WARREN BUCKLER POWELL

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http://energysystems.princeton.edu/
http://adp.princeton.edu/
http://optimallearning.princeton.edu/

EDUCATION:

1977-1981	Ph.D. in Civil Engineering, MIT
1977-1979	Master of Science in Civil Engineering, MIT
1973-1977	Bachelor of Science in Engineering, Princeton University, Summa Cum Laude; Phi Beta Kappa, Tau Beta Pi

POSITIONS HELD:

2022-	Chief Innovation Officer, Optimal Dynamics
2020-2022	Chief Analytics Officer, Optimal Dynamics
2020-	Professor Emeritus, Operations Research and Financial Engineering, Princeton University
1999-2020	Professor, Operations Research and Financial Engineering, Princeton University
2014-2020	Associated faculty, Andlinger Center for Energy and the Environment
2013-2020	Associated faculty, Electrical Engineering, Princeton University
2012-2020	Affiliated faculty, Princeton Environmental Institute
2011-2020	Associated Faculty, Computer Science, Princeton University
2009-	Member, Program in Applied and Computational Mathematics, Princeton University
1993-1999	Professor, Civil Engineering and Operations Research, Princeton University
1987-1993	Associate Professor, Civil Engineering and Operations Research, Princeton University
1987-1988	Visitor, University of Montreal, with the Centre de recherche sur les transports
1981-1987	Assistant Professor, Civil Engineering, Princeton University
1981	Lecturer, Civil Engineering, Massachusetts Institute of Technology

COURSES TAUGHT:

Lecture courses (17):

CIV 245 - Introductory Engineering Statistics (1982-1987)
CIV 308 - Stochastic Systems Analysis (1983-1988)
CIV 411 – Strategies in Modeling: Public and Corporate Decisions (1990-1991)
CIV 411 – Operations Engineering (1992-1995) ("Production management")
CIV 411 – Operations Engineering (1996-1999) ("Dynamic resource management")
CIV 417 - Network Optimization Algorithms and Applications (1986-87,1990-1993)
CIV 514 - Stochastic Modeling of Engineering Systems (1982-1983)
CIV 529 – Computational methods in routing and scheduling (1993)
CIV 530 - Network Models in Transportation (1996)
CIV 532 - Transportation Planning and Logistics (1993-1994)
ORF 417/547 – Markov Decision processes (1998-2003)
ORF 417/547 – Approximate Dynamic Programming (2004-2007)
ORF 105 – Science and Technology of Decision Making (2001-2002)

ORF 411 – Operations and Information Engineering (2000- 2016)
ORF 418 – Optimal Learning (2008, 2010-2019).
ORF 544 – Stochastic Optimization and Learning (2016-2019)
ORF 411 – Sequential Decision Analytics and Modeling (2018-)

Graduate seminars

ORF 569 – Convergence Theory for Approximate Dynamic Programming (2010)
ORF 569 – Computational Stochastic Optimization (2012-2013)

PROFESSIONAL AFFILIATIONS

American Association for Artificial Intelligence (AAAI) – 2012-
Institute for Operations Research and the Management Sciences (Informs) 1979-
Math Programming Society
American Mathematical Society (AMS)
IEEE (Senior member)
SIAM

AWARDS and RECOGNITION

Personal

Informs Journal on Computing Test of Time Award for the paper "A Knowledge-Gradient Policy for Correlated Normal Beliefs," awarded by the Informs Journal on Computing, November, 2025. Citation:

> *This paper introduces the now well-known knowledge gradient (KG) method for gathering information when faced with a black-box objective, where query measurements may be both costly and noisy. The focus of the paper is on ranking and selection, but the KG method can be used also to study multi-armed bandit problems and many other models in Bayesian information collection. This very broad applicability led to a lively KG research area that continues to this day, with new developments studied in modern machine learning. It is an excellent example of work that has stood the test of time.*

"Warren B. Powell '77 Graduate Fellowship" donated to Princeton University by a former graduate advisee to support graduate students.

Highly Ranked Scholar by ScholarGPA for being in the top 0.05 percent in 2024, top 25 in Industrial Engineering and Operations Research, and 2nd in dynamic programming (below Bellman).

Top 100 in mathematics on Research.com for 2023, 2024.

The 2022 Saul Gass Expository Writing Award, given annually to an author whose publications in operations research and management science have set an exemplary standard of exposition. The award recognizes the impact a body of work has had in advancing OR methodology and its application, and that this impact is due not only to mathematical and computational excellence, but also to expository excellence.

The Robert Herman Lifetime Achievement Award, 2021. The Robert Herman Lifetime Achievement Award is awarded at most every second year by the INFORMS Transportation Science and Logistics Society to an individual who throughout his or her professional career has made fundamental and sustained contributions to transportation science and logistics, and has influenced the field through her or his writings, teaching, service, and nurturing of younger professionals.

Winner, 2020, Best paper prize: Urban Transportation SIG Outstanding Paper Award with Yixiao Huang, Lei Zhao, W.B. Powell, Yue Tong, Ilya Ryzhov for "Optimal Information Collection in Urban Delivery Resource Allocation."

Winner, 2015 Best Paper Prize from the Society for Transportation Science and Logistics (coauthored with Belgacem Bouzaiene-Ayari, Clark Cheng, Ricardo Fiorello, Sourav Das). Awarded at Informs annual meeting, Philadelphia, November, 2015.

