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PERSONAL	<b>Name:</b> Vivek Francis Farias <b>Department:</b> Operations Management <b>Date of Birth:</b> October, 1981 <b>Place of Birth:</b> Bombay, India <b>Citizenship:</b> US	
EDUCATION	<b>Stanford University</b> , Stanford, CA Ph.D., Electrical Engineering.	<i>Sept 2002 - June 2007</i>
	<b>University of Arizona</b> , Tucson, AZ B.S., Computer Engineering. College of Engineering Outstanding Graduating Senior in Computer Engineering for 2002	<i>Aug 1999 - May 2002</i>
PH.D. THESIS	<i>Revenue Management Beyond ‘Estimate, Then Optimize’</i> , Stanford University, 2007. Thesis Advisor: Benjamin Van Roy.	
RESEARCH INTERESTS	Revenue Management, Approximate Dynamic Programming and Reinforcement Learning, Approximation Algorithms for Stochastic Control, Healthcare Operations	
NON-MIT EMPLOYMENT	<b>Nike, Inc.</b> , Boston, MA <i>Commercial Analytics</i>	<i>August 2019 - Present</i>
	As part of the Celect acquisition, guiding the integration of the CelectEngine technology platform. The platform is the key enabler for Commercial Analytics/ ML at Nike, Inc.	
	<b>Seer Biosciences, Inc.</b> , Redwood City, CA <i>SAB Member; Data Committee Chair</i>	<i>February 2017 - Present</i>
	Co-corresponding author on primary publication underlying Seer’s novel technology for unbiased sampling of the proteome. Served on SAB and as chair of data committee from company’s inception. IPO in December 2020 with an initial market cap of ~ \$4B.	
	<b>Celect, Inc.</b> , Boston, MA <i>Co-Founder, Chief Technology Officer</i>	<i>July 2014 - August 2019</i>
	Co-founder, CTO of an ML/ retail tech company that commercialized my research on choice modeling. Raised over \$30M in capital from top-tier VCs and Federal sources including In-Q-Tel. Helped assemble a team of industry veterans and grow team to ~75 employees. Implemented technology platform at multiple top-tier US retailers. Acquired by Nike.	
	<b>The Carlyle Group</b> , New York, NY <i>Ad-Hoc Consultant</i>	<i>Various</i>
	<b>Grantham, Mayo, Van Otterloo LLC.</b> , Boston, MA <i>High Frequency Trading Group</i>	<i>Various (June 2005 - June 2007)</i>
	One of four designers of GMO’s (a USD 110 bn. money manager) first 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.	
	<b>Micron Technology</b> , Boise, ID <i>Summer intern, Flash R&amp;D</i>	<i>May 2001 - Aug 2001</i>
	Designed/ automated multiple test processes for flash memory chip testing. Resulted in very signif-	

icant test cycle time savings. Offered a permanent position while still a sophomore.

