

Education

- 2001 PhD, Management Science and Engineering, Stanford University.
- 1998 MS, Engineering-Economic Systems and Operations Research, Stanford University.
- 1996 MS, Industrial Engineering, Universidad Politécnica de Madrid, Spain.

Academic Positions

- 2012- Class of 2008 Term Professor of Management Science and Operations,
London Business School.
- 2012- Professor of Management Science and Operations, London Business School.
- 2009-12 Class of 2008 Term Associate Professor of Management Science and Operations,
London Business School.
- 2008-12 Associate Professor of Management Science and Operations, London Business School.
- 2001-08 Assistant Professor of Decision Sciences, London Business School.

Papers

In refereed journals

1. DeMiguel, V. and E. Adida, 2011, "Supply Chain Competition with Multiple Manufacturers and Retailers." *Operations Research*, 59(1), 156–172.
2. DeMiguel, V. and H. Xu, 2009, "A Stochastic Multiple Leader Stackelberg Model: Analysis, Computation, and Application." *Operations Research*, 57(5), 1220–1235.
3. DeMiguel, V., L. Garlappi, F.J. Nogales, and R. Uppal, 2009, "Improving Performance By Constraining Portfolio Norms: A Generalized Approach to Portfolio Optimization." *Management Science*, 55(5), 798–812.
4. DeMiguel, V. and F.J. Nogales, 2009, "Portfolio Selection with Robust Estimation." *Operations Research*, 57(3), 560–577.
5. DeMiguel, V., L. Garlappi and R. Uppal, 2009, "Optimal versus Naive Diversification: How Inefficient Is the $1/N$ Portfolio Strategy?" *Review of Financial Studies*, 22(5), 1915–1953.
6. DeMiguel, V. and F.J. Nogales, 2008, "On Decomposition Methods for a Class of Partially Separable Nonlinear Programs." *Mathematics of Operations Research*, 33(1), 119–139.
7. DeMiguel, V. and W. Murray, 2006, "A Local Convergence Analysis of Bilevel Decomposition Algorithms." *Optimization and Engineering*, 7, 99–133.

8. DeMiguel, V., M.P. Friedlander, F.J. Nogales, and S. Scholtes, 2005, "A Two-Sided Relaxation Scheme for Mathematical Programs with Equilibrium Constraints." *SIAM Journal on Optimization*, 16(2), 587–609.
9. DeMiguel, V. and R. Uppal, 2005, "Portfolio Investment with the Exact Tax Basis via Non-linear Programming." *Management Science*, 51(2), 277–290.

Working papers

10. DeMiguel, V., F.J. Nogales and R. Uppal, 2010, "Stock Return Serial Dependence and Out-of-Sample Portfolio Performance."
11. DeMiguel, V., Y. Plyakha, R. Uppal, and G. Vilkov, 2010, "Improving Portfolio Selection Using Option-Implied Volatility and Skewness."
12. DeMiguel, V., A. Martin-Utrera and F.J. Nogales, 2010, "Size Matters: Calibrating Shrinkage Estimators for Portfolio Optimization."
13. DeMiguel, V. and N. Mishra, 2007, "What Multistage Stochastic Programming Can Do for Network Revenue Management."

Work in progress

14. DeMiguel, V., N. Bakshi, and E. Adida, 2011, "Supply Chain Intermediation: A Three-Tier Competition Model". In preparation.
15. DeMiguel, V., N. Bakshi, and W. Hwang, 2011, "Improving Supplier Reliability with Contract Design". In preparation.

In conference proceedings

16. DeMiguel, V., K. Fridgeirsdottir, C. Stefanescu, and S. Zenios, 2004, "Revenue Management With Correlated Demand Forecasting." Proceedings of the American Statistical Association, Business and Economics Statistics Section, Alexandria, VA.
17. DeMiguel, V. and W. Murray, 2000, "An Analysis of Collaborative Optimization Methods." In Eighth AIAA/USAF/NASA/ISSMO Symposium on Multidisciplinary Analysis and Optimization.

Other publications

18. DeMiguel, V., 2001, "Two Decomposition Algorithms for Nonconvex Optimization Problems with Global Variables." PhD thesis, Stanford University.
19. DeMiguel, V. and W. Murray, 2001, "A Class of Quadratic Programming Test Problems with Global Variables." Technical Report SOL 01-2, Dept. of MS&E, Stanford University.
20. DeMiguel, V. and W. Murray, 2001, "Generating Optimization Problems with Global Variables." Technical Report SOL 01-3, Dept. of MS&E, Stanford University.

