Rafael Becerril Arreola

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Last updated: October, 2025

EMPLOYMENT

University of South Carolina	**USA**
Associate Professor (with tenure), Marketing Dept.	2022 -
Assistant Professor, Marketing Dept.	2013 - 2022
Lingnan University	**Hong Kong**
Visiting Tutor, English Dept.	2008
Senior Research Assistant, Computing and Decision Sciences Dept.	2007 - 2008
Research Assistant, Computing and Decision Sciences Dept.	2006 - 2007
ARBE Transportation	**Mexico**
Systems Analyst (part-time contractor)	2005 - 2006
AVW-TELAV	**Canada**
Systems Design Specialist, System Design and Integration Dept.	2004 - 2005
Concordia University	**Canada**
Research Associate, Electrical and Computer Engineering Dept.	2003 - 2004
ITESM	**Mexico**
Instructor, Division of Engineering	2001

EDUCATION

UCLA (University of California, Los Angeles)	**USA**
Ph.D. in Management (focus on Quantitative Marketing and Economics)	2008 - 2013
University of Toronto	**Canada**
M.A.Sc. in Electrical Engineering (focus on Automatic Control)	2001 - 2003
ITESM (Instituto Technológico de Estudios Superiores de Monterrey)	**Mexico**
B.Sc. in Electrical and Computer Engineering	1996 - 2000

EXPERTISE

Research. I study digital technologies (e.g., pricing algorithms, web tracking, e-commerce) and social and economic factors (e.g., income, status) in consumer markets and supply chains. To this end, I develop methods and technologies that combine econometrics, statistics, optimization, computer science, and computer engineering with theories from marketing, operations, economics, and psychology.

Teaching. My specialties are the methods and management of Data Science, Machine Learning, and Artificial Intelligence at undergraduate and graduate levels. I teach through the case method, in-class labs, and consulting assignments. Delivered in face-to-face, distributed, and hybrid formats, my courses emphasize critical thinking and highly-structured best practice frameworks to tackle the complexity of real-life problems.

Practice. My consulting work has focused on retailing, e-commerce, and consumer packaged goods. Most projects involve the application of analytics and data science to problems related to pricing, product line decisions, forecasting, and impact evaluation.

ADVANCED RESEARCH IN PROGRESS

1. Rafael Becerril-Arreola and Randolph E. Bucklin. Permanent Income and Marketing Outcomes.

2. Rafael Becerril-Arreola. The Effectiveness and Consistency of Pricing Algorithms in Online Grocery Retailing.

3. Yilian Du and Rafael Becerril-Arreola. Reselling Surcharges in an Online Marketplace.

4. Rafael Becerril-Arreola. Device Fingerprinting, Web Tracking, and Personalization in Online Retailing.

WORKING PAPERS

1. Rafael Becerril-Arreola and Juanjuan Zhang. Price as a Signal of Wealth, Revisited.

2. Yilian Du and Rafael Becerril-Arreola. Product Availability in Online Grocery Retailing.

3. Chi Zhou, Rafael Becerril-Arreola, and Mingming Leng. Retailer-Supplier Coordination of Pricing and Delivery Ratings Availability Decisions in Online Marketplaces. Revise and resubmit.

JOURNAL PUBLICATIONS

1. Mingming Leng, Rafael Becerril-Arreola, Mahmut Parlar, and Mark Ferguson. Disclosing Delivery Performance Information when Consumers are Sensitive to Promised Delivery Time, Delivery Reliability, and Price. **Manufacturing & Service Operations Management**, 26(5):1918–1924, 2024. doi:10.1287/msom.2023.0223.

