

Rafael Becerril Arreola

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EDUCATION

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

EMPLOYMENT

- **University of South Carolina, USA**
Assistant Professor of Marketing, Darla Moore School of Business 2013 -
- **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

EXPERTISE

Research. I study the roles of socioeconomics and technology in consumer markets, focusing on their implications for marketing and its interfaces with operations, engineering, and information systems. To this end, I develop and apply tools from econometrics, Bayesian statistics, automatic control, game theory, optimization, and high-performance computing, supported by theories from microeconomics, psychology, and sociology. Most of this work pertains to pricing, assortment, and product line decisions in the contexts of automotive markets, retailing, online markets, and consumer packaged goods.

Teaching. My specialty is business analytics, with a focus on marketing analytics at both undergraduate and graduate levels. I teach the conceptual foundations and the practical application of analytics tools, through the case method, in-class labs, and consulting assignments with major consumer goods companies. Delivered in face-to-face, distributed, and mixed formats, my courses emphasize critical thinking and highly-structured best practices to tackle the complexity of real-life problems.

PUBLICATIONS IN ACADEMIC BUSINESS JOURNALS

1. Rafael Becerril-Arreola. Estimating Demand with Substitution and Intraline Price Spillovers. *Manufacturing & Service Operations Management*. Forthcoming.
2. Yong Tang, Jie Xiong, Rafael Becerril-Arreola, and Lakshmi Iyer. Ethics of Blockchain: A Framework of Technology, Applications, Impacts, and Research Directions. *Information Technology & People*. Forthcoming.
3. 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.
4. 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.
5. 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.
6. 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.
7. 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.

PUBLICATIONS IN ACADEMIC SCIENCE JOURNALS

1. 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.
2. 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.
3. 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.
4. 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.
5. 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.
6. 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.

PAPERS UNDER REVIEW OR REVISION

1. Rafael Becerril-Arreola, Randolph E. Bucklin, and Raphael Thomadsen. Effects of Income Distribution Changes on Assortment Size in the Mainstream Grocery Channel. Under review.
2. Rafael Becerril-Arreola and Dominique M. Hanssens. Quantifying and Explaining Product Category Positionality. Revising for resubmission.
3. Rafael Becerril-Arreola, Mark Ferguson, Mingming Leng, and Mahmut Parlar. Supply Chain Analysis under the Impact of Delivery-Time-Based Customer Ratings. Revising for resubmission. Authors listed in alphabetical order.
4. Rafael Becerril-Arreola. Heterogeneous Veblen Effects: Evidence from the Car Rental Market. Preparing for submission.

RESEARCH IN PROGRESS (ADVANCED PROJECTS)

1. Rafael Becerril-Arreola, Randolph E. Bucklin, and Nitin Mehta. Heterogeneous Effects of Income Changes on Consumer Behavior.
2. Sina Aghaie, Carlos J.S. Lourenco, Charles H. Noble, and Rafael Becerril-Arreola. Blue or Real? An Empirical Analysis of the Correlates of Entry Threats.

INVITED PRESENTATIONS

1. Rafael Becerril-Arreola. Heterogeneous Veblen Effects: Evidence from the Car Rental Market. *Shanghai University of Finance and Economics*, Jun 2018.
2. Chen Zhou, Rafael Becerril-Arreola, Yan Dong, and Tony H. Cui. Competitive Reactions and Spillover Effects of Product Recalls. *University of California, Los Angeles*, May 2016.
3. Rafael Becerril-Arreola and Randolph E. Bucklin. Does Income Inequality Matter in Marketing? A Large Scale Analysis of Consumer Product Availability. Columbia, SC, Apr 2016. *Symposium on Research Computing Infrastructure*.
4. Rafael Becerril-Arreola. 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.

CONFERENCE PRESENTATIONS

1. Rafael Becerril-Arreola. Heterogeneous Veblen Effects: Evidence from the Car Rental Market. In *Marketing Science*, Philadelphia, PA, Jun 2018. INFORMS.
2. Rafael Becerril-Arreola and Randolph E. Bucklin. What Are the Welfare Effects of Consumer Brand Deletions? In *Marketing Science*, Los Angeles, CA, Jun 2017. INFORMS.
3. Rafael Becerril-Arreola and Randolph E. Bucklin. Does Income Inequality Matter in Marketing? A Cross - Category, Cross - Market Look at Consumer Product Availability. In *Marketing Science*, Baltimore, MA, Jun 2015. INFORMS.

4. Rafael Becerril-Arreola and Randolph E. Bucklin. Does Income Inequality Matter in Marketing? A Cross-Category, Cross-Market Look at Consumer Product Availability. In *Theory + Practice in Marketing*, Atlanta, GA, Jun 2015.
5. Rafael Becerril-Arreola. The Relationships among Income, Preferences, and Consumer Motivation. In *Marketing Science Conference*, Boston, MA, Jun 2012. INFORMS.
6. Rafael Becerril-Arreola. The Multiple Moderating Effects of Social Comparisons on Consumer Expenditures. In *Marketing Science Conference*, Houston, TX, Jun 2011. INFORMS.
7. Rafael Becerril-Arreola. Social Comparisons and Consumption. In *Doctoral Symposium in Marketing*, Houston, TX, Apr 2010. University of Houston.