Awarded *Docteur honoris causa* by the University of Quebec at Montreal, November 17, 2013.

Winner, 2011, Best Paper Prize at IEEE Symposium Series on Computational Intelligence, Paris, France, for "Bayesian Active Learning with Basis Functions," (coauthored with Ilya Ryzhov).

Winner, 2010 Best Paper Prize from the Society for Transportation Science and Logistics (coauthored with Hugo Simao, Abraham George, Ted Gifford, Jeff Day and John Nienow). Awarded at Informs annual meeting, Austin, TX, November, 2010.

Winner, 2009 Daniel H. Wagner Prize for Excellence in Operations Research Practice. (with Hugo Simao, Abraham George, Jeff Day, Ted Gifford, John Nienow). The Wagner prize recognizes projects which feature contributions to methodology.

Princeton Commendation for Outstanding Teaching, for ORF 418 Optimal Learning, Spring, 2008.

Best paper prize at ICPR Americas conference, June, 2008, "Approximate Dynamic Programming for Managing High Value Spare Parts" (with H. P. Simao)

Recipient, 2004 Informs Fellows Award.

Winner, Best Paper on Land Transportation, from IEEE Section on Vehicular Technologies, 1992. Paper title: "Optimization Models and Algorithms: An Emerging Technology for the Motor Carrier Industry" (award received 1995).

Finalist, Franz Edelman Award from The Institute of Management Science, 1991, with Yellow Freight System.

National Science Foundation Presidential Young Investigator Award, $312,500. "Dynamic Models for Large Scale Transportation Problems," 1984-1990.

Second place, Franz Edelman Award from The Institute of Management Science, 1987, with North American Van Lines.

1984 Rheinstein Junior Faculty Award, granted by the Princeton School of Engineering and Applied Science "to young faculty who have shown exceptional promise.

Winner, dissertation prize from the Transportation Science Section of the Operations Research Society of America, 1982.

Awards for supervised student research

Ahmet S. Cakmak Senior thesis prize, granted by the Department of Operations Research and Financial Engineering to Steven Chen (2012) "Natural Gas Power Generation in the Presence of Wind: A Mixed Integer Linear Programming Approach to the Hour-Ahead Unit Commitment Problem"

Frank S. Castellana Senior thesis prize, granted by the Department of Operations Research and Financial Engineering to Vince Jeong (2011) Approximate Dynamic Programming for the Stochastic Load Curtailment Problem

Ahmet S. Cakmak Senior thesis prize, granted by the Department of Operations Research and Financial Engineering to Gerald van den Berg (2011) "Bayesian Information Collection in Stochastic Optimization: An Aggregation-Based Approach"

Finalist, Nicholson Student Paper Prize Competition, for "Stochastic Optimization with an Observable State Variable," by Lauren Hannah, Presented at Informs annual meeting, Austin, TX, 2010.

Ahmet S. Cakmak Senior thesis prize, granted by the Department of Operations Research and Financial Engineering to Jennifer Schoppe (2010) The Valuation of Natural Gas Storage: A Knowledge Gradient Approach with Nonparametric Estimation

Ahmet S. Cakmak Senior thesis prize, granted by the Department of Operations Research and Financial Engineering to Katie Hsih (2010), "Optimal Dosing Applied to Glycemic Control for Type 2 Diabetes"

Ahmet S. Cakmak Senior thesis prize, granted by the Department of Operations Research and Financial Engineering to Da (Jessica) Zhou (2010), "20% Wind Generation and the Energy Markets A Model and Simulation of the Effect of Wind on the Optimal Energy Portfolio"

Finalist, Data Mining Student Paper Prize Competition, for "Dirichlet Process Mixtures of Generalized Linear Models," by Lauren Hannah, Presented at Informs annual meeting, Austin, TX, 2010.

Honorable mention (second place), "Doing Good with Good OR" competition, Informs, 2009. Work by Diana Negoescu '09 and Peter Frazier *09. Presented at Informs Annual Meeting, October, 2009.

Finalist, "Information Collection on a Graph," by Ilya Ryzhov, for the NJ Informs Student Operations Research Contest. Presented at Rutcor, September, 2009.

Honorable mention, Informs Computing Society Student Paper Prize, won by Peter Frazier for "The Knowledge Gradient Policy for Correlated Normal Beliefs," Presented at Informs Annual Meeting, October, 2009.

Finalist, Decision Analysis Society Student Paper Prize, won by Peter Frazier for "A Knowledge Gradient Policy for Sequential Information Collection," November, 2007.

Winner, Transportation Dissertation Prize Competition, won by Tassio Carvalho, Dissertation title: "Dynamic Control of Spatial Resource Allocation Problems," 1996.

Winner, George Dantzig Prize for the best dissertation in Operations Research, won by Raymond K.-L. Cheung, Dissertation title: "Dynamic Networks with Random Arc Capacities, with Application to the Stochastic Dynamic Vehicle Allocation Problem," 1994.

Honorable mention, Transportation Dissertation Prize Competition, won by Raymond K.-L. Cheung, Dissertation title: "Dynamic Networks with Random Arc Capacities, with Application to the Stochastic Dynamic Vehicle Allocation Problem," 1993.

Winner, Transportation Dissertation Prize Competition, won by Linos Frantzeskakis, Dissertation title: "Dynamic Networks with Random Arc Capacities: Solution Methods and Applications," 1990.