MIT APPOINTMENTS	<p><b>MIT Sloan School of Management</b>, Cambridge, MA</p> <p><i>Patrick J. McGovern (1959) Professor</i> July 2018 - present <i>Robert N. Noyce Career Development Associate Professor (with Tenure)</i> July 2013 - June 2018 <i>Robert N. Noyce Career Development Associate Professor (without Tenure)</i> July 2011 - June 2013 <i>Robert N. Noyce Career Development Assistant Professor</i> July 2009 - June 2011 <i>J. Spencer Standish (1945) Assistant Professor</i> July 2008 - June 2009 <i>Assistant Professor of Operations Management</i> July 2007 - June 2008</p>
MIT ACTIVITIES	<p>Group Head of the Operations Management Group at MIT Sloan (2017 - present)</p> <p>One of four faculty leading the MIT CovidAlliance (covidalliance.com) focused on forecasting and resource allocation (April - August 2020)</p> <p>Member of the Masters in Business Analytics Program Committee (2016 - 2019)</p> <p>Program leader for the Munjal Manufacturing Institute, an institute established at the Indian School of Business with the aid of the Sloan School of Management (2015 - 2018)</p> <p>Operation Management Group Faculty Search Committee Member (2015 - present)</p> <p>Member of Solaris task-force, exploring ways for technology to influence Sloan's educational mission. (2014 - 2015)</p> <p>Member of Sloan CIO search committee. (2014)</p> <p>Organizer of first MIT 'Building Networked Collaborations' conference (2012) that seeks to connect researchers at MIT's international partner schools with their colleagues at MIT.</p> <p>MIT co-lead on collaboration with Beth Israel Deaconess Hospital. (2009-2012)</p> <p>Undergraduate Admissions Committee, 2008, 2009.</p> <p>MSOM Conference Program Committee, 2009.</p> <p>OR Center Admissions Committee, 2009, 2011, 2012, 2015, 2016; MIT Sloan OM Admission Committee, 2008-12.</p> <p>Invited by MBA student body to deliver one of three mock lectures to incoming class (2010, 2011).</p>
AWARDS (SELECTED)	<p>INFORMS Wagner Prize for <i>Generalized Synthetic Control for TestOps at ABI: Models, Algorithms, and Infrastructure</i>. (October 2022)</p> <p>INFORMS Jeff McGill Student Paper Award to advisees Tianyi Peng and Andy Zheng for <i>Markovian Interference in Experiments</i> (October 2022)</p> <p>INFORMS Applied Probability Society (APS) Best Student Paper Prize to advisees Tianyi Peng and Andy Zheng for <i>Markovian Interference in Experiments</i> (October 2022)</p> <p>INFORMS MSOM Student Paper Prize (second place) to advisee Jackie Baek for <i>Fair Exploration via Axiomatic Bargaining</i> (October 2022)</p> <p>INFORMS MSOM Young Scholar Prize. (November 2020)</p> <p>MIT Jamieson Prize for Excellence in Teaching. (May 2020, USD 10k)</p> <p>INFORMS Wagner Prize Finalist for <i>Primal-Dual Algorithms For Order Fulfillment At Urban Outfitters, Inc.</i> (November 2018)</p> <p>INFORMS George Nicholson award to advisee A. A. Li for 'Learning Preferences with Side Information'. (October 2017)</p> <p>INFORMS MSOM Best Publication in Management Science for <i>A Nonparametric Approach to Modeling Choice with Limited Data</i> (November 2016)</p> <p>ISMS-MSI Gary Lilien Practice Prize Finalist for <i>Building Optimized and Hyperlocal Product As-</i></p>

*sortments: A Nonparametric Choice Approach used by Celect* (May 2016)

INFORMS Revenue Management and Pricing Section Prize for the best contribution to the science of pricing and revenue management published in the last five years for *A Nonparametric Approach to Modeling Choice with Limited Data* (November 2015)

INFORMS Simulation Society Best Publication Award for a paper published in the last three years, award for *Pathwise Optimization for Optimal Stopping* (December 2014)

INFORMS MSOM Student Paper Contest honorable mention to advisee D. F. Ciocan for ‘Model Predictive Control for Dynamic Allocation Problems’. (October 2013)

MIT Sloan Outstanding Teacher Award. (May 2013)

INFORMS JFIG Paper Prize (first place) for *A Smoothed Approximate Linear Program*. (November 2011)

INFORMS Pierskalla Award (Finalist) for *Fairness, Efficiency and Flexibility in the Organ Allocation for Kidney Transplantation*. (November 2011)

NSF CAREER Award for the proposal *Large Scale Stochastic Control: A Math Programming and Discrete Optimization Lens*. (February 2011; One of two awarded nationally in the area of Operations Research in 2010, USD 400k)

INFORMS MSOM Student Paper Contest first prize to advisee S. Jagabathula for ‘A Nonparametric Approach to Modeling Choice with Limited Data’. (November 2010)

INFORMS JFIG Paper Prize (second place) for *The Linear Programming Approach to Solving Large Scale Dynamic Stochastic Games*. (November 2009)

INFORMS MSOM Student Paper Contest second prize for *Dynamic Pricing with a Prior on Market Response*. (November 2006)

Stanford School of Engineering Fellow (Autumn 2002)

IEEE Region 6 Student Paper Contest Prize (third place) for Senior Thesis (Autumn 2002)

Arizona Regents Fellow (Arizona Class of 2003)

RESEARCH GRANTS Meta Research Gift in recognition of research on *Anomaly Detection*. (2022, USD 500k).

MIT-Takeda Grant: *Causal Inference for HCP outreach*. (2022, USD 600k).

MIT-Liberty Mutual Grant: *Robust Machine Learning*. (2021, USD 150k).

MIT-Jameel Clinic Grant: *Casual Inference in Observational Omics Data*. (2021, USD 50k).

MIT-HSI Grant: *Tensor Algorithms for Data Imputation*. (2019,2021 USD 120k).

ABI Grant: *Causal Inference & Assortment Optimization*. (2019,2021,2022 USD 800k w/ N. Trichakis).

Target Grant: *Supply Chain Forecasting*. (2019, USD 200k, w/ R. Levi).