Invited presentations and conferences

- 2009-11 2010 INFORMS Annual Meeting (Austin), Western Finance Association Annual Meeting (Victoria), Fuqua School of Business at Duke University, 2009 MSOM Conference (Boston), Zaragoza Logistics Center (Spain), 20th International Symposium on Mathematical Programming (Chicago), 2009 INFORMS Annual Meeting, 2010 INFORMS Annual Meeting, 2011 AFA Meeting (Denver).
- 2008 AFA Meeting (New Orleans), SIAM Conference on Optimization (Boston), Bachelier Finance Society Fifth World Congress (London), ETJE08 Meeting (Spain), INFORMS Annual Meeting (DC), University of Chicago GSB.
- 2007 INFORMS Revenue Management and Pricing Conference (Barcelona), International Conference on Continuous Optimization (Hamilton), Tepper School of Business at Carnegie Mellon University (Pittsburgh), Stern School of Business at NYU (New York), Johnson School of Business at Cornell University, Workshop on Optimization in Finance (Coimbra), INFORMS Annual Meeting (Seattle).
- 2006 Operations Research Center at MIT (Boston), INFORMS Annual Meeting (Pittsburgh), University of Illinois at Urbana Champaign (Illinois), University of Edinburgh (Edinburgh), Institute for Quantitative Investment Research Conference (Bristol), 19th International Symposium on Mathematical Programming (Rio de Janeiro), NBER Summer Institute Asset Pricing Workshop (Boston), Kellogg School of Management at Northwestern University (Evanston), Columbia University (New York), London School of Economics (London), Southampton University (Southampton).
- 2005 INFORMS Annual Meeting (San Francisco), Workshop on Optimization in Finance (Coimbra), Western Finance Association (Portland), INFORMS Revenue Management and Pricing Section Conference (Boston), SIAM Conference on Optimization (Stockholm), Judge Institute of Management at Cambridge University (Cambridge).
- 2004 Applied Mathematical Programming and Modelling (London), Western Finance Association (Vancouver), American Statistical Association (Alexandria), Judge Institute of Management at Cambridge University (Cambridge), European Finance Association (Holland), International Conference on Continuous Optimization (New York), Stochastic Programming Conference (Tucson, Arizona), INFORMS Annual Meeting (Denver), Rutherford Appleton Laboratory (Oxford).
- 2003 International Symposium on Mathematical Programming (Copenhagen), INFORMS Annual Meeting (Atlanta), Georgia Institute of Technology (Atlanta), Argonne National Laboratory (Illinois), Northwestern University (Evanston).
- 2002 Judge Institute of Management at Cambridge University (Cambridge), SIAM Conference on Optimization (Toronto), INFORMS Annual Meeting (San Jose), Stanford University (Stanford).
- 2000-01 Eighth AIAA/USAF/NASA/ISSMO Symposium on Multidisciplinary Analysis and Optimization (CA), Universidad Carlos III de Madrid, Instituto de Empresa (Madrid), London Business School (London), Universitat Pompeu Fabra (Barcelona), IESE School of Business (Barcelona), INFORMS International Conference (Hawaii), Optimization 2001 (Aveiro).

Teaching

Courses

- 2008- *Financial Modelling with Spreadsheets*. Elective MBA course. Financial models covered include portfolio management and estimation, term structure estimation, capital budgeting, risk measurement, risk analysis in discounted cash flow models, and pricing of European, American, exotic, and real options. Spreadsheet features covered include data tables, scenario manager, database operations, pivot tables and charts, data analysis tool pack, and recording and editing macros.
- 2001- *Decision and Risk Analysis*. Core course for full-time, executive, and global executive MBA programmes at LBS. Teaching is case driven. Subjects covered include Monte Carlo simulation, decision tree analysis, and optimization modeling. PC-based-software is used to illustrate how to apply the methodologies introduced.
- 2011- *Strategic Decision Making*. Executive education module for Advanced Development Programme at LBS.
- 2002-05 *Decision Making*. ExecEd module for Emerging Leaders Programme at LBS.
- 2003-06 *Optimization Theory and Applications*. PhD programme at LBS. Theoretical foundations of optimization modeling as well as its applications to portfolio selection, equilibrium modeling, and stochastic optimization.

Teaching awards

- 2009 Received 2008/2009 *Outstanding Core Course Teaching Award*, London Business School.
- 2004 Received the 2003/2004 *Junior Faculty Teaching Award*, London Business School.
- 2003 Short-listed for the 2002/2003 *Junior Faculty Teaching Award*, London Business School.
- 2002 Short-listed for the 2001/2002 *Junior Faculty Teaching Award*, London Business School.