CONFERENCE PROCEEDINGS

1. Yong Tang, Jie Xiong, Rafael Becerril-Arreola, and Lakshmi Iyer. Blockchain Ethics Research: A Conceptual Model. In *Proceedings of the ACM SIGMIS Computers and People Research Conference*, Nashville, TN, Jun 2019.
2. Rafael Becerril-Arreola, Denise Dahlhoff, Ravi Dhar, Gilles Laurent, Jessie Handbury, Christian Kalweit, and John Zhang. Pricing the Priceless: How to Charge Luxury Prices. In Barbara Kahn, Joseph Nunes, and David Bell, editors, *White papers of the 2015 Online Luxury Retailing Conference*, New York, NY, 2015. Authors listed in alphabetical order.
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.

MEDIA CONTRIBUTIONS AND MENTIONS

1. Wallet Hub. 2018's Most Prestigious & Most Exclusive Credit Cards.
<https://wallethub.com/most-exclusive-credit-cards/>, Nov 2018.
2. National Affairs Blog. Picking winners.
<https://nationalaffairs.com/blog/detail/findings-a-daily-roundup/picking-winners>, Apr 2018.

RESEARCH GRANTS

- **Association for Computing Machinery**
Management Information Systems research grant \$1,000 2018
(with Yong Tang, Jason Xiong, and Lakshmi Iyer)
- **University of South Carolina, Darla Moore School of Business**
Moore research grant \$5,000 2016
Moore research grant \$2,500 2014
Moore research grant \$3,000 2013

TEACHING EXPERIENCE

- **University of South Carolina, Darla Moore School of Business, USA**
Taught:
- face-to-face undergraduate course on Marketing Analytics 2016 -
(regression, forecasting, data mining, optimization, etc.)
Developed and taught:
- concurrently distributed and face-to-face MBA course on Marketing Analytics 2014 -
(panel data regression, multivariate testing, marketing mix modeling, etc.)
- MBA practicums involving consulting projects on marketing analytics 2013 - 2015
(price optimization, measurement of market structure, etc.)
- face-to-face MBA course on Marketing Analytics 2013
(predictive analytics, marketing experiments, CLV, conjoint analysis, etc.)
- **ITESM, Mexico**
Developed and taught undergraduate course on electric circuits 2001

STUDENT ADVISING AND SERVICE

- **University of South Carolina, Marketing Department**
PhD dissertation committee (co-chair)
- Sina Aghaie 2019
PhD comprehensive exam committee (member) 2017, 2018
PhD qualifying exam committee (member) 2014, 2015, 2019
- **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)
- Surya Bhatt 2015

SERVICE TO DEPARTMENT, SCHOOL, UNIVERSITY, AND COMMUNITY

- **University of South Carolina, Marketing Department**
Center for Marketing Solutions' Advisory Board (member) 2014 - 2016
Faculty recruiting committee (member) 2013 - 2015
- **University of South Carolina, Darla Moore School of Business**
Administrator of institutional Nielsen datasets contract 2019 -
Faculty Advisory Committee (member) 2017 -
Analytics certificate curricula committee (member) 2014 - 2016

- **University of South Carolina**
 - Research Computing Advisory Committee (member) 2019 -
 - University Bookstores' Committee (member) 2015 - 2017
 - University Bookstores' Committee (co-chair) 2014 - 2015

SERVICE TO PROFESSION

Ad hoc reviewer for: Marketing Science, Production and Operations Management, Information Systems Research, Journal of Public Policy & Marketing, Transportation Research Part A: Policy and Practice, European Journal of Operational Research, IIE (Institute of Industrial Engineers) Transactions, ACM (Association for Computing Machinery) Computing Surveys

HONORS AND AWARDS

- **ACM (Association for Computing Machinery)**
 - SIGMIS CPR Magid Igbaria Outstanding Conference Paper Award nominee 2019
- **MSI (Marketing Science Institute)**
 - Honorable Mention, Clayton Dissertation Award 2012
- **UCLA (University of California, Los Angeles)**
 - Fellow, American Marketing Association Sheth Doctoral Consortium 2011
 - Fellow, Columbia-Duke-UCLA Workshop on Quantitative Marketing 2010
 - Fellow, Doctoral Symposium in Marketing, University of Houston 2010
 - Fellow, Doctoral Internationalization Consortium in Marketing, UT Austin 2009
 - Graduate, Teaching, and Research Fellowships 2008 - 2013
 - Anderson Educational Fellowship 2008 - 2012
- **University of Toronto**
 - Graduate, Teaching, and Research Fellowships 2001 - 2003
- **ICIA (International Communication Industries Association)**
 - Educational Communications Foundation Scholarship 2001
- **ITESM (Instituto Tecnológico de Estudios Superiores de Monterrey)**
 - Excellence Scholarship for Master's program 2001
 - Highest GPA in undergraduate major, graduation honors 2000
 - Undergraduate merit-based scholarship 1996 - 2000
- **IHS (Information Handling Services)**
 - 1st place in the IHS96 Research Prize 1996

SOFTWARE SKILLS (RECENTLY USED)

- **Statistical software**
 - R, SAS, STAN
- **Computer languages**
 - Python, C, C++, SQL
- **High performance computing platforms**
 - PBS and SLURM job managers, MPI protocol
- **Operating systems**
 - Windows and Linux (user and basic administration)