MIT-Sensetime Grant: *Dynamic Portfolio Management*. (2018, USD 200k).

NSF Grant: *An Optimization Framework for Dynamic A-B Testing*. (2017, USD 471k).

NSF Grant: *Revenue Mgmt. For Enterprise Users of Cloud Infrastructure*. (2016, USD 360k).

NSF Grant: *An Innovative Optimization and Computational Framework for Assortment Problems Under Consider-Then-Rank Choice Models*. (2015, USD 300k, with R. Levi).

NSF CAREER Grant: *Large Scale Stochastic Control: A Math Programming and Discrete Optimization Lens*. (2011, USD 400k).

NSF Grant: *What Do Customers Like: A New Approach That Lets The Data Decide*. (2010, USD

305k).

Ford Grant: *Compressive Sensing and Consumer Choice*. (2010, USD 300k)

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

MEDIA  
RECOGNITION  
(SELECTED)

‘Would you pay \$5,000 for a Bruce Springsteen concert ticket? The algorithm thinks you might.’, NPR’s Marketplace Tech, August 12, 2022. (Research on Dynamic Pricing)

‘Nike acquires A.I. platform Celect, hoping to better predict shopping behavior’, CNBC, August 6, 2019. (Research on Choice Modeling)

‘Boston startup raises \$10M for retail software that predicts inventory needs’, Boston Business Journal, March 1, 2017. (Research on Choice Modeling)

‘The hat whisperers: This Boston startup tracks shopper’s habits to help brick-and-mortar stores make sales’, Boston Globe, June 25, 2015. (Research on Choice Modeling)

‘What Air Traffic Can Teach Us About Kidney Transplants’, NPR’s Planet Money, May 30, 2012. (Research on Organ Allocation)

‘Is It Time To Retire The Five Star Rating System?’, New York Times, July 13, 2011. (Research on Choice Modeling)

SELECTED SERVICE

Chair-Elect of INFORMS Revenue Management and Pricing (RMP) Section (2022-24).

Department Editor for Management Science (Big Data Analytics) (2021 -).

Associate Editor for INFORMS Journal on Optimization (2017-).

Associate Editor for Management Science (Big Data Analytics, Entrepreneurship) (2018-).

Associate Editor for Operations Research (Decision Analysis, Revenue Management) (2018-).

INFORMS Revenue Management and Pricing Section Prize Committee Member (2016-17).

NSF Panel member to evaluate proposals submitted to the Service Enterprise Systems program (2010, 2011, 2012, 2013, 2014).

One of 6 voting members of Scientific Registry of Transplant Recipients Technical Advisory Committee (the US body responsible for simulation studies related to organ allocation policy). (2011-2014).

INFORMS Dantzig Dissertation Prize Committee Member (2012-14).

Secretary, INFORMS Revenue Management and Pricing Section (2012-14).

Council member, INFORMS Applied Probability Society (2011-13).

Reviewer for Operations Research, Manufacturing & Service Ops. Management, Math of Operations Research, Management Sci., IEEE Trans. Information Theory, IEEE Trans. Automatic Control. Guest Associate Editor for OR Letters.

Associate Editor for Management Science (Business Analytics) (2012-2013).

