

EDUCATION	<p>Stanford University, Stanford, CA <i>Sept 2002 - June 2007</i> Ph.D., Electrical Engineering. Advisor: Benjamin Van Roy.</p> <p>University of Arizona, Tucson, AZ <i>Aug 1999 - May 2002</i> B.S., Computer Engineering. College of Engineering Outstanding Graduating Senior in Computer Engineering for 2002</p>
PH.D. THESIS	<i>Revenue Management Beyond 'Estimate, Then Optimize'</i> , Stanford University, 2007.
RESEARCH INTERESTS	Revenue Management, Approximate Dynamic Programming and Reinforcement Learning, Approximation Algorithms for Stochastic Control
NON-MIT EMPLOYMENT	<p>Grantham, Mayo, Van Otterloo LLC., Boston, MA <i>June 2005 - June 2007</i> <i>Consultant, High Frequency Trading Group</i> One of four designers of GMO's (a USD 110 bn. money manager) first (proprietary) high frequency algorithmic trading strategy. Development of approximation algorithms for high-dimensional financial stochastic control problems and trading models. The strategy was used by GMO between December 2005 and July 2010 after which it was spun out as a separate investment vehicle.</p> <p>Micron Technology, Boise, ID <i>May 2001 - Aug 2001</i> <i>Summer intern, Flash R&D</i> Designed/ automated multiple test processes for flash memory chip testing. Resulted in very significant test cycle time savings. Offered a permanent position while still a sophomore.</p>
MIT APPOINTMENTS	<p>MIT Sloan School of Management, Cambridge, MA <i>July 2009 - present</i> <i>Robert N. Noyce Career Development Assistant Professor</i></p> <p><i>J. Spencer Standish (1945) Assistant Professor</i> <i>July 2008 - June 2009</i></p> <p><i>Assistant Professor of Operations Management</i> <i>July 2007 - June 2008</i></p>
MIT ACTIVITIES	<p>Undergraduate Admissions Committee, 2008, 2009; MSOM Conference Program Committee, 2009; OR Center Admissions Committee, 2009; OR Center Qualifying Exam Committee, 2009; MIT Sloan OM Admission Committee, 2008-10.</p> <p>Invited by MBA student body to deliver one of three mock lectures to 2010 incoming class.</p> <p>Program Director (Manufacturing Area) for MIT Sloan - Indian School of Business Collaboration.</p>
CONSULTING ACTIVITIES	<p>Mc Kinsey & Co., New York, NY <i>June-Sept 2008</i> <i>Financial Institutions Group</i></p>
OTHER ACTIVITIES	Reviewer for Operations Research, Manufacturing & Service Ops. Management, Math of Operations Research, Management Sci., IEEE Trans. Information Theory, IEEE Trans. Automatic Control.
AWARDS (SELECTED) AND GRANTS	<p>NSF Grant for the proposal <i>What Do Customers Like: A New Approach That Lets The Data Decide.</i> (September 2010, USD 305k w/ D. Shah).</p> <p>Ford Motor Company Grant for the proposal <i>Compressive Sensing and Consumer Choice.</i> (May 2010, USD 300k w/ D. Shah)</p> <p>INFORMS JFIG Paper Prize (second place) for <i>The Linear Programming Approach to Solving Large</i></p>

Scale Dynamic Stochastic Games. (November 2009)

Solomon Buschbaum Research Award for interdisciplinary research. (June 2008, USD 50k)

MSOM Student Paper Contest second prize (for a paper “judged to be the best in the field of Operations Management”; November 2006)

Stanford School of Engineering Fellow (Autumn 2002)

IEEE Region 6 Student Paper Contest Winner (third prize, for Senior Thesis; Autumn 2002)

Arizona Regents Fellow (One of 13 international recipients in Arizona Class of 2003)