Grants and Awards

- 2011 *2010/2011 INQUIRE Third Prize* at the INQUIRE-Europe seminars for the paper “Improving Portfolio Selection Using Option-Implied Volatility and Skewness”.
- 2010-13 *Grant of Ministerio de Educación y Ciencia de España*, MTMMTM2010-16519. Joint with five other researchers.
- 2009-12 *Class of 2008 Term Associate Professorship* in Management Science and Operations at London Business School.
- 2007-10 *Grant of Ministerio de Educación y Ciencia de España*, MTM2007-63140. Joint with Francisco J. Nogales and Jose Niño Mora.
- 2007 *INQUIRE-UK Research Grant*, £16,000 to work on the project “Improving Performance By Constraining Portfolio Norms: A Generalized Approach to Portfolio Optimization”.
- 2005-06 *Research and Materials Development Fund* at London Business School, £10,000. Title: “Competition in Airline Network Revenue Management.”
- 2005 *Best Paper Award* at the 2005 seminars of INQUIRE-UK for the paper “How Inefficient is the 1/N Asset-Allocation Strategy?”.
- 2004-05 *Grant of Ministerio de Educación y Ciencia de España*, MTM2004-02334. Joint with Francisco J. Nogales and Jose Niño Mora.
- 2004 *AIM*, £2,000. Title: “Airline Revenue Management with Correlated Demand and Multistage Stochastic Programming.”
- 2003-04 *Research and Materials Development Fund* at London Business School, £10,000. Title: “Airline Revenue Management with Multistage Stochastic Programming.”

- 2001-02 *Research and Materials Development Fund* at London Business School, £10,000. Title: "Portfolio Investment with the Exact Tax Basis via Nonlinear Programming."
- 1997-99 *La Caixa Fellowship*, \$ 80,000. Fellowship granted to 40 Spanish students per year to pursue graduate studies in the USA.
- 1997 *Fulbright Fellowship*. Declined in lieu of the La Caixa Fellowship.
- 1996 *National Award* to the top ranked Industrial Engineering graduate in 1996 in Spain.

Professional Activities

Referee for following journals

Journal of Econometrics; Journal of Economic Dynamics and Control; Management Science; Manufacturing and Service Operations Management; Mathematical Programming; Mathematics of Operations Research; Operations Research; Production and Operations Management; Review of Financial Studies; SIAM Journal on Optimization.

Graduate students supervised

- 2011- PhD co-supervisor for Mai Xiaoling, Universidad Carlos III de Madrid.
- 2009- PhD co-supervisor for Woonam Hwang, London Business School.
- 2009- PhD co-supervisor for Alberto Martin-Utrera, Universidad Carlos III de Madrid.
- 2003- PhD supervisor for Nishant Mishra, London Business School.

Internal Service at London Business School

- 2011-12 MSO junior recruitment committee.
- 2011- Member of diversity working group.
- 2011 Seminar to LBS faculty on PhD student supervision, member of two academic appeal committees.
- 2009-10 MSO junior recruitment committee, member of three-year performance review committee for three Assistant Professors.
- 2009 EMBA curriculum internal review panel.
- 2007-08 MSO junior recruitment committee.
- 2002-05 Member of the PhD committee.
- 2003- Three Info Sessions for EMBA programme recruiting.
- 2002- Speaker at faculty induction day in five occasions.
- 2001- Supervised second year projects of around 20 MBA students.

Research Interests

My research focuses on the design, analysis, and application of optimization models and methods for managerial decision making. I have worked on three different areas: portfolio selection, equilibrium modeling and computation, and decomposition methods for stochastic and large-scale optimization.

- Portfolio selection:
 - Portfolio selection with capital-gains taxes.

- Portfolio selection with estimation error.
- Portfolio selection with transaction costs.

- Equilibrium modeling and computation:
 - Modeling economic equilibria in supply chain management.
 - Equilibrium existence and uniqueness.
 - Methodologies for equilibrium computation.

- Decomposition methods for stochastic and large-scale optimization:
 - Modeling decision making under uncertainty via stochastic optimization problems.
 - Decomposition of large-scale optimization problems such as stochastic optimization and multidisciplinary design optimization problems.
 - Convergence theory of interior-point decomposition methods.

Biographical sketch

Victor DeMiguel is the Class of 2008 Term Professor of Management Science and Operations at London Business School. He holds a PhD in Management Science and Engineering from Stanford University, and an MS in Industrial Engineering from Universidad Politecnica de Madrid.

Victor's research focuses on the design, analysis, and application of quantitative models for managerial decision making. Applications include financial portfolio selection and competition modeling. His papers have been published in most of the top journals of his field, including Management Science, Operations Research, and Mathematics of Operations Research. One of his most popular papers is "Optimal Versus Naive Diversification: How Inefficient is the 1/N Portfolio Strategy", which received the Best Paper Award from the Institute for Quantitative Investment Research and was published in The Review of Financial Studies. He has consulted for several companies including ENDESA, Iberdrola, and McKinsey & Company.

Victor teaches MBA courses on *Financial Modelling with Spreadsheets* and *Decision and Risk Analysis* and a PhD seminar on *Optimization Theory and Applications*. In addition, he teaches a "Strategic Decision Making" module for the Advanced Development Programme of Executive Education. He is the recipient of the *Junior Faculty Teaching Award* for 2003/2004 and the *Outstanding Core Course Teaching Award* for 2008/2009 at London Business School.