SUBJECTS TAUGHT	15.761 Intro. to Operations Management (Evaluation Score: 4.79, 4.85/5)	Spring 2008
	15.764 Theory of Operations Management (Evaluation Score: 4.50/5)	Spring 2009
	15.761 Intro. to Operations Management (Evaluation Score: 4.75/5)	Spring 2009
	15.761 Intro. to Operations Management (Evaluation Score: 4.50, 4.51, 4.23/5)	Spring 2010
	15.066 Systems Optimization and Applications (Evaluation Score: 4.71/5)	Summer 2010
	15.066 Systems Optimization and Applications (Evaluation Score: 4.06/5)	Summer 2011
	15.764 Theory of Operations Management (Evaluation Score: 4.60/5)	Fall 2011
	15.778 Fellows: Intro. to Operations Management (Evaluation Score: 3.90, 4.08/5)	Summer 2012
	15.778 Data, Models and Decisions (Evaluation Score: 4.82, 4.88/5)	Fall 2012
	15.734 EMBA: Intro. To Operations Management (Evaluation Score: 4.64/5)	Spring 2013
	15.767 Intro. to Healthcare Delivery in the U.S (Evaluation Score: 4.5/5)	Fall 2013
	15.734 EMBA: Intro. to Operations Management (Evaluation Score: 4.7/5)	Fall 2013
	15.734 EMBA: Intro. to Operations Management (Evaluation Score: 4.36, 4.24/5)	Summer 2016
	15.778 Fellows: Intro. to Operations Management (Evaluation Score: 4.75, 4.77/5)	Summer 2016
	15.778 Fellows: Intro. to Operations Management (Evaluation Score: 4.76, 4.73/5)	Summer 2017
	15.778 Fellows: Intro. to Operations Management (Evaluation Score: 4.76, 4.73/5)	Summer 2018
	15.785 Digital Product Management (Evaluation Score: 4.6/5)	Spring 2019
	15.778 Fellows: Intro. to Operations Management (Evaluation Score: 4.88,4.69/5)	Summer 2019
	15.785 Digital Product Management (Evaluation Score: 4.6/5)	Spring 2020
	15.778 Fellows: Intro. to Operations Management (Evaluation Score: 4.82,4.61/5)	Summer 2020
	15.785 Digital Product Management (Evaluation Score: NA)	Spring 2021
	15.778 Fellows: Intro. to Operations Management (Evaluation Score: 4.74,4.64/5)	Summer 2021
	15.785 Digital Product Management (Evaluation Score: 4.50,4.27/5)	Spring 2022
	15.S04 Hands-on Deep Learning (Evaluation Score: 4.75/5)	Spring 2022
	15.778 Fellows: Intro. to Operations Management (Evaluation Score: 4.85,4.70/5)	Summer 2022

PH.D. THESES SUPERVISED	Jackie Baek (OR Center); August 2022; Assistant Professor at NYU Stern. <i>Topic: Decision-Making Under Uncertainty</i>
	Patricio Araneda (OR Center); August 2022; Data Scientist at Lyft <i>Topic: Learning and Optimization in Modern Retail</i>
	Deeksha Sinha (OR Center); December 2020; Data Scientist at Facebook. <i>Topic: Optimization for Online Platforms</i>
	Eli Gutin (OR Center); August 2018; Data Scientist at Uber. <i>Topic: Practical Applications of Large-Scale Stochastic Control for Learning and Optimization</i>
	Andrew Li (OR Center); August 2018; Assistant Professor at Carnegie Mellon University. <i>Topic: Algorithms for Large-Scale Personalization</i>
	Ali Aouad (OR Center); August 2017; Assistant Professor at London Business School. (co-advised w/ R. Levi) <i>Topic: Choice Modeling and Machine Learning</i>
	Florin Ciocan (MIT Sloan); August 2014; Assistant Professor at INSEAD. <i>Topic: High-Dimensional Revenue Management</i>
	Matthieu Monsch (OR Center); August 2013; Senior Data Scientist at LinkedIn. (co-advised w/ G.

Perakis) *Topic: Revenue Management and Applied Machine Learning*

Yiwei Chen (MIT Sloan); August 2012; Assistant Professor at Singapore University of Technology and Design. *Topic: Revenue Management*

Nikolaos Trichakis (OR Center); June 2011; Assistant Professor at MIT Sloan. (co-advised w/ D. Bertsimas) *Topic: Fairness and Deceased Donor Organ Allocation*.  
*Awarded the INFORMS Dantzig Dissertation Award Third Prize.*

Srikanth Jagabathula (MIT EECS); August 2011; Assistant Professor at New York University Stern School of Business. (co-advised w/ D. Shah) *Topic: Modeling Choice*

Carri Chan (Stanford EE); June 2009; Assistant Professor at Columbia University Graduate School of Business. (primarily advised by N. Bambos) *Topic: Stochastic Control*

S.M. THESES  
SUPERVISED

Bryan Park (EECS); December 2010; Trader, UBS. *Topic: Revenue Management ADP*

Gregory Sham (Sloan MBA); May 2012; Associate, McKinsey. *Topic: Surgical OR Scheduling*

Ryan Graue (Sloan MBA); May 2013. *Topic: Surgical OR Scheduling*

Marcus Braun (Sloan MBA); May 2014; Associate, McKinsey. *Topic: Surgical OR Scheduling*

Giselle Valera (Sloan Fellow); May 2017; Global Business VP, USPS. *Topic: Postal Service Pricing*

Durgesh Das (Sloan MBA); May 2020; Associate, Bain. *Topic: Inventory Optimization*

Colin McIntyre (Sloan MBA); May 2020; Associate, Bain. *Topic: Routing Optimization*

Andreea Georgescu (OR Center); December 2020; Product Manager. *Topic: Inventory Positioning*

PH.D. THESIS  
SUPERVISION

Andrew Zheng (OR Center) 09/2018 - present

Tianyi Peng (Aero Astro) 09/2019 - present

Max Jiang (OR Center) 09/2021 - present

Aryan Khojandi (OR Center) 09/2023 - present

Adam Jozefiak (OR Center) 09/2022 - present

THESES

*Revenue Management Beyond 'Estimate, Then Optimize'.* Stanford University Ph. D. Thesis, 2007.

