*. In press.
- 22) Hu W, Chan C, **Zubizarreta JR**, Escobar G. An Examination of Early Transfers to the ICU Based on a Physiologic Risk Score. *Manufacturing & Service Operations Management* 2017. In press.
- 23) Miratrix LW, Wager S, **Zubizarreta JR**. Shape-Constrained Partial Identification of a Population Mean Under Unknown Probabilities of Sample Selection. *Biometrika* 2017. In press.

Non-peer reviewed scholarship in print or other media:

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Proceedings of meetings or other non-peer reviewed scholarship

- 1) **Zubizarreta JR**. Educational Outcomes of the Children of the Poor: the Chilean Case, background paper prepared for the Human Development Report 2008/2009 for Latin America and the Caribbean. United Nations Development Plan 2009.
- 2) **Zubizarreta JR**. Introduction to matching in Observational Studies Using Mixed Integer Programming. *Transactions of the Annual Deming Conference on Applied Statistics* 2012.

Reviews, chapters, monographs and editorials

- 1) Rodriguez C, Dominguez P, Undurraga E, **Zubizarreta JR** (2009). Identification and Characterization of Vulnerable Populations: Elements for the Measurement of Risk. In: *Towards the Bicentenary: Proposals for Chile*. Ediciones UC 2009. 305-328. (In Spanish.)
- 2) Paredes RD, Volante P, Opazo MO, **Zubizarreta JR**. Shared Financing in the Chilean Subsidized Education. In: *Proposals for Chile*. Ediciones UC 2013. 51-83. (In Spanish.)

Professional educational materials or reports, in print or other media:

Statistical Software

1. depinf package for R, with Peter Aronow and Forrest Crawford
2. designmatch package for R, with Cinar Kilcioglu
3. mipmatch package for R
4. sbw package for R, with Mohammed-Amine Allouah
5. scbounds package for R, with Luke Miratrix and Stefan Wager

Thesis:

Zubizarreta JR. Optimal Designs for Observational Studies Using Integer Programming. University of Pennsylvania. 2013.