Honorable Mention, Transportation Dissertation Prize Competition, won by Yiannis Koskosidis, Dissertation title: "Optimization-Based Models and Algorithms for Routing and Scheduling with Time Window Constraints," 1988.

Honorable Mention, Transportation Dissertation Prize Competition, won by Hugo Simao, Dissertation title: "Numerical, Discrete Time Simulation of Transportation Queueing Networks," 1987.

Doctoral student and post-doctoral supervision (52)

Post-doctoral placement (15, 11 academic)

Dionysios Kalogerias 2017-2019, Michigan State University

Juliana Nascimento 2016-2020, Optimal Dynamics

Lina al-Kanj, 2014-2019.

Saeed Ghadimi, 2020, Management Sciences, University of Waterloo

Kris Reyes, 2013-2014, 2016-2017 – University of Buffalo.

Tsvetan Asamov, 2013-2016 (Industry).

Haitham Bou-Ammar 2015-2016, American University of Beiruit.

Javad Khazaei, 2012-2015. EDF Renewable Energy.

Somayeh Moazeni, 2012-2014, Stevens Institute of Technology

Ricardo Collado, 2011-2013, Stevens Institute of Technology

Arta Jamshidi, 2011-2013, Electrical and Computer Engineering, University of Tehran

Marcos Leone Filho, 2013, Unicamp, Brazil.

Stephan Meisel, 2012-2013, University of Muenster, Germany

Boris Defourny, 2010-2013, Lehigh University

Martijn Mes, 2012-2013, University of Twente, Netherlands

Academic placement (15):

Donghun Lee (CS), 2020, "Learning to Learn Optimally: A Practical Framework for Machine Learning Applications with Finite Horizon," First position: Korea University, Department of Mathematics.

Yingfei Wang (CS), 2017, "Advances in Decision Making under Uncertainty: Inference, Finite-Time Analysis, and Health Applications," First position: University of Washington School of Business.

Daniel Jiang, 2016, "Risk Neutral and Risk Averse Approximate Dynamic Programming Methods," First position: University of Pittsburgh, Industrial Engineering.

Ilya Ryzhov, 2011, "Information Collection in Stochastic Optimization," First position: Robert H. Smith business school at the University of Maryland.

Lauren Hannah, 2010, "Stochastic Search, Optimization and Regression with Energy Applications," First position: Columbia University, Department of Statistics (after a two-year post-doctoral position in the Department of Statistics, Duke University).

Peter Frazier, 2009 – "Knowledge Gradient Methods for Statistical Learning," First position: Cornell University, Department of Operations Research and Information Engineering.

Kazutoshi Yamazaki, 2009 – "Essays on Sequential Analysis: Multi-Armed Bandit with Availability Constraints and Sequential Change Detection and Identification," First position: Osaka University, Center for the Study of Finance and Insurance.

Katerina Papadaki, 2002, "Adaptive Dynamic Programming for Aging and Replenishment Processes," First position: London School of Economics (currently tenured).

Huseyin Topaloglu, 2001, "Dynamic Programming Approximations for Dynamic Resource Allocation Problems," First position: Operations Research and Industrial Engineering, Cornell University (currently tenured).

Mike Spivey, 2001, "The Dynamic Assignment Problem," First position: Math department, Samford University. Currently tenured at University of Puget Sound, Math Department.

Zhi-Long Chen, 1997, "Algorithms for Deterministic and Stochastic Scheduling," First position: Department of Systems Engineering, University of Pennsylvania. Currently tenured at University of Maryland.

Raymond K.-M. Cheung, 1993, "Dynamic Networks with Random Arc Capacities: Solution Methods and Applications," First position: Industrial engineering, Iowa State University. Currently tenured at Hong Kong University of Science and Technology.

Judy Farvolden, 1989, "A Primal Partitioning Solution for the Multicommodity Network Flow Problem," First position: Industrial Engineering, University of Toronto

Yiannis Koskosidis, 1988, "Optimization-Based Models and Algorithms for Routing and Scheduling with Time Window Constraints," First position: City University of New York.

Hugo P. Simao, 1987, "Numerical, Discrete-Time Simulation of Transportation Queueing Networks," First position: Associate Professor, Instituto Tecnologico de Aeronautica, Brazil.

Research laboratories (5):

Yan Li, 2016, "Optimal Learning in High Dimensions," First position: IBM T.J. Watson Research Laboratories.

Abraham George, 2005, "Optimal Learning Strategies for Multi-Attribute Resource Allocation Problems," First position: Research staff, Princeton University. Second position AT&T Laboratories.

Tongqiang Wu, 2004, "The Optimizing Simulator for the Military Airlift Problem," First position: Lawrence Livermore National Laboratory.

Tassio Carvalho, 1996, "Dynamic Control of Spatial Resource Allocation Problems," First position: IBM Watson Research Labs.

Linos Frantzeskakis, 1990, "Dynamic Networks with Random Arc Capacities, with Application to the Stochastic Dynamic Vehicle Allocation Problem," First position: AT&T Bell Laboratories.

Industry (19):

Ahmet Duzgun, 2023, From Learning to Optimal Learning: Understanding the impact of overparameterization on features of neural networks to optimal learning of expensive, noisy functions using low-dimensional belief models," First position: Squarepoint Capital

Xiaohe Luo, 2023, Entropic stochastic search for expensive, unimodular functions and its application to stochastic gradient algorithms and the optimization of parameterized policies for supply chain planning," First position: Schonfeld Strategic Advisors

Larry Thul (EE), 2022, "Multi-agent Sequential Decision Modeling for Information Collection and Intervention in Epidemics." First position: Optimal Dynamics.