SUBJECTS TAUGHT	15.066 Systems Optimization and Applications (Evaluation Score: 4.71)	<i>Summer 2010</i>
	15.761 Introduction to Operations Management (Evaluation Score: 4.50, 4.51)	<i>Spring 2010</i>
	15.761 Introduction to Operations Management (Evaluation Score: 4.75)	<i>Spring 2009</i>
	15.764 Theory of Operations Management (Evaluation Score: 4.50)	<i>Spring 2009</i>
	15.761 Introduction to Operations Management (Evaluation Score: 4.79, 4.85)	<i>Spring 2008</i>

PH.D. THESIS
SUPERVISION

Florin Ciocan (Sloan) 09/2009 - present

Andre Calmon (OR Center) 09/2009 - present (co-advised by R. Levi)

Srikanth Jagabathula (MIT EECS) 01/2009 - present (co-advised by D. Shah)

Matthieu Monsch (OR Center) 09/2008 - present (co-advised by Georgia Perakis)

Yiwei Chen (Sloan) 09/2008 - present

Nikolaos Trichakis (OR Center) 09/2007 - present (co-advised by Dimitris Bertsimas)

Carri Chan (Stanford EE) 06/2007 - 06/2009 (advised by Nick Bambos); currently Assistant Professor at Columbia DRO.

ARTICLES

V. F. Farias, R. Madan. *Irrevocable Multi-Armed Bandit Policies.* Operations Research (forthcoming), 2010.

D. Bertsimas, V. F. Farias, N. Trichakis. *The Price of Fairness.* Operations Research (forthcoming), 2010.

C. W. Chan, V. F. Farias. *Stochastic Depletion Problems: Effective Myopic Policies for a class of Dynamic Optimization Problems.* Mathematics of Operations Research, Vol. 34, No. 2, May 2009.

V. F. Farias, C. C. Moallemi, T. Weissman, B. Van Roy. *Universal Reinforcement Learning.* IEEE Transactions on Information Theory, Vol. 56, No. 5, May 2010.

V. F. Farias, B. Van Roy. *Dynamic Pricing with a Prior on Market Response.* Operations Research, Vol. 58, No. 1, January-February 2010.

V. F. Farias, B. Van Roy. *Approximation Algorithms for Dynamic Resource Allocation.* Operations Research Letters, Vol. 34, No. 2, March 2006.

M. C. Weinberg, D. P. Birnie III, and V. F. Farias. *Simulation of Anisotropic Particle Shape Development during 2D Transformation.* J. Phys. Chem. (B). Vol. 106, October 2002.

ARTICLES
SUBMITTED

C. W. Chan, V. F. Farias, N. Bambos, G. Escobar. *Maximizing Throughput of Hospital Intensive Care Units with Patient Readmissions.* Second round in Operations Research, 2009.

V. Desai, V. F. Farias, C. C. Moallemi. *The Smoothed Approximate Linear Program.* Second round in Operations Research, 2009.

V. F. Farias, S. Jagabathula, D. Shah. *A Data-Driven Approach to Modeling Choice.* Second round

in Management Science, 2009.

V.F.Farias, D. Saure, G. Weintraub. *The Linear Programming Approach to Solving Large Scale Dynamic Oligopoly Models*. Second round in RAND Journal of Economics, 2010.

Y. Chen, V. F. Farias. *Simple Policies for Dynamic Pricing with Imperfect Forecasts*. Submitted to Operations Research, 2010.

D. Bertsimas, V. F. Farias, N. Trichakis. *A Characterization of the Efficiency-Fairness Tradeoff*. Submitted to Mathematics of Operations Research, 2010.

NOTABLE
CONFERENCE
PAPERS

V. F. Farias, S. Jagathula, D. Shah. *A Data-Driven Approach to Modeling Choice*. Advances in Neural Information Processing Systems 22, MIT Press, 2009. (Spotlight paper; selectivity was 40 of over 1000)

V. Desai, V. F. Farias, C. C. Moallemi. *The Smoothed Approximate Linear Program*. Advances in Neural Information Processing Systems 22, MIT Press 2009. (Spotlight paper; selectivity was 40 of over 1000)

V. F. Farias, C. C. Moallemi, T. Weissman, B. Van Roy. *A Universal Scheme for Learning*. Proceeding of the IEEE International Symposium on Information Theory, September 2005.