2. Rafael Becerril-Arreola, Randolph E. Bucklin, and Raphael Thomadsen. Effects of Income Distribution Changes on Assortment Size in the Mainstream Grocery Channel. **Management Science**, 67(9):5301–5967, 2021. doi:10.1287/mnsc.2020.3785.
   Featured in phys.org, newswise, Futurity

3. Rafael Becerril-Arreola and Randolph E. Bucklin. Beverage Bottle Capacity, Packaging Efficiency, and the Potential for Plastic Waste Reduction. **Scientific Reports**, 11(3542), 2021. doi:10.1038/s41598-021-82983-x.
   Featured in New Scientist, ScienMag, Inverse, Florida News Times, Europa Press, EurekAlert!, Azom, Phys.org, The Herald, Ambiente Plástico, Technologie Média, Sina, Zimo Dnevnik, Plastic Food Packaging Waste News, Nature Asia, Science in Poland, Gigazine, Notiamérica, Clarín, Publímetro, Unfoldtimes, Newsbreak, Infobae, La Repubblica, Rakéta, La Stampa, Eco dalle città, Piece Business, Food Processing, etc.

4. Rafael Becerril-Arreola. Estimating Demand with Substitution and Intraline Price Spillovers. **Manufacturing & Service Operations Management**, 22(3):598–614, 2020. doi:10.1287/msom.2018.0765.

5. Yong Tang, Jie Xiong, Rafael Becerril-Arreola, and Lakshmi Iyer. Ethics of Blockchain. **Information Technology & People**, 33(2):602–632, 2020. doi:10.1108/ITP-10-2018-0491.
   Featured in Cointelegraph Magazine, FutureNews

6. Chen Zhou, Shrihari Sridhar, Rafael Becerril-Arreola, Tony H. Cui, and Yan Dong. Promotions as Competitive Reactions to Recalls and Their Consequences. **Journal of the Academy of Marketing Science**, 47(4):702–722, 2019. doi:10.1007/s11747-018-0611-8.

7. Rafael Becerril-Arreola, Chen Zhou, Raji Srinivasan, and Daniel Seldin. Service Satisfaction-Market Share Relationships in Partnered Hybrid Offerings. **Journal of Marketing**, 81(5):86–103, 2017. doi:10.1509/jm.15.0537.

8. Rafael Becerril-Arreola, Mingming Leng, and Mahmut Parlar. Online Retailers' Promotional Pricing, Free-Shipping Threshold, and Inventory Decisions: A Simulation-Based Analysis. **European Journal of Operational Research**, 230(2):272–283, 2013. Authors listed in alphabetical order. doi:10.1016/j.ejor.2013.04.006.

9. Mingming Leng and Rafael Becerril-Arreola. Joint Pricing and Contingent Free-Shipping Decisions in B2C Transactions. **Production and Operations Management**, 19(4):390–405, 2010. doi:10.1111/j.1937-5956.2009.01112.x.

10. Rafael Becerril-Arreola, Amir G. Aghdam, and Rashid R. Kohan. Variable Structure Decentralized Control and Estimation for Highway Traffic Systems. **Journal of Dynamic Systems, Measurement, and Control**, 130:041002, 2008. doi:10.1115/1.2907389.

11. Rafael Becerril-Arreola. A Comment of Kim Warren's Paper: Why Has Feedback Systems Thinking Struggled to Influence Strategy and Policy Formulation. **Systems Research and Behavioral Science**, 24(1):115–118, 2007. doi:10.1002/sres.790.

12. Rafael Becerril-Arreola, Amir G. Aghdam, and Valery D. Yurkevich. Decentralised Two-Time-Scale Motions Control Based on Generalised Sampling. **IET Control Theory & Applications**, 1(5):1477–1486, 2007. doi:10.1049/iet-cta:20070020.

13. Rafael Becerril-Arreola and Amir G. Aghdam. Decentralised Nonlinear Control with Disturbance Rejection for On-Ramp Metering in Highways. **IET Control Theory & Applications**, 1(1):253–262, 2007. doi:10.1049/iet-cta:20045192.

14. Amir G. Aghdam, Edward J. Davison, and Rafael Becerril-Arreola. Structural Modification of Systems Using Discretization and Generalized Sampled-Data Hold Functions. **Automatica**, 42(11):1935–1941, 2006. doi:10.1016/j.automatica.2006.06.005.

15. Manfredi Maggiore and Rafael Becerril. Modeling and Control Design for a Magnetic Levitation System. **International Journal of Control**, 77(10):964–977, 2004. doi:10.1080/002071704200024392.