Joseph Durante (EE), 2020, "Stochastic Dual Dynamic Programming and Backward Approximate Dynamic Programming with Integrated Crossing State Stochastic Models for Wind Power in Energy Storage Optimization," First position: Optimal Dynamics

Weidong Han, 2019, "Lookahead Approximations for Online Learning with Nonlinear Parametric Belief Models, First position: Two-Sigma.

Nana (Kobby) Aboagye, 2018, "Knowledge Gradient for Expensive Locally Quadratic Functions and Stochastic Optimization of Aid Allocation," First position: Air Liquide.

Raymond Perkins, 2018, "Multistage Stochastic Programming using Parametric Cost Function Approximations," First position: T. Rowe Price.

Si Chen, 2017, "Optimal Learning in Materials Science," First position: Goldman Sachs.

Xinyu He (EE), 2017, "Optimal Learning for Nonlinear Parametric Belief Models," Jump Trading.

Bolong (Harvey) Cheng, 2017, "Local Approximations and Hierarchical Methods for Stochastic Optimization," First position: SigOpt.

Daniel Salas, 2014, "Approximate Dynamic Programming Algorithms for the Control of Grid Level Storage in the Presence of Renewable Generation," Ph.D. from Chemical and Biological Engineering, First position: Thomson Reuters.

Warren R. Scott, 2012, "Energy Storage Applications of the Knowledge Gradient for Calibrating Continuous Parameters, Approximate Policy Iteration using Bellman Error Minimization with Instrumental Variables, and Covariance Matrix Estimation using an Errors-in-Variables Factor Model," First position: Energy trading startup.

Jae Ho Kim, 2011, "Quantile Optimization in the Presence of Heavy-Tailed Stochastic Processes, and an Application to Electricity Markets," Ph.D. from Electrical Engineering at Princeton. First position: Alliance Bernstein (fixed income hedge fund).

Jun Ma, 2011, "Approximate Policy Iteration Algorithms for Continuous, Multidimensional Applications and Convergence Analysis," First position: [Hedge Fund].

Johannes Enders, 2008, "Mitigating Failure Risk in an Aging Electric Power Transmission System" Louis Dreyfus Highbridge Energy

Juliana Nascimento, 2008, "Approximate dynamic programming for complex storage problems," McKinsey Consulting, Sao Paolo, Brazil

Gregory Godfrey,2007, "Nonlinear Approximation Method for Solving Stochastic, Dynamic Resource Allocation Problems," First position: Metron Inc.

Arun Marar, 2002, "Information Representation in Large-Scale Resource Allocation Problems: Theory, Algorithms and Applications." First position: Amaranth Advisers

Joel Shapiro, 1999, "A Framework for Representing and Solving Dynamic Resource Transformation Problems," First position: i2 Technologies.

Masters theses (11):

Yinzhen Jin (CEE), 2013, "A Stochastic Model of Errors in Wind Forecasts"

Ekaterina Jager, 2008, "Sensor Management."

Dennis Panos, 2007, "Approximate dynamic programming and aerial refueling."

Jayanth Marasanapalle, 2000, "Function Approximations for Integer, Stochastic Resource Allocation Problems."

Tom Dong, 1998, "A Dynamic Programming Approximation for the Dynamic Assignment Problem."

Karthik Sarma, 1998, "Adaptive Nonlinear Approximation Algorithms for Multiattribute Resource Scheduling Problems."

Mike Towns, 1997, "The Impact of User Noncompliance and System Stochasticity on Dynamic Routing Problems: A Study of the Truckload Industry."

Sheraz Shere, 1996, "A Dynamic Programming Approximation for the Driver Assignment Problem."

Tony Snow, 1996, "Adaptive Labeling Algorithms for the Dynamic Assignment Problem."

Derek Gittoes, 1994, "A Generalized Labeling Algorithm for Solving the Dynamic Assignment Problem."

Mary-Ellen Noyes, 1993, "Validation and Testing of a Stochastic, Dynamic Fleet Management System."

Undergraduate senior theses/independent work: (213 total)

Supervising undergraduate senior theses is a major time commitment in our department. Below is a partial list (1993 and later) of senior theses and independent projects.

***2010-2020* (78)**

2020 (2)

Kara Dowling (2020), A Multi-agent Stochastic Control Model for Adversarial Planning in Naval Operations

Madhumitha Shridharan (2020), The Little Wind Farm That Could: A Comparative Analysis of Lookahead Policies for Energy Storage Problems

2019 (9)

Emma Corless (2019), Conquering an Empire of Pain: An Optimal Learning Strategy for Identifying the Stage of Opioid Addiction

Sadie McGirr (2019), Optimal learning for optimal rowing: Minimizing race energy expenditure

Greg Kernisan (2019), Making "Dependable Engines": From Policy Search to Stochastic Lookaheads in Dynamic Supply Chain Planning

Stephanie Ward (2019), Optimizing Energy Storage Locations in the Presence of Offshore Wind using Stochastic Dual Dynamic Programming

Emily Kallfelz (2019), Optimal Learning for Optimal Rowing: Maximizing Technical Efficiency

Amanda Brown (2019) Beat the Curve: Designing Adaptive Blood Glucose Management Strategies for Non-Pump Patients with Type 1 Diabetes