V. F. Farias, C. C. Moallemi, B. Prabhakar. *Load Balancing with Migration Penalties*. Proceeding of the IEEE International Symposium on Information Theory, September 2005. Also presented by invitation at the Stochastic Networks Research Conference, 2004. Invited to Special issue of *Queueing Systems: Theory and Applications*.

WORKING PAPERS

V. F. Farias, S. Jagathula, D. Shah. *A Universal Model of Choice: Data, Algorithms and Performance*. Draft available, 2010.

V. Desai, V. F. Farias, C. C. Moallemi. *Mathematical Programs for High-Dimensional Stopping*. Draft available, 2010.

V. F. Farias, B. Ifrach, G. Weintraub. *A Two-Tiered Dynamic Oligopoly Model*. Draft available, 2009.

Y. Chen, D. F. Ciocan, V. F. Farias. *A New Approach to Dynamic Allocation Problems*. Draft available, 2010.

V. F. Farias, R. Levi, J. Orlin, G. Perakis *Dynamic Pricing with Learning - State-Space Collapse and Fully Polynomial Time Approximation Scheme*. Draft available, 2008.

V. F. Farias, B. Van Roy *An Approximate Dynamic Programming Approach to Network Revenue Management*. Draft available, 2008.

IN PROGRESS

D. Bertsimas, V. F. Farias, N. Trichakis. *Fairness and Scoring Rules for Kidney Allocation*.

Y. Chen, V. F. Farias. *On the Social Costs of Revenue Management: An Empirical Study*.

Y. Chen, V. F. Farias. *How Dynamic Should Dynamic Pricing Be?*

D. Bertsimas, V. F. Farias, N. Trichakis. *Fairness in the Air Traffic Flow Problem*.

V. F. Farias, M. Monsch, G. Perakis. *Oblivious Learning in Competitive Revenue Management*.

BOOK CHAPTER

V. F. Farias, B. Van Roy. *Tetris: A Study of Randomized Constraint Sampling*. Probabilistic and Randomized Methods for Design Under Uncertainty, Springer, 2006.

INVITED ORAL
PRESENTATIONS
(RECENT)

Revenue Management Beyond ‘Estimate, Then Optimize’

University of Chicago GSB, Operations Management Seminar

IBM Almaden Research Center, Theory Group Seminar

Google (Mountain View Campus), Tech Talk Series

Stochastic Depletion Problems

January 2007

May 2007

June 2007

MIT Operations Research Center, ORC Seminar	<i>November 2007</i>
Stanford Management Science and Engineering, OR Seminar	<i>November 2007</i>
Grantham, Mayo, Van Otterloo LLC.	<i>December 2007</i>
Cornell Operations Research and Industrial Engineering, ORIE Colloquium	<i>November 2008</i>
Columbia Graduate School of Business, IEOR-DRO Seminar	<i>November 2008</i>
A New Approach to Modeling Choice	
Tata Institute of Fundamental Research (Summer School Lecture)	<i>September 2009</i>
MIT Marketing Group Seminar	<i>November 2009</i>
University of British Columbia Sauder School	<i>December 2009</i>
Indian School of Business	<i>March 2010</i>
Kellogg School of Management	<i>May 2010</i>
IBM T. J. Watson Research Center	<i>July 2010</i>
Ford Motor Company	<i>July 2010</i>
Carnegie Mellon University, Tepper School of Management	<i>September 2010</i>
Discharge Policies at General Intensive Care Units: A Quantitative Perspective	
University of Pittsburgh	<i>April 2010</i>
MSOM Special Interest Group on Healthcare	<i>June 2010</i>
Practical Dynamic Allocation	
University of Minnesota Department of Systems and Industrial Engineering	<i>October 2010</i>
Stanford University Graduate School of Business	<i>November 2010</i>

COMPUTER SKILLS Can develop commercial quality code in Java. Proficient in C, C++. Also experience with Matlab, CPLEX, Perl, Oracle DB.

PERSONAL INTERESTS Technology, Back country hiking, Cooking, Miniature auto modeling