

## FEDERICO (RICO) BUMBACA

Leeds School of Business, University of Colorado Boulder  
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### EMPLOYMENT

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**Assistant Professor of Marketing**, Leeds School of Business, University of Colorado Boulder 2018 - current

### EDUCATION

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**Ph.D. in Marketing** 2018

The Paul Merage School of Business, University of California – Irvine

Dissertation: Big Data Methods and Applications in Marketing

Co-Chairs: Peter E. Rossi (informal) at UCLA and Imran Currim at UCI

**M.S. in Operations Research**, Industrial Engineering, Virginia Polytechnic Institute

**MBA in Management**, Sloan School of Management, Massachusetts Institute of Technology

Thesis: A Model of Discrete Choice using Probability Density Estimation

Advisor: John D.C. Little

**M.S. and B.S. in Electrical Engineering**, Engineering Science, University of Toronto

MS thesis area: Artificial Intelligence

### RESEARCH INTERESTS

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**Topics:** Hierarchical Models in a Big Data Environment, Target Marketing, Loyalty Programs

**Methods:** Big Data Methods, Distributed Computing, Nonparametric Methods, Bayesian Econometrics, Structural Econometrics, Scientific Visualization

### PUBLICATIONS

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- Bumbaca, Federico (Rico), Sanjog Misra, and Peter E. Rossi. 2020. Scalable Target Marketing: Distributed Markov Chain Monte Carlo for Bayesian Hierarchical Models. *Journal of Marketing Research*. 2020, Vol. 57(6) 999-1018. <https://doi.org/10.1177/0022243720952410>
  - Lead article
  - CU Boulder Leeds: Kahle Family Faculty Research Excellence Award (2021)
- Bumbaca, Federico (Rico) and Jackson Novak (2025), CRAN R Package: scalablebayesm 1.0

### WORKING PAPERS AND WORK-IN-PROGRESS

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- Bumbaca, Federico (Rico). Identifying High-Value Customer Microsegments at Scale (SSRN)
- Bumbaca, Federico (Rico). Scalable Inference: A Subsampling Approach
- Shriver, Scott, Olivier Toubia, Federico (Rico) Bumbaca. Commitment Devices: Demand Estimation and Optimal Pricing
- Bumbaca, Federico (Rico). Scalable Nonparametric Density Estimation
- Bumbaca, Federico (Rico). Scalable Supervised Machine Learning for Target Marketing

## PUBLICATIONS (ARTIFICIAL INTELLIGENCE)

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- Bumbaca, Federico. 1988. Intelligent Computer-Assisted Instruction: A Theoretical Framework, *International Journal of Man-Machine Studies* **29**(3), 227-255
- Bumbaca, Federico and K.C. Smith. 1988. A Practical Approach to Image Restoration for Computer Vision, *Computer Vision, Graphics, and Image Processing*, **42**(2), 220-233
- Bumbaca, Federico and K.C. Smith. 1987. Design and Implementation of a Color Vision Model for Computer Vision Applications, *Computer Vision, Graphics, and Image Processing*, **39**(2), 226-245
- Bumbaca, Federico, Francois Blais, and Marc Rioux. 1986. Real-time Correction of Three Dimensional Nonlinearities for a Laser Rangefinder. *Optical Engineering*, **25**(4), 561-565

## TEACHING EXPERIENCE

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### University of Colorado Boulder, Leeds School of Business

Instructor, Data and Decisions: MBA core course\* 2019 – 2025

\*Nominated for the Joseph L. Frasca Teaching Excellence Award in 2021

\*Awarded the Kolb Teaching Innovation Award for “flipping the classroom” in 2020

Instructor, Marketing Research and Analytics: undergraduate juniors 2018 – 2025

### University of California Irvine, Paul Merage School of Business

Instructor, Introduction to Marketing: undergraduate juniors, one section 2016

## TEACHING ASSISTANTSHIPS

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### University of California Irvine, The Paul Merage School of Business