Selina Pi (2019) An optimal learning model for state-level optimization of naloxone kits with non-convex response rates

Amy Zhang (2019) Optimal Learning using Monte Carlo Tree Search for Epidemic Control in the Meningitis Belt

Kara Dowling (2019) (ORFE – Junior independent work)

2018 (9)

Joseph Carlstein (2018), Approximate Dynamic Programming: Designing an Economically Optimal Fleet of Electric Self-Driving Cars

Anid Laoui (2018), Optimal Design for Multi-Agent Peer to Peer Energy Trading Networks

Steven Sobel (2018), A Stochastic Optimization Model for Managing Energy Storage Using a Driverless Fleet of Electric Vehicles

Evan Wood (2018), Energy Risk Management: Stochastic Optimization for Industrial Gas Operations

Brandon Tan (2018), The Knowledge Gradient Policy for Sequential Information Collection: A Review (PACM)

Nicholas Yang (2018), The Knowledge Gradient Policy in Sequential Decision Applications (Math)

Michael Li (2018), Applying the Knowledge Gradient Policy with Locally Quadratic Belief Model to Optimizing Energy Arbitrage Strategies (CS – Junior independent work)

Woramot (Earning) Yomjinda (2018), Jet Engine Supply Chain Optimization: Graphical Utility and One-Agent Inventory Policy Against Uncertainties (ORFE – Junior independent work)

Tor Nitayanont (2018), – Relationship Learning on a Graph Using Optimal Learning Policies (ORFE – Junior independent work)

2017 (6)

Andy Deng (2017), Optimal Management and Design for a Fleet of Electric Vehicles

Ginevra Guzzi (2017), Investigating a Feasible, Reliable and Cost-Effective Energy Portfolio in a Net-Zero Carbon Emissions Landscape.

Raj Patel (2017), Twitter Trading: Modeling Twitter Processes and Finding an Optimal Trading Policy

Aaron Schwartz (2017), Stochastic Optimization for Isolated Microgrid Energy System Design and Control

Eric Schneider (2017), Multifidelity Modeling with Varying Costs using Optimal Learning (Math)

Connor Werth (2017), Learning Stochastic Binary Feedback on a Sampled Hierarchical Belief Model: Optimal Pricing of Contracts in the Truckload Trucking Market

2016 (10)

Sankalpa Banerjee (2016), Understanding Variability and Uncertainty in Energy Generation Portfolios using SMART-Invest: A Stochastic Dynamic Programming Approach

Kabo Kula (2016), A Stochastic Analysis of the Economics of Solar and Storage

Angela Zhou (2016), Sequential Decision-Making Problems: Online Learning for Optimization over Networks

Zachary Koerbel (2016), An Evaluation of Different Hotel Management Techniques

Chandler Gay (2016), Simulated Solar Variability under High Penetration Renewable Energy Deployment

Mohamed El Tonbari (2016), Low Rank Approximations to Markov Decision Processes

Olabode Adunbarin (2016), Energy Resource Scheduling Policy Studies in the PJM Electricity Market: A Dynamic Programming Approach

Natalie Carthy (2016), A Dynamic Programming Model for Simulation Demand Response and Renewable Energy.

Raina Sun (2016), Gone With the Wind: A Stochastic Model of Wind Energy Crossing Time and Error Distributions

Bryan Oslin (2016), Finding the Inefficiencies in Medicine: An Analysis of Medical Quality Versus Cost with Respect to Knee Replacement Episodes

2015 (2)

Erick Chen (2015), Structured Approximate Dynamic Programming for Simulating Heterogeneous Agents in Incomplete Markets

Saumya Singh (2015, Princetonian Electricity: Managing an Isolated Microgrid

***2014* (7)**

Kevin Cen (2014), Entropy Minimization and Locating Faults Across the Electrical Network using Customer No Light Calls

Henry Chai (2014), A Statistical Model for Simulating Solar Intensity in New Jersey

Daniel P. Chen (2014), Analyzing Transformer Replacement Policies: A Simulation Approach to Reducing Failure Risk

Luke L. Cheng (2014), Solar, Wind, and Storage: Optimizing for Least Cost Configurations of Renewable Energy Generation in the PJM Grid

Mark Holekamp (2014), Keeping the Lights On: An Analysis of the Dynamic Allocation Problem of Assigning Utility Repair Trucks to Outages

Kevin Lin (2014), Approximate Dynamic Programming Applied to Biofuel Markets in the Presence of Renewable Fuel Standards

Oladoyin F. Phillips (2014), Policies for Investing in Nigeria's Power Delivery Capabilities

***2013* (9)**

Haotian (Cosmo) Zhong (2013), Replicating Electricity Spot Prices Through Inverse Optimization of Supply Shifts

Daniel H. Elkind (2013), Prediction Markets and Strategic Behavior: A Simulation Approach to Evaluating Alternative Mechanisms, Program in Applied and Computational Mathematics, Economics Department.

Kelly R. Funderburk (2013), Exploring Alternative Treatment for Bacterial Meningitis through Optimal Dosing Strategy: Responding to Rising Antibiotic Resistance

Shreyashi Ghosh (2013), The Future of Solar: An Analysis of New Jersey's Market for Solar Renewable Energy Credits (SRECs)

Taman Narayan (2013), Modeling Government Contracting: A Principal-Agent Approach with Imperfect Monitoring and Constrained Rewards, Certificate Program in Applied and Computational Mathematics, Economics Department.