*A 2-D Simulation of Anisotropic Particle Shape.* University of Arizona Honors Thesis, 2002.

PUBLISHED/  
FORTHCOMING  
ARTICLES

**Except where otherwise noted, authors are in alphabetical order**

Costa, L. et al. *Generalized Synthetic Control for TestOps at ABI: Models, Algorithms, and Infrastructure.* Interfaces (INFORMS Journal on Applied Analytics) (forthcoming), 2022.

Cramer, E. Y. et al. *Evaluation of individual and ensemble probabilistic forecasts of COVID-19 mortality in the US.* Proceedings of the National Academy of Sciences, Vol. 119, No. 15, 2022.

Ferdosi, S. et al. *Enhanced competition at the nano-bio interface enables comprehensive characterization of protein corona dynamics and deep coverage of proteomes.* Advanced Materials, Vol. 34, No. 44, 2022.

N. Bhat, V. F. Farias, C. C. Moallemi, A. Zheng. *Non-parametric Approximate Dynamic Programming via the Kernel Method.* Stochastic Systems (forthcoming), 2022.

V. F. Farias, E. Gutin *Optimistic Gittins Indices.* Operations Research (forthcoming), 2021.

<sup>1</sup> J. E. Blume, W. C. Manning, G. Troiano, M. Figa, L. Hesterberg, T. L. Platt, X. Zhaoa, R. A. Cuaresma, P. A. Everley, , M. Ko, H. Liou, M. Mahoney, S. Ferdosi, C. Stolarczyk, B. Tangeysh,

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<sup>1</sup>co-corresponding author

H. Xia, D. Hornburg, A. Siddiqui, P. Ma, R. Langer, V. F. Farias, O. C. Farokhzad. *Rapid, Deep and Precise Profiling of the Plasma Proteome with Multi- Nanoparticle Protein Corona*. Nature Communications, Vol. 11, No. 1, 2020.

Corbo, Claudia, et al. *Analysis of the Human Plasma Proteome Using Multi-Nanoparticle Protein Corona for Detection of Alzheimer's Disease*. Advanced Healthcare Materials, Vol. 10, No. 2, 2021.

A. Aouad, V. F. Farias, R. Levi. *Assortment Optimization under Consider-then-Rank Choice Models*. Management Science, Vol. 67, No. 6, 2021.

V. F. Farias, S. Jagabathula, D. Shah. *Inferring Sparse Preference Lists From Partial Information*. Stochastic Systems, Vol. 10, No. 4, 2020.

J. M. Andrews, V. F. Farias, A. I. Khojandi, C. M. Yan. *Primal-Dual Algorithms For Order Fulfillment At Urban Outfitters, Inc.*. Interfaces (INFORMS Journal on Applied Analytics), Vol. 49, No. 5, 2019.

Y. Chen, V. F. Farias, N. Trichakis. *On the Efficacy of Static Prices for Revenue Management in the Face of Strategic Customers*. Management Science, Vol. 65, No. 12, 2019.

N. Bhat, V. F. Farias, C. C. Moallemi, D. Sinha. *Near-Optimal A-B Testing*. Management Science, Vol. 66, No. 10, 2020.

A. Aouad, V. F. Farias, R. Levi, D. Segev. *The Approximability of Assortment Optimization Under Ranking Preferences*. Operation Research, Vol. 66, No. 6, 2018.

V. F. Farias, A. A. Li. *Learning Preferences with Side Information*. Management Science, Vol. 65, No. 7, 2019.

Y. Chen, V. F. Farias. *Robust Dynamic Pricing with Strategic Customers*. Mathematics of Operations Research, Vol. 43, No. 4, 2018.

<sup>2</sup> C. W. Chan, V. F. Farias, G. Escobar. *The Impact of Delays on Service Times in the Intensive Care Unit*. Management Science, Vol. 63, No. 7, 2017.

P. Cho, V. F. Farias, J. Kessler, R. Levi, T. Magnanti, E. Zarybnisky. *Maintenance and flight scheduling of low observable aircraft*. Naval Research Logistics (NRL), Vol. 62, No. 3, pp. 60-80, 2014.

