Javier Zapata

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RESEARCH INTERESTS

Statistics, Machine Learning, Information Theoretic Learning, High-Dimensional Statistics, Graphical Models, Clustering Methods

EDUCATION

University of California, Santa Barbara — Santa Barbara, CA
PhD in Statistics and Applied Probability (GPA: 3.94) — 2015-Current
Advisor: Sang-Yun Oh

University of Chile — Santiago, CHILE
Industrial Engineer (Final Grade: 7.0/7.0) — 2005-2011
& Bachelor of Engineering Science in Industrial Engineering
Dissertation Title: *"Stability Analysis of Credit Ratings Applied to Synthetic CDOs"*

PROFESSIONAL EXPERIENCE

SimpliRoute — Mountain View, CA
Data Scientist - Intern — July 2017 - September 2017

- Developed data mining tools to analyze delivery planning data.

Ministry of Finance, Sovereign Wealth Funds (SWF) — Santiago, CHILE
International Finance Analyst — 2013 - 2015

- Performed quantitative analyses for the investment policy of the SWFs and its financial investment committee.
  - Analyzed the optimal size of the Pension Reserve Fund's investment portfolio (US$5.8 billion)
  - Developed a Vector Auto Regressive asset allocation model for the Economic and Social Stabilization Fund (US$15 billion)
- Reduced operational risk of SWFs' by developing an information database system for reports and data analysis.

Center of Finance, University of Chile — Santiago,CHILE
Research Scientist, Advisor: Arturo Cifuentes. — 2011

- Conducted Monte Carlo simulation studies on credit ratings and synthetic CDOs.
- Developed a methodological framework to implement a real estate index for the Chilean housing market.

Fischer & Zabala (Financial asset manager) — Santiago, CHILE
Part-time Quantitative Financial Analyst — 2012

- Developed a credit risk model for a complex financial mortgage-backed security deal (US$60 million) for the Chilean pension funds. The model was used to structure the fund and test its investment guidelines.
- Participated actively in roadshow meetings by addressing quantitative questions of potential investors.
- Responsible for daily monitoring of two high-yield fixed income funds.

JOURNAL AND CONFERENCE PAPERS

(1) J.Zapata and A. Cifuentes. "On the Stability of Synthetic CDO Credit Ratings". (Link: `http://onlinelibrary.wiley.com/doi/10.1111/infi.12086/abstract`)

(2) J.Zapata and A. Cifuentes. "Dissecting Abacus: Risks That Investors Should Have Seen". Accepted for Presentation In: *Macrotheme Finance and Investments Conference in Paris, 2012.*

TEACHING

University of California, Santa Barbara — Santa Barbara, CA
Department of Statistics and Applied Probability
Teaching Assistant — 2015-Current

- PSTAT 109 - Statistics for Economics
- PSTAT 120A - Introduction to Probability
- PSTAT 160B - Applied Stochastic Processes
- PSTAT 170 - Introduction to Mathematical Finance
- PSTAT 174/274 - Time Series
- PSTAT 131/231 - Data Mining

University of Chile — Santiago, CHILE
Department of Industrial Engineering, School of Engineering — 2009 - 2011

- Financial Management, Marketing Engineering, Operations Engineering courses

HONORS & AWARDS

University of Chile — Santiago, CHILE
Industrial Eng. Department, School of Engineering

- Summa Cum Laude Graduated & Ranked 1^{st} in the class of 2012 — 2012
- Best Heuristic Algorithm of the Class — Fall 2010
- Best Teaching Assistant Award ("*Ayudante Destacado*") — 2010
- Dean's List ("*Alumno Destacado*") — 2006 - 2011

COMPUTER SKILLS

R, Python, C/C++, SQL, Matlab, Visual Basic, Microsoft Office