Alexander Ogier (2013), Optimizing Princeton's Energy Use, Department of Computer Science

Tarun Sinha (2013), Resource Optimization in the Princeton University Energy System, Department of Mechanical and Aeronautical Engineering

Tarun Sinha (2013), A Stochastic Gradient Method to Match Actual Resource Demand in Energy Management Systems, Certificate Program in Applied and Computational Mathematics, Department of Mechanical and Aeronautical Engineering (PACM certificate)

Timothy Wenzlau (2013), Nested Newsvendor Optimal Commitment Policies in Day-Ahead and Hour-Ahead Electric Capacity Forward Markets

2012 **(8)**

Yu-Sung Huang (2012) Dynamic Pricing of Electric Vehicle Charging Locations: An Application of Optimal Learning

Kevin Kim (2012) A Stochastic Unit Commitment Model in the Presence of Offshore Wind Energy

Huanqi Deng (2012) A Clustering Based Algorithm for Efficient Online Nonparametric Regression

Dao Mi (2012) Electricity Forward and Option Hedging System

Daniel Dix (2012) Examining the Impact of Electric Vehicles on Today's Power Grid

Ma. Claudine M. Fernandez (2012) Parameterization of Public Policies to Incentivize Investment in Geothermal Power Projects in the Philippines

Steven Chen (2012) Natural Gas Power Generation in the Presence of Wind: A Mixed Integer Linear Programming Approach to the Hour-Ahead Unit Commitment Problem

Atanas Petkov (2012) The Hedging Problem: Modeling Electricity Spot Prices

2011**(13)**

Xiaoyang Long (2011) Optimal Learning in Dynamic Pricing Problems with Linear Beliefs

Hui (CinCin) Fang (2011) Controlling the Elements: Regulating Wind With Hydro in China

Sarah Gershkon (2011) Advance Commitments for Electric Power: Applied Policies and Risk-Management at Air Products and Chemicals

Kathy Huang (2011) Smart Home Appliances: Demand Management as Energy Storage

Vince Jeong (2011) Approximate Dynamic Programming for the Stochastic Load Curtailment Problem

Lawrence W. Manning (2011) Mean Field Variational Inference for Dirichlet Process mixtures of Generalized Linear Models and Applications in Approximate Q-learning

Ben Sheng (2011) A Stochastic Dynamic Programming Model of Ancillary Storage Using Electric Vehicles to Offset Volatility from Wind Generation

Gerald van den Berg (2011) Bayesian Information Collection in Stochastic Optimization:_An Aggregation-Based Approach

Megan Wong (2011) Cell Charging Challenges: An Optimal Pricing Strategy for a Solar Mobile Charging System in Africa

Sami Yabroudi (2011) Exploiting the Inverse Capacity-Rate Relationship in a Stochastic Setting: Control Algorithm Development for Hybrid Energy Storage in Renewable Energy Applications (MAE)

Peck Yang (2011) Lake Management: Endogenous and Optimal Learning to Reduce Uncertainty

Florina Yezril (2011) Smart Grid in New York City: Modeling, Optimizing, and Controlling Power Flow Bottlenecks (EE)

Rui Zhang (2011) Winding up the Grid: Optimal Placement of Wind Farms in China

2010 **(12)**

Peng, Jerry (2010) The Batch Knowledge Gradient Policy for Simultaneous Information Collection

Earp, Daphne (2010) Riding Down the Experience Curve: A Dynamic Model for Photovoltaic Technology Incentives

Escoriaza, Alex (2010) Simulation and Analysis of an Energy Portfolio Problem using a Deterministic Linear Program

Hsih, Katie (2010) Optimal Dosing Applied to Glycemic Control for Type 2 Diabetes

Hummer, Merritt (2010) Greening the Grid: Optimal Tax Policy for Wind and Solar Technology

Schoppe, Christine (2010) Wind and Pumped Hydro-Power Storage: Determining Optimal Commitment Policies with Knowledge Gradient Nonparametric Regression

Schoppe, Jennifer (2010) The Valuation of Natural Gas Storage: A Knowledge Gradient Approach with Nonparametric Estimation

Shue, Victoria (2010) Batteries: Storing Wind

Tagher, Nicholas (2010) Powering America: Optimizing Electricity Generation for the United States until 2030

Wei, Eva (2010) Optimal Levels of Hourly Wind Generation Commitment and Reserve Portfolio Usage

Yu, Vanessa (2010) Optimal Information Collection and Intervention Strategy for Infectious Disease Outbreak at Princeton University: A Partially Observable Markov Decision Process

Zhou, Jessica (2010) 20 Percent Wind Generation and the Energy Markets

2000-2009 (55)

2009 **(5):**

Negoescu, Diana, (2009) Optimal Learning for Drug Design in Ewing's Sarcoma

Valdez-Vivas, Martin R., (2009) Optimal Learning in the Two-Agent Newsvendor Problem

Tsinis, Ilya (2009) The Role of Energy Storage in Helping Global Energy Problems Become Gone with the Wind

Sun, Yintao (Alex) (2009) Utilizing Wind: Optimal Wind Farm Placement in the United States

Wong, Kimlee (2009) Wind Farm Valuation

2008 **(3):**

Gregory, Alanna (2008), Optimal Risk Profiling Strategies and Testing Policies for Cardiovascular Disease in Female Patients in the United States

Tavares, Stephen L. (2008), An Examination of the Ethanol Industry's Effect on Agriculture and the Corn-Soybean Planting Decision in the U.S.

