Luis Vicente Montiel

Operations Research
The University of Texas at Austin
1 University Station, C2200,
Austin TX, 78712-0292

Tel: (650) 450 3722
lvmontiel@utexas.edu
lvmontiel@gmail.com

Academic Preparation

The University of Texas at Austin   Operations Research   Postdoc. 2012 to date
Research interest: Optimization under uncertainty, and probabilistic modeling in decision analysis.

The University of Texas at Austin   Operations Research   Ph.D. 2006 – 2012
Coursework emphasized decision analysis, stochastic and deterministic optimization, probability, and systems simulation.
Thesis: "Accuracy of multivariate discrete distribution approximations". **Advisor:** Eric Bickel.
Reading Committee: David P. Morton, John J. Hasenbein, James S. Dyer, and Larry W. Lake.

Columbia University   Financial Engineering   M.S. 2004 – 2005
Coursework emphasized investment science, stochastic process, derivatives and fix income.

Stanford University   Management Sciences & Eng.   M.S. 2003 – 2004
Coursework emphasized decision analysis, probability, network optimization, and dynamic programming.

Monterrey Institute of Technology   Industrial and Systems Eng. B.S. 1997 – 2001
Graduated with honors. Minor in financial engineering.

Publications

Montiel, L.V. & J.E. Bickel 2013. Multi-Attribute Utility with Incomplete Preference Information. Submitted to *Decision* Analysis.

Montiel, L.V. & J.E. Bickel. 2012c. Approximating joint probability distributions given partial information. *Decision Analysis,* **10**(1): 26-41.

Montiel, L.V. & J.E. Bickel. 2012b. A simulation-based approach to decision making with partial information. *Decision* Analysis, **9**(4): 329–347.

Montiel, L.V. & J.E. Bickel. 2012a. Generating a random collection of discrete joint probability distributions subject to partial information. *Methodology and Computing in Applied Probability.* DOI 10.1007/s11009-012-9292-9.

Montiel, L.V. 2012. Approximations, Simulation, and Accuracy of Multivariate Discrete Probability Distributions in Decision Analysis. Ph. D. Thesis. University of Texas at Austin. http://hdl.handle.net/2152/ETD-UT-2012-05-5031

Manuscripts in preparation

Montiel, L.V. & J.E. Bickel e. Accuracy of joint distribution approximation models. *In prep.*

Montiel, L.V. & J.E. Bickel f. The entropy concentration theorem paradox. *In prep.*

Conference Proceedings

Gong, X., D. A. McVay, J. E. Bickel, **L.V. Montiel**. 2011. Integrated Reservoir and Decision Modeling To Optimize Northern Barnett Shale Development Strategies. Paper CSUG/SPE 149459 presented at the Canadian Unconventional Resources & International Petroleum Conference, Calgary, Alberta, Canada. 15-17 November.

Bickel, J.E. & **L.V. Montiel.** 2011. Accuracy of Multivariate Discrete Distribution Approximations, Grant # 0954371 presented at the NSF CMMI Research and Innovation Conference, Atlanta, Georgia, 5-7 January.

Turkarslan, G., D. A. McVay, J. E. Bickel, **L.V. Montiel**, R. Ortiz. 2010. Integrated Reservoir and Decision Modeling to Optimize Spacing in Unconventional Gas Reservoirs," Paper CSUG/SPE 137816 presented at the Canadian Unconventional Resources & International Petroleum Conference, Calgary, Alberta, Canada. 19-21 October.

Conference Presentations, Seminars and Posters

INFORMS Annual Conference 2012

Montiel, Luis V. 2012. "Multi Attribute Utility Functions with Incomplete Preference Information".

Montiel, Luis V. 2012. "Stochastic Optimization Solutions with Underspecified Joint Distributions".

INFORMS Annual Conference 2011

Montiel, Luis V. 2011. "Simulating Joint Probability Distributions Subject to Partial Information".

Montiel, Luis V. 2011. "Making Decisions With Partial Information: Eagle Airlines Example".

ORIE Seminar Series, University of Texas at Austin 2011

Montiel, Luis V. 2012. "Sensitivity Analysis for Multi-attribute Utility".

Montiel, Luis V. 2011. "Eagle Airlines: A New Approach to Decision Making With Partial Information".

NSF Program: Service Enterprise Systems

Montiel, L.V. & J.E. Bickel. 2010. "Accuracy of Multivariate Discrete Distribution Approximations". Poster Presentation.

INFORMS Annual Conference 2009

Montiel, Luis V. "Accuracy of Entropy Approximations for Multivariate Discrete Distributions".

Conference Organization

Session Chair

Montiel, Luis V. 2011. "Advances in probabilistic modeling". INFORMS Annual Conference, Charlotte, North Carolina, 13-16 November.

Grants and Awards

Professional Development Award (2011 & 2009). Given by The University of Texas at Austin.

Decision Analysis Society Student Award (2011). Given by the Decision Analysis Society.

CONACYT Scholarship (2003-2007). Granted to outstanding students by the government of Mexico.

Fulbright Scholarship (2003-2004). Granted by the USA government to pursue Ph. D. research.

Chiles Foundation Award (2004). Granted by The Chiles foundation to Mexican students in Economics and Management Sciences.

Professional Experience

2008 - 2011 The University of Texas at Austin   Austin Tx   Graduate Research Assistant
Duties: research for the projects "Goodness of maximum entropy" funded by NSF Grant No. SES-0954371 (2009-2011), and "Unconventional gas reservoirs" funded by CPARM (2008).

2008 The University of Texas at Austin   Austin Tx   Teaching Assistant
Duties: Providing support for the students of Decision Analysis course, discussing problems and exercises; grading and proctoring exams.

2008 Tidal TV   Austin Tx   Summer Intern
Duties: Generation of optimization algorithms for online optimization, data analysis and forecasting models in the industry of streaming online television.

2007 - 2008 Zilliant   Austin Tx   Pricing Analyst
Duties: Implementation of linear programming models in Cplex for complex pricing projects. In addition, I developed a new pricing model that improved the previous used algorithm.

2001 - 2002 DMR Consulting   Mexico DF.   Jr. Consultant
Duties: Collaborate in the initial operations of the DMR office in Mexico City. Find clients, define, evaluate, design and implement new projects in strategic and operative areas.

Technical and Other Skills

Programming languages Visual Basics, C, Java, Python.
Packages Cplex, Mathematica, Matlab, S-plus, R-statistics, SAS.
Languages English and Spanish (first language)

Affiliations

American Society of Mechanical Engineers (ASME)

Decision Analysis Society (DAS)

Institute for Operations Research and the Management Sciences (INFORMS)

Institute of Industrial Engineers (IIE)

Other Interests

Camp leader (Managing teams of above 50 people during camping activities)

Leading summer courses for underprivileged children in Mexico.

Music - B. S. in composition from the CIEM-Royal School of London.

Traveling.