Y. Chen, V. F. Farias. *Simple Policies for Dynamic Pricing with Imperfect Forecats*. Operations Research, Vol. 61, No. 3, pp. 612-624, 2013.

V. F. Farias, S. Jagabathula, D. Shah. *A Nonparametric Approach to Modeling Choice with Limited Data*. Management Science. Vol. 59, No. 2, 305-322, 2013.

D. Bertsimas, V. F. Farias, N. Trichakis. *Fairness, Efficiency and Flexibility in the Organ Allocation for Kidney Transplantation*. Operations Research, Vol. 61, No. 1, pp. 73-87, 2013.

V. Desai, V. F. Farias, C. C. Moallemi. *Pathwise Optimization for Optimal Stopping*. Management Science, Vol. 58, No. 12, pp. 2292-2308, 2012.

D. Bertsimas, V. F. Farias, N. Trichakis. *A Characterization of the Efficiency-Fairness Tradeoff*. Management Science. Vol. 58, No. 12, pp. 2234-2250, 2012.

<sup>3</sup> C. W. Chan, V. F. Farias, N. Bambos, G. Escobar. *Maximizing Throughput of Hospital Intensive*

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<sup>2</sup>co-first author

<sup>3</sup>co-first author

- Care Units with Patient Readmissions*. Operations Research. Vol. 60, No. 6, pp. 1323-1341, 2012.
- D. F. Ciocan, V. F. Farias. *Model Predictive Control for Dynamic Resource Allocation*. Mathematics of Operations Research, Vol. 37, No. 3, August 2012, pp. 501-525.
- V. Desai, V. F. Farias, C. C. Moallemi. *The Smoothed Approximate Linear Program*. Operations Research, Vol. 60, No. 3, May-June 2012, pp. 655-674.
- V. F. Farias, R. Madan. *Irrevocable Multi-Armed Bandit Policies*. Operations Research, Vol. 59, No. 2, March-April 2011, pp. 383-399.
- D. Bertsimas, V. F. Farias, N. Trichakis. *The Price of Fairness*. Operations Research, Vol. 59, No. 1, January-February 2011, pp. 17-31.
- V. F. Farias, D. Saure, G. Weintraub. *The Linear Programming Approach to Solving Large Scale Dynamic Oligopoly Models*. RAND Journal of Economics, Vol. 53, No. 2, Summer 2012, pp. 253-282.
- 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, pp. 333-350.
- 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, pp. 2441-2454.
- V. F. Farias, B. Van Roy. *Dynamic Pricing with a Prior on Market Response*. Operations Research, Vol. 58, No. 1, January-February 2010, pp. 16-29.
- V. F. Farias, B. Van Roy. *Approximation Algorithms for Dynamic Resource Allocation*. Operations Research Letters, Vol. 34, No. 2, March 2006, pp. 180-190.
- <sup>4</sup> 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, pp. 8318-8325.
- V. F. Farias, C. C. Moallemi, T. Peng, A. Zheng. *Synthetically Controlled Bandits.*, 2022. (submitted)
- V. F. Farias, A. A. Li, T. Peng, A. Zheng. *Markovian Interference in Experiments.*, 2022. (extended abstract in NeurIPS 2022, submitted)
- J. Baek and V. F. Farias. *Fair Exploration via Axiomatic Bargaining.*, 2021. (extended abstract in NeurIPS 2021, Major Revision in Management Science)
- V. F. Farias, A. A. Li and T. Peng. *Learning Treatment Effects with General Intervention Patterns.*, 2021. (extended abstract in NeurIPS 2021, submitted)
- V. F. Farias, A. A. Li and T. Peng. *Near-Optimal Entrywise Anomaly Detection for Low-Rank Matrices with Sub-Exponential Noise.*, 2021. (extended abstract in ICML 2021, invited to Manufacturing & Service Operations Management)
- J. Baek, V. F. Farias, A. Georgescu, R. Levi, T. Peng, D. Sinha, J. Wilde and A. Zheng. *The Limits to Learning a Diffusion Model.*, 2021. (extended abstract in EC 2021, Revised for Management Science).
- V. F. Farias, A. A. Li, D. Sinha *Optimizing Offer Sets in Sub-Linear Time*, 2020. (extended abstract in EC 2020, Major Revision in Management Science)

<sup>4</sup>third author

COMPLETED  
ARTICLES



SELECT REFER'D.  
CONFERENCE  
PAPERS

V. F. Farias, A. A. Li, T. Peng and A. Zheng. *Markovian Interference in Experiments*. 36th Annual Conference on Neural Information Processing Systems (NeurIPS), 2022. (Full Oral)

V. F. Farias, A. A. Li and T. Peng. *Uncertainty Quantification For Low-Rank Matrix Completion With Heterogeneous and Sub-Exponential Noise*. 25th International Conference on Artificial Intelligence and Statistics (AISTAT), 2022.