16. Rafael Becerril Arreola. Output Feedback Nonlinear Control for a Linear Motor in Suspension Mode. **Automatica**, 40(12):2153–2160, 2004. doi:10.1016/j.automatica.2004.07.005.

PEER REVIEWED CONFERENCE PUBLICATIONS

1. Rafael Becerril-Arreola. A Method to Assess and Explain Disparate Impact in Online Retailing. In **Proceedings of the 2023 ACM Web Conference**, WWW '23, page 3670–3679, New York, NY, USA, 2023. doi:10.1145/3543507.3583270.

2. Yong Tang, Jie Xiong, Rafael Becerril-Arreola, and Lakshmi Iyer. Blockchain Ethics Research: A Conceptual Model. In **Proceedings of the 2019 ACM Computers and People Research Conference**, Nashville, TN, Jun 2019.

3. Rafael Becerril-Arreola, Amir G. Aghdam, and Edward J. Davison. Minimizing Interaction of Subsystems in Large-Scale Interconnected Systems Using Generalized Sampling. In **Proceedings of the 16th IFAC World Congress**, Prague, Czech Republic, Jul 2005.

4. Rafael Becerril and Amir G. Aghdam. On-Ramp Decentralized Nonlinear Control with Disturbance Rejection. In **Proceedings of the 16th IFAC World Congress**, Prague, Czech Republic, Jul 2005.

5. Rafael Becerril, Amir G. Aghdam, and Valery D. Yurkevich. Decentralized Two-Time-Scale Motions Control Using Generalized Sampled-Data Hold Functions. In **Proceedings of the 2004 American Control Conference**, volume 4, Boston, MA, Jun 2004.

6. Rafael Becerril, Amir G. Aghdam, and Rashid R. Kohan. Decentralized Nonlinear Traffic Control–II: Sliding Mode Observers. In **Proceedings of the 43rd IEEE Conference on Decision and Control**, Nassau, Bahamas, Dec 2004.

7. Rashid R. Kohan, Rafael Becerril, and Amir G. Aghdam. Decentralized Nonlinear Traffic Control–I: Variable Structure Linearizing Control. In **Proceedings of the 43rd IEEE Conference on Decision and Control**, Nassau, Bahamas, Dec 2004.

8. Rafael Becerril-Arreola and Manfredi Maggiore. Nonlinear Stabilization of a 3 Degrees-of-Freedom Magnetic Levitation System. In **Proceedings of the 2003 American Control Conference**, volume 2, Denver, CO, Jun 2003.

CONFERENCE PRESENTATIONS

1. Auditing the Effectiveness and Impartiality of Pricing Algorithms in Online Grocery Retailing. In **INFORMS Annual Conference**, Atlanta, GA, Oct 2025.

2. Product Availability in Online Grocery Retailing: Can Online Retailing Reforest Food Deserts? In **Marketing Science Conference**, Sydney, NSW, Australia, Jun 2024.

3. Local Assortments in Online Retailing: Enhancing Retail Auditing Capabilities with Automation. In **Theory + Practice in Marketing Conference**, Austin, TX, May 2024.

4. The Effects of Permanent Income on Marketing Outcomes. In **Marketing Science Conference**, Chicago, IL, Jun 2022.

5. Exploring Disparate Impact in Online Retailing. In **Marketing Science Conference**, Chicago, IL, Jun 2022.

6. Heterogeneous Veblen Effects: Evidence from the Car Rental Market. In **Marketing Science Conference**, Philladelphia, PA, Jun 2018.

7. What Are the Welfare Effects of Consumer Brand Deletions? In **Marketing Science Conference**, Los Angeles, CA, Jun 2017.

8. Does Income Inequality Matter in Marketing? A Cross - Category, Cross - Market Look at Consumer Product Availability. In **Marketing Science Conference**, Baltimore, MA, Jun 2015.

9. Does Income Inequality Matter in Marketing? A Cross-Category, Cross-Market Look at Consumer Product Availability. In **Theory + Practice in Marketing Conference**, Atlanta, GA, Jun 2015.

10. The Relationships among Income, Preferences, and Consumer Motivation. In **Marketing Science Conference**, Boston, MA, Jun 2012.

