# MALEK BEN SLIMAN

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#### **EDUCATION**

#### Ph.D. Candidate in Marketing

Expected May 2020

Columbia University, Graduate School of Business – Marketing, New York, NY

Dissertation: "The Art of Art Valuation"

Doctoral Coursework: Multivariate Statistics, Economic Theory, Econometrics, Random Graph Theory, Bayesian Methods, Mathematical and Empirical Models in Marketing, Optimization, Consumer Behavior, Marketing Decisions and Methods, Industrial Organization, Stochastic Models, Causal Inference

# Master of Science in Operations Research

December 2014

Columbia University, Industrial Engineering and Operations Research, New York, NY

#### Master of Science in Engineering – Diplôme d'Ingénieur

June 2013

Ecole Centrale Paris, Industrial Engineering, Paris, France

Classes Préparatoires

June 2011

Lycée Louis Le Grand, Mathematics – Physics, Paris, France

## ACADEMIC PROJECTS

Ben Sliman, Malek and Rajeev Kohli (2019), "Friendship Paradox Generalizations and Centrality Measures," under review with *Social Networks*.

- Developed a graph theoretical result extending the Friendship Paradox to more distant connections in social networks to assess the advantages of deeper stochastic seeding strategies
- Established relations between expected in and out degrees of terminal nodes of alternating walks
- Explicited the link between the Friendship Paradox, adjacency matrices, and centrality measures

Ben Sliman, Malek, Khaled Boughanmi and Rajeev Kohli (2019), "Adaptive Customization," under review with *Management Science*.

- Developed a method to dynamically customize the filtering menus and the products display offered by online retailers to facilitate the customer experience and increase revenues
- Modeled a latent class probabilistic screening rule to estimate the customers' attribute preferences in order to personalize the website's display after each feature selection
- Estimated, implemented and simulated the procedure using a dataset from a conjoint experiment
- Presented at Marketing Science 2019 and at Data Science Institute Poster Session 2019

Jedidi, Kamel, Bernd Schmitt, Malek Ben Sliman and Yanyan Li (2019), "R2M Index 1.0: Assessing the Relevance to Marketing of Academic Marketing Research," revision invited at *Journal of Marketing*.

- Designed a Relevance-to-Marketing (R2M) index using topic modeling to measure and rank the level of relevance of academic papers to marketing practice
- Scraped keywords used by business news articles to build a dictionary of marketing practice
- Validated the metric against external measures (e.g., practice awards, performance of other fields)
- Constructed and distributed surveys to marketing managers to assess the R2M index's validity

Ben Sliman, Malek and Rajeev Kohli (2019), "Leveraging the Friendship Paradox for Seeding in Social Networks with Asymmetric Relations," to be submitted at *Management Science*.

- Generalized the Friendship Paradox to directed graphs and derived three stochastic strategies for seeding (followers, leaders, friends) for diffusing information in networks with asymmetric relations
- Analyzed the theoretical conditions for each strategy to generate the highest number of followers
- Obtained a twentyfold gain over a random strategy through simulation on a twitter dataset
- Presented at Marketing Science 2018

Ben Sliman, Malek, Rajeev Kohli and Kamel Jedidi (2019), "The Art of Art Valuation."

- Develop a model for art valuation incorporating visual features, creativity and artists' reputations
- Scrape over 140,000 New York based fine art auctions results including images of the paintings
- Implement machine learning tools (e.g., autoencoder) to extract key components of paintings
- Build a similarity network of art to measure and quantify a painting's creativity and influence

#### **EXPERIENCE**

# Columbia University - Teaching Assistant

New York, NY

Design and coordination of MBA, MS, Ph.D. level courses

August 2015 – Present

- Organized, supported and created content for courses in: Applied Multivariate Statistics, Pricing Strategies, Marketing Strategy, Marketing Models, Mathematical Models in Marketing, Catching Growth Waves in Emerging Markets, Digital Marketing, edX Marketing Analytics
- Created, led and taught workshops on programming in SAS and R

# Columbia University - Research Assistant to Professor Jedidi

New York, NY

Assessing the Relevance to Marketing of Academic Marketing Research

May 2014 – August 2015

- Initiated a project to build an index of relevance to practice of academic marketing papers
- Created robust crawlers to scrape over 10,000 published papers in top marketing journals
- Developed customized stemming procedure to preprocess raw data for Latent Dirichlet Allocation

# Ecole Centrale Paris - Supply Chain Chair

Paris, France

RFID in Supply Chain of Retail Industries

September 2012 – January 2013

- Analyzed the advantages of RFID for costs reduction in the retail industry in a 3-person team
- Modeled the relation between information and holding costs in cross-docking using queuing theory
- Simulated the impact of RFID-driven information gain on holding costs of cross-docking operations

### EDF (Electricité de France) & Ecole Centrale Paris

Paris, France

Metering and billing of electric vehicles' energy consumption

September 2011 – June 2012

- Predicted the electric vehicle market's evolution in a 5-person team for the French utility company
- Estimated the impact on the energy demand and potential costs using time series extrapolation
- Prepared risk scenarios and strategic plans to help EDF anticipate the increase in energy demand

#### HONORS AND AWARDS

- AMA-Sheth Foundation Doctoral Consortium Fellow (2019)
- Luxury Education Foundation Award (2019)
- INFORMS Doctoral Consortium Fellow (2018)
- Quantitative Marketing and Structural Econometrics Workshop Fellow (2017)
- Ph.D. Program Fellowship, Columbia University (2015-Present)
- IEOR Outstanding Student Service Award, Columbia University (2014)
- Excellence-Major Scholarship, French Government (2008-2013)

# SKILLS AND EXTRACURRICULAR ACTIVITIES

- Languages:
  - Computer: R, Python, Matlab, SQL, TensorFlow, Keras, ggplot, matplotlib, Tableau
  - Human: French, Arabic, Spanish (basic)
- Sports:
  - New York Tennis League Men's Competitive 2 Winner (Fall 2017)
  - Captain of the Tennis Team at Ecole Centrale Paris (2012-2013)
  - Co-Founder and Vice-Captain of the Centrale Cricket Club (2012-2013)
- Wine Tasting and Mixology:
  - Certification in Mixology provided by Columbia Bartending Agency (2014)
  - President of the Wine Club at Ecole Centrale Paris (2011-2013)