J. Baek and V. F. Farias. *Fair Exploration via Axiomatic Bargaining*. 35th Annual Conference on Neural Information Processing Systems (NeurIPS), 2021. (Spotlight paper)

V. F. Farias, A. A. Li and T. Peng. *Learning Treatment Effects with General Intervention Patterns*. 35th Annual Conference on Neural Information Processing Systems (NeurIPS), 2021. (Full Oral)

V. F. Farias, A. A. Li and T. Peng. *Near-Optimal Entrywise Anomaly Detection for Low-Rank Matrices with Sub-Exponential Noise*. Proceedings of the Thirty Eighth International Conference on Machine Learning (ICML), 2021

J. Baek, V. F. Farias, A. Georgescu, R. Levi, T. Peng, D. Sinha, J. Wilde and A. Zheng. *The Limits to Learning a Diffusion Model*. Proceedings of the Twenty Second ACM Conference on Economics and Computation (EC), ACM, 2021.

V. F. Farias, A. A. Li, D. Sinha. *Optimizing Offer Sets in Sub-Linear Time*, Proceedings of the Twenty First ACM Conference on Economics and Computation (EC), ACM, 2020.

V. F. Farias, A. A. Li. *Optimal Recovery of Tensor Slices*. Proceedings of the 20th International Conference on Artificial Intelligence and Statistics (AISTAT), PMLR, 2017.

Y. Chen, V. F. Farias. *On the Efficacy of Static Prices for Revenue Management in the Face of Strategic Customers*. Proceedings of the Seventeenth ACM Conference on Economics and Computation (EC), ACM, 2016.

Gutin, Eli, and Vivek Farias. *Optimistic Gittins Indices*. Advances in Neural Information Processing Systems 29 (NIPS), pp. 3153-3161, MIT Press 2016.

Y. Chen, V. F. Farias. *Robust Dynamic Pricing with Strategic Customers*. Proceedings of the Sixteenth ACM Conference on Economics and Computation (EC), ACM, 2015.

N. Bhat, V. F. Farias, C. C. Moallemi. *Non-parametric Approximate Dynamic Programming via the Kernel Method*. Advances in Neural Information Processing Systems 25 (NIPS), MIT Press 2012.

V. F. Farias, S. Jagabathula, D. Shah. *A Data-Driven Approach to Modeling Choice*. Advances in Neural Information Processing Systems 22 (NIPS), MIT Press, 2009. (Spotlight paper)

V. Desai, V. F. Farias, C. C. Moallemi. *The Smoothed Approximate Linear Program*. Advances in Neural Information Processing Systems 22 (NIPS), MIT Press 2009. (Spotlight paper)

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

V. F. Farias, C. C. Moallemi, B. Prabhakar. *Load Balancing with Migration Penalties*. Proc. of IEEE International Symposium on Information Theory (ISIT), September 2005; Stochastic Networks Research Conference, 2004. Invited to special issue of *Queueing Systems*.

BOOK CHAPTERS

J. Acimovic, V. F. Farias, V. F. *The Fulfillment-Optimization Problem*. Operations Research & Management Science in the Age of Analytics (pp. 218-237). INFORMS, 2019.

V. V. Desai, V. F. Farias, C. C. Moallemi. *Bounds for Markov decision processes*. Reinforcement

Learning and Approximate Dynamic Programming for Feedback Control, IEEE Press, 2011.

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  
(2007 ONWARD)

**Revenue Management Beyond ‘Estimate, Then Optimize’**

University of Chicago GSB, Operations Management Seminar *January 2007*  
IBM Almaden Research Center, Theory Group Seminar *May 2007*  
Google (Mountain View Campus), Tech Talk Series *June 2007*

**Stochastic Depletion Problems**

MIT Operations Research Center, ORC Seminar *November 2007*  
Stanford Management Science and Engineering, OR Seminar *November 2007*  
Grantham, Mayo, Van Otterloo LLC. *December 2007*  
Cornell University, ORIE Colloquium *November 2008*  
Columbia University, Graduate School of Business, IEOR-DRO Seminar *November 2008*

**Discharge Policies at General Intensive Care Units: A Quantitative Perspective**

University of Pittsburgh *April 2010*  
MSOM Special Interest Group on Healthcare *June 2010*