11. The Multiple Moderating Effects of Social Comparisons on Consumer Expenditures. In **Marketing Science Conference**, Houston, TX, Jun 2011.

12. Social Comparisons and Consumption. In **Doctoral Symposium in Marketing**, Houston, TX, Apr 2010. University of Houston.

INVITED PRESENTATIONS

1. Exploring disparate impact in online retailing algorithms. **University of North Carolina, Charlotte; University of California, Davis**, 2023.

2. Heterogeneous Veblen Effects: Evidence from the Car Rental Market. **Shanghai University of Finance and Economics; ESSEC Business School; University of Connecticut, VOYA Financial Colloqium**, 2018-2023.

3. Competitive Reactions and Spillover Effects of Product Recalls. **University of California, Los Angeles, Marketing Area Research Symposium**, May 2016.

4. Does Income Inequality Matter in Marketing? A Large Scale Analysis of Consumer Product Availability. Columbia, SC, Apr 2016. **Symposium on Research Computing Infrastructure**.

5. The Effects of Economic Inequality on the Demand for Status-Signaling Brands. Job market paper presented at **Boston University, University of Washington Seattle, George Washington University, Tilburg University, VU Amsterdam, University of California Riverside, University of South Carolina**, 2012-2013.

PATENT

1. Rafael Becerril Arreola. Method for assessing disparate impact in internet markets, December 7 2023. US Patent App. 18/299,929.

GRANTS

Washington Center for Equitable Growth
Principal Investigator, Academic grant ($85,000)	2022 - 2026

Hong Kong Research Grants Council
Co-Investigator, Research grant (HK$418,07)	2022 - 2024

ACM Special Interest Group on Management Information Systems
Co-Investigator, Research grant ($3,000)	2018

University of South Carolina
Principal Investigator, Office of Research Racial Justice and Equity Research grant ($15,000)	2022
Principal Investigator, Office of Research ASPIRE-I grant ($15,000)	2021
Center for Teaching Excellence, online course design grant ($500)	2020

University of South Carolina, Darla Moore School of Business
Principal Investigator, Moore research grants ($4,928)	2024
Professional MBA course redesign grant ($5,000)	2023
Professional MBA course redesign grant ($5,000)	2020
Principal Investigator, Moore research grants ($5,750)	2020
Principal Investigator, Moore research grants ($5,500)	2019
Principal Investigator, Moore research grant ($5,000)	2016
Principal Investigator, Moore research grant ($2,500)	2014
Principal Investigator, Moore research grant ($3,000)	2013

MENTORING

University of South Carolina, Marketing Department
PhD Dissertation Committee (chair) for Yilian Du	2025 -
PhD Dissertation Committee (co-chair) for Sina Aghaie	2017 - 2019
PhD Comprehensive Exam Committee (member)	2017 -
PhD Qualifying Exam Committee (member)	2014 -

University of South Carolina, Management Science Department
PhD Qualifying Exam Committee (member)	2017 - 2018

University of South Carolina, Computer Science Department
Master Thesis Committee (member) for Surya Bhatt	2014 - 2015

TEACHING EXPERIENCE

University of South Carolina, Darla Moore School of Business
Developed and taught:
MKTG744: Hybrid distributed and face-to-face MBA course on ML and AI management (MLOps, LLMOps, System design, Governance, Requirements engineering)	2025 -
MKTG722: Face-to-face graduate course on Data Science (Python programming and machine learning methods)	2021 -
MKTG448: Face-to-face undergraduate course on Data Science (R programming and machine learning methods)	2020 -
MKTG717: Hybrid distributed and face-to-face MBA course on Marketing Analytics (analytics life-cycle management, fundamentals of analytics methods, experiments, etc.)	2014 - 2024
MKTG712: Face-to-face MBA course on Marketing Analytics (predictive analytics, marketing experiments, CLV, conjoint analysis, etc.)	2013

Taught:
MKTG451: Face-to-face undergraduate course on Marketing Analytics (regression diagnostics, forecasting, data mining, optimization, etc.)	2016 - 2019