Gartner, Bryan (2008), Ex Post Disaster Loans: Optimizing the Small Business Administration's Decision Making Process

2007 **(7):**

Krishnan, Meera (2007), Distribution of antiviral drugs during pandemic influenza: an approximate dynamic programming approach.

Chasparis, Filippos (2007), An approximate dynamic programming approach for routing a bulk cargo ship.

Yu, Vincent (2007) Approximate dynamic programming for blood inventory management.

Raikh, Evgenia (2007) Share repurchase strategies using approximate dynamic programming techniques

Tostanoski, Edward J. III, (2007) Approximate dynamic programming for equity portfolio selection

Yates, Peter (2007) (ADP for spare cell phones)

Dixon, Blake (2007)

***2006* (8):**

Basler, John T. (2006): Optimal Portfolio Rebalancing: An Approximate Dynamic Programming Approach.

Melendez, Ariel (2006): Approximate Dynamic Programming Methods For Speeder Apprehension.

Brosterman, Jonathan (2006): Applications of the Beer Distribution Game in Supply Chain Decision Making.

Kim, Sophia Y. (2006): Modeling the Allocation of Trailers in the Southeastern United States for Future Hurricane Preparation.

Brown, William Cliff (2006): Dynamic Jet Fuel Hedging Strategies.

Bellapravalu, Vikram (2006): Are Multiple Acts of Deception Preferable to One? A Comparison of Hierarchical and Centralized Resource Allocation.

Cant, Lindsey (2006): Life Saving Decisions: A Model For Optimal Blood Inventory Management.

Blankshain, Jessica (2006): Centralization and the Robustness of Military Supply Chains: A Scenario Analysis for the Design of Fuel Distribution Infrastructure.

***2005* (5):**

Toran, Julie (2005): A Model for the Dynamic Management of Power Transformers.

Ortiz, Michael (2005): Revenue Maximization for Software; Dynamically Solving the Versioning and Pricing Problems.

Johnson, Joshua (2005): Putting a Price on Performance: A Study of Risk Hedging in Major League Baseball.

Cui, Xiaolin (2005): Modeling the Spread of HIV/AIDS and the Financial Resource Needs in China.

Andrews, John O. (2005): Approximate Dynamic Programming for Aerial Refueling.

***2004* (7):**

Karfeld, Whitney Laine (2004): How Much Is Enough? Optimizing Loans at the International Monetary Fund.

Bramwell, Elizabeth Burns (2004): Value Optimization for Trucking Networks.

Verbin, Ann S. (2004): Optimal Direct-to-Consumer Advertising for the Pharmaceutical Industry.

Bondada, Sandhya (2004): Modeling the Impact of Funö1414 on Tuberculosis Control in India.

Ng, Wei Hung Vincent (2004): Learning To Buy Futures: An Approximate Dynamic Programming Approach.

Zimmerman, Aaron (2004): Pricing to a Different Tune: A Mathematical Model for the Sale of Music in the Digital Marketplace.

Cohen, Daniel L. (2004): Stocks and "Barry" Bonds: Evaluating Players and Optimal Team Strategy in Baseball Free Agent Markets.

2003 **(3):**

Lescher, Scott (2003): Beyond Bar Codes: A Benefits Analysis of Auto-ID Technology in Retail..

DeRoulet, Jason (2003): Approximate Dynamic Programming for Fleet Management..

Farmer, Catherine (2003): The Economic Effects of Defense Spending in Isreal.

2002 **(5):**

Ahuja, Anand (2002): Optimization with a Pattern Metric: An Application for Mutual Fund Investing.

Brown, Craig A. (2002): The Cooperative and Adaptive Information Chains: What is the Right Information Chain For Your Product?.

Caragine, Dana (2002): Mathematical Models for the Marketing Trade: The Development and Application of Decision Science Models in New Product Management.

Fleming, Heather L. (2002): Modeling the Spread of HIV/AIDS and the Allocation of Financial Resources for Prevention Methods in Zimbabwe.

Colburn, Edward (2002): The Optimization of Pricing Decisions Over a Dynamic Shipping Network Using Stochastic Gradient Algorithms.

2001 **(7):**

Vazquez-Gil, Xabier (2001): Learning to Fly: An Adaptive Dynamic Programming Approach for the Air Mobility Command Problem.

Anen, Stephen John (2001): The Role of Underwriter Reputation in the Initial Public Offering Process.

Atchison, David (2001): Consumer Decisions: A model for the flow of information.

Hsu, Michael (2001): Multiproduct Inventory with Substitution in an Electronic Commerce Setting.

Viergutz, Philip M. (2001): Simulations of the Bullwhip Effect: How Information Sharing and Cooperation Creates Value in Supply Chains.

Kim, Frances Y. (2001): The Economic Impact of Charter Schools and Educational Vouchers on the Princeton Regional School District.

del Sol, Adrianne Christine (2001): The Multidimensional Corporate Profile: Synthesizing the Layers of the Industrial Organization Model.

2000 **(5):**

Cervantes, Elizabeth Cerda (2000): Subsitute Inventory and the Value of Observable Consumer Preference in E-Commerce.

Stockdale, Owen Benton (2000): The Application of Minimum Cost Machine Scheduling Algorithms to Job Shop Manufacturing.

Dranoff, Julia (2000): Risk Aversion, Investor Behavior and IPO Pricing: Can Deception Really Make us Better Off.