**A New Approach to Modeling Choice**

MIT Sloan, Marketing Group Seminar *November 2009*  
University of British Columbia, Sauder School *December 2009*  
Indian School of Business *March 2010*  
Northwestern University, Kellogg School of Management *May 2010*  
IBM T. J. Watson Research Center *July 2010*  
Ford Motor Company *July 2010*  
Carnegie Mellon University, Tepper School of Management *September 2010*  
University of Minnesota, Department of Systems and Industrial Engineering *October 2010*  
Stanford University, Graduate School of Business *November 2010*  
Columbia University, Graduate School of Business, IEOR-DRO Seminar *November 2010*  
Tsinghua University, ‘Mostly OM’ Workshop *May 2011*

**Practical Dynamic Allocation**

Laboratory for Information and Decision Systems, MIT EECS *November 2010*  
New York University, Stern School of Business *April 2011*  
University of Pennsylvania, Wharton School, Operations & Information Seminar *October 2011*  
Duke University, Fuqua School of Business, Decision Sciences Seminar *October 2011*

**Non-Parametric Approximate Dynamic Programming**

University of Maryland, Robert H. Smith School of Business *September 2012*  
University of Southern California, Marshall School of Business *November 2012*  
University of Chicago GSB, Operations Management Seminar *April 2013*

**Online A-B Testing**

University of Texas, McCombs School of Business *September 2014*  
Stanford University, Management Science and Engineering *October 2014*  
INSEAD, Technology and Operations Management *April 2015*  
Yale School of Management *April 2016*  
UC Berkeley Simons Institute *September 2016*

**Learning with Side Information**

GeorgiaTech, Industrial and Systems Engineering *April 2016*

Tsinghua University, ‘Mostly OM’ Workshop	<i>May 2016</i>
CWI Amsterdam, Machine Learning Seminar	<i>March 2017</i>
Columbia University, Graduate School of Business, IEOR-DRO Seminar	<i>October 2017</i>
UC Berkeley Simons Institute	<i>March 2018</i>
UIUC Allerton Conference on Communication, Control, and Computing	<i>October 2018</i>
New York University, Stern School of Business	<i>October 2018</i>

**Online Fulfillment Optimization**

University of Minnesota, Institute for Mathematics and its Applications Workshop	<i>October 2018</i>
INFORMS Annual Conference Wagner Prize Presentations	<i>November 2018</i>
Northwestern University, Kellogg School of Management	<i>April 2019</i>
London Business School	<i>May 2019</i>
Stanford University, Graduate School of Business	<i>November 2019</i>

**Causal Analysis for Panel Data**

University of British Columbia, Sauder School of Management Colloquium	<i>November 2020</i>
University of Pennsylvania, Wharton School, Operations & Information Seminar	<i>November 2020</i>
Two Sigma Seminar on Mathematical Foundations of Data Science	<i>April 2021</i>
Workshop on the Design of Online Platforms at EC 2021	<i>July 2021</i>
Rutgers Business School	<i>April 2022</i>
Carnegie Mellon University, Tepper School of Business	<i>April 2022</i>

**Markovian Interference in Experiments**

UIUC Allerton Conference on Communication, Control, and Computing	<i>September 2022</i>
UC Berkeley, Simons Institute	<i>September 2022</i>
Cornell University and Cornell Tech, Bloomberg Learning Machines Seminar	<i>October 2022</i>
University of Toronto, Rotman School of Management	<i>November 2022</i>
University of Michigan, Ross School of Business	<i>December 2022</i>
Duke University, Fuqua School of Business	<i>December 2022</i>

**Plenaries/ Tutorials**

Tata Institute of Fundamental Research Applied Probability Summer School	<i>September 2009</i>
INFORMS Annual Meeting 2013 TutORials	<i>October 2013</i>
MSOM Special Interest Group Conference 2015 Thought Leader Plenary	<i>June 2015</i>
12th International Conference on Computational Management Science Plenary	<i>June 2015</i>
INFORMS Workshop on Marketplace Innovation Plenary, Stanford University	<i>June 2017</i>
INFORMS Annual Meeting 2019 TutORials	<i>October 2019</i>
Two Sigma Seminar on Mathematical Foundations of Data Science	<i>April 2021</i>
Workshop on the Design of Online Platforms at EC 2021	<i>July 2021</i>

COMPUTER SKILLS    Architected and grown high availability, distributed real-time systems. Contributed to production codebases written in Java and Python, and using diverse technologies (eg. Spark).

PERSONAL INTERESTS    Cooking, Technology