Marketing Management, MBA 2012 – 2017

Business Statistics, MBA 2017

Product Marketing: upper division undergraduates 2016

Marketing Communications: upper division undergraduates 2015

Brand Management: upper division undergraduates 2014

## INVITED TALKS

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- Stanford University, Graduate School of Business, April 4, 2018
- San Francisco State University, College of Business, November 6, 2017
- University College London, School of Management, October 17, 2017
- University of Rochester, Simon Business School, October 13, 2017
- University of Notre Dame, Mendoza College of Business, October 6, 2017
- Penn State, Smeal College of Business, October 2, 2017
- Northwestern University, Kellogg School of Management, September 28, 2017
- University of Colorado Boulder, Leeds School of Business, September 11, 2017
- University of Texas Austin, McCombs School of Business, September 8, 2017

## PRESENTATIONS

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- Scalable Target Marketing with Big Data. *Leeds Business Power Breakfast December 2021*

- Characterizing the Distribution of Heterogeneity: Distributed Markov Chain Monte Carlo for Hierarchical Models. *Marketing Science Conference June 2021, Leeds Summer Seminar Series August 2021*
- Characterizing Loyalty Program Members: A Big Data Approach. *Marketing Science Conference June 2017, UC Irvine brown bag June 2017, UC Irvine poster May 2017*
- Distributed Markov Chain Monte Carlo for Bayesian Hierarchical Models. *Marketing Science Conference June 2015, San Diego Marketing Camp April 2016*
- What's the Big Deal about Big Data in Marketing? *UC Irvine poster April 2016*
- Big Data in Consumer Choice: Scalable Bayesian Hierarchical Model Estimation. *UC Irvine brown bag and poster April 2015*
- Reconsidering Baron and Kenny: Myths and Truths about Mediation Analysis. *at UC Irvine brown bag January 2014*
- The Charles River Dialogs or Why Bother with the Logit? MIT Marketing Center Working Paper 89-6. Presented by John D.C. Little at *TIMS/ORSJ Conference, July 1989*

## CONFERENCES AND WORKSHOPS

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Quantitative Marketing and Structural Econometrics Workshop, Washington University	July 2017
INFORMS Marketing Science, University of Southern California	June 2017
San Diego Supercomputer Center High Performance Computing Workshop, UC – San Diego	August 2016
Sheth Doctoral Consortium, University of Notre Dame	May 2016
San Diego Marketing Camp, California State University – San Diego	April 2016
INFORMS Marketing Science, University of Maryland	June 2015
UC/USC Colloquium, UC Riverside	May 2015
Big Data Marketing Analytics, University of Chicago	October 2014
Quantitative Marketing and Economics, University of Southern California	October 2014

## SERVICE

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### University of Colorado, Leeds School of Business

Distinguished Speaker Series (DSS) and Marketing Research Seminar Series (MRSS)	2019 – 2022
Mentor, New Teacher Teaching Mentors Program	2019 – 2022
Mentor, Diverse Scholars Faculty Mentoring Program	2018 – 2022
New Assistant Professor Program, Faculty Teaching Excellence Program	2018 – 2020

## INDUSTRY EXPERIENCE

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### Mojo Networks

Managing Director, International Channels  
Vice President, Asia Pacific and Japan (Hong Kong)

### Check Point Software, Zonelabs Division

Director, Worldwide Business Development  
Director, Asia Pacific, Japan, and Latin America

### Peakstone Corporation

Vice President, Business Development

### Alcatel-Lucent, VitalSoft Division

Director, Business Development

**Visix Software**

Vice President, Asia Pacific

Director, Western Region of USA

**Fair Isaac Corporation, Blaze Software Division**

Director & General Manager, Japan (Tokyo, Japan)

Director, Marketing, Sales and Strategic Alliances

**National Research Council, Laboratory for Intelligent Systems**

Research Officer – Artificial Intelligence (Ottawa, Canada)

**COMPUTER SKILLS**

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Mathematical and Statistical Software: R, SAS, Matlab

Visualization Software: R, VisIt

Programming Languages: C/C++, SQL

High Performance Computing