Advised:

BADM720: MSBA capstone consulting projects on Business Analytics	2023 - 2024
Healthy learners - Intervention effectiveness measurement	
Simply NUC Inc. - Pricing analysis and optimization	
Simply NUC Inc. - Demand forecasting	
MKTG750: MBA capstone consulting projects on Marketing Analytics	2013 - 2015
Coca Cola Consolidated - Price analysis and optimization	
Coty Inc.- Price and promotion analysis and optimization	
Coty Inc.- Market structure analysis based on store planograms	
Jacobsen Manufacturing - Product line and pricing analysis	

ITESM

Developed and taught undergraduate course on electric circuits	2001

SERVICE TO UNIVERSITY AND COMMUNITY —————————————————————————

University of South Carolina, Marketing Department

PhD Program Update Committee (chair)	2023 - 2024
PhD Admission Committee (member)	2019
Center for Marketing Solutions' Advisory Board (member)	2024 -
	2014 - 2016
Faculty Recruiting Committee (member)	2013 - 2015

University of South Carolina, Darla Moore School of Business

Center for Sustainable Growth (fellow)	2024 -
Faculty Council (elected member)	2021 - 2024
Master of Science in Business Analytics, Program Committee (member)	2020 -
Institutional Nielsen datasets subscription (administrator)	2019 -
Faculty Advisory Committee (member)	2017 - 2020
Analytics Certificate Committee (member)	2014 - 2016

University of South Carolina

Faculty Advisory Committee (member)	2024 -
Intellectual Property Committee (member)	2022 - 2025
Office of Research (grant reviewer)	2021
Research Computing Advisory Committee (member)	2019 - 2021
University Bookstores' Committee (member)	2015 - 2017
University Bookstores' Committee (co-chair)	2014 - 2015

Dutch Fork High School

Advanced Placement Research Program (mentor)	2019 - 2020

SERVICE TO PROFESSION —————————————————————————————————————

Academic Journals

Ad hoc reviewer for Marketing Science, Journal of Marketing, Journal of Retailing, Manufacturing & Service Operations Management, Production and Operations Management, Journal of Operations Management, Information Systems Research, Journal of Business Ethics, Journal of Public Policy & Marketing, Technological Forecasting & Social Change, Transportation Research Part A: Policy and Practice, European Journal of Operational Research, ACM Computing Surveys

Academic Conferences

Chair, Track on Coordination in E-Commerce Supply Chains, INFORMS Annual Conference, October 2025
Chair, Track on Algorithmic Fairness, Marketing Science Conference, June 2022

Funding Agencies

Ad hoc reviewer for FONDECYT (National Fund for Scientific and Technological Development, Chile)

HONORS AND AWARDS

University of South Carolina
Moore's Fellow — 2025 -
Business Partnership Foundation Dean's Fellow — 2021 - 2025

Emerald publishing
Emerald Literati Awards, Outstanding Paper Award — 2021

ACM (Association for Computing Machinery)
SIGMIS CPR Magid Igbaria Outstanding Conference Paper Award, finalist — 2019

MSI (Marketing Science Institute)
Clayton Dissertation Award, Honorable Mention — 2012

University of California, Los Angeles
American Marketing Association Sheth Doctoral Consortium, Fellow — 2011
Columbia-Duke-UCLA Workshop on Quantitative Marketing, Fellow — 2010
Doctoral Symposium in Marketing, University of Houston, Fellow — 2010
Doctoral Internationalization Consortium in Marketing, UT Austin, Fellow — 2009
Graduate, Teaching, and Research Fellowships — 2008 - 2013
Anderson Educational Fellowship — 2008 - 2012

University of Toronto
Graduate, Teaching, and Research Fellowships — 2001 - 2003

International Communication Industries Association
Educational Communications Foundation Scholarship — 2001

Instituto Technológico de Estudios Superiores de Monterrey
Excellence Scholarship for Master's program — 2001
Highest GPA within major's graduating class, graduation honors — 2000
Undergraduate merit-based scholarship — 1996 - 2000

Information Handling Services
1st place in the IHS96 Research Prize — 1996