Mattamana, Alan (2000): The Chemistry of Human Processes.

White, Kevin A. (2000): A Report From the Flight Deck: An Empirical Analysis of the Fractional Jet Ownership Industry.

1993-1999 (23)

***1999* (3):**

Todd, Ian H. (1999): A Multiple Path Theme Park Ride System.

Breckner, Erica A. (1999): Managing Dynamic Resource Allocation Problems through Control of Information.

Liu, James I. (1999): Adaptive Dynamic Programming Methods Applied to the Management of Orange Juice Commodities.

***1998* (5):**

Krasovec, Brian (1998): Congestion Management: The Development and Application of an Arrival Gradient for an Emergency Ward.

Weinstein, Jamie (1998): Price Optimization for Freight Trucking: An Application of Stochastic Gradient Methods to Complex Network Pricing Pronblems.

Woolbert, Stephen (1998): The Inventory Sourcing Problem: Development and Analysis of an Iterative Solution Algorithm.

Jones, Courtney (1998): Airline Yield Management: A Stochastic Gradient Approach.

Mitchell, Bradley (1998): Ingram Book Company: A Dynamic & Stochastic Distribution Case Study.

***1997* (4):**

Kamara, Korli (1997): The Use of Marginal Cost Forecasting to Assist in Operations Management Decisions.

Applebaum, Michael (1997): Methods of Cost Allocation for Networks: An Application to Truckload Motor Carriers.

Corcoran, Brian (1997): Competing Against a Free Commodity: An Analysis of the Evian Water Distribution Network.

Hanson, Paul M. (1996): Analysis of Fleet Size and Mix Using Hierarchical Control of a Logistics Queueing Network: An Application to Norfolk Southern Railroad.

***1996* (4):**

Kundrat, Paul S. (1996): Development of an Integrated Packaging, Inventory, and Distribution Model for PanAbrasive Inc..

Bell, Akira Lynn Brantley (1996): Evaluation of Prices for Truckload Trucking: An Application for Reusable Resources.

Pollack, Jacob A. (1996): A Modular Dynamic Fleet Management Simulator for Research and Analysis.

Rodriguez, Steven Francis (1996): Decision Making in Time: An Algorithm to Schedule Production.

***1994* (2):**

Spencer, Joffrey (1994): A New Algorithm for Vehicle Routing and Scheduling Problems with Time Window Constraints.

Chen, Paige (1994): Tradeoffs and Preferences in the Driver Assignment Problem.

***1993* (5):**

Wang, Jennifer S.W. (1993): Production and Inventory Control in a Multi-Item, Capacitated Job Shop Environment.

Hu, Eric L. (1993): A Study of Costing Allocation and Marginal Analysis of Empty Flows in the Trucking Industry.

Zolikoff, III, John A. (1993): Scenario Methods for Logistics Systems Design: Discount Pricing Strategies for Inventory Management.

Clark, Jr., William A. (1993): Experimental Investigation of Just-In-Time Theory: An Application with Derrick Manufacturing.

Hammonds, Keita M.K. (1993): Circumventing the Shelf Life Problem at Brook Warehouse through Improved Inventory Maintenance.

***1982-1992*(50):**

Approximately five theses per year during this period, with the exception of 1988.

SUMMER INTERNS (42)

Since 2011 I have been running a summer research program with undergraduates, initially focusing on energy but broadening in recent years to other applications:

2019 (2)

Kara Dowling
Madhumitha Shridharan

2018 (6)

Raluca Cobzaru
Chung Kyong (John) Nguen
Andrei Grauer
Roert Raveaunu
Joy Hii
Tor Nitayanont

2017 (5)

Marius Bocanu
Joseph Carlstein
Prachi Joshi
Russell Kim
Michael Li

2016 (5)

Andy Deng
Dask Sharma
Josh Tam
Alice Xie
Tinay Zeigler

2015 (4)

Miles Hinson
Grace Chang
Naman Jain
Brian Kang

2014 (4)

Chamsi Hssaine
Ryan McNellis
Shuyang Li
Erick Chen

2013 (3)

Kevin Lin
Rebecca Zhang
Austin Wang

2012 (7)

Tarun Sinha
Christine Feng
Ryan Peng
Henry Chai
Austin Wang
Stephen Wang
Joe Yan

2011 (5)

Will Harrel
Daniel Dix
Ashish Gupta
Kevin Kim
William Song

I did not keep records of the sporadic interns I hired before 2011:

2003 (1)

Vincent Ng (wrote the spreadsheet-based version of the OJ game during the SARS crisis)

PROFESSIONAL ACTIVITIES

Within Princeton University:

Director, Program in Engineering and Management Systems, 2006-2020.

Executive committee, Program in Architecture and Engineering 2017-2020.

Member, Siebel Scholars evaluation committee, August, 2015.

Member, Advisory Group for Infrastructure Master Plan (IMP) 2015-2016

Member, Self study committee for SEAS for industrial relationships, 2014-2015

Member, ORFE Self-study committee 2014

Chair, ORFE faculty search committee in optimization, 2013.

Member, Energy Technology Distillates working committee on energy storage (2013-2014)

Member, Princeton Energy and Climate Scholars (PECS) Faculty Board, 2012-2014.

Member, ORFE faculty search committee, 2010-2011.

Affiliated member, Program in Applied and Computational Mathematics 2010-

Faculty adviser, 2008 Mathematical Contest in Modeling

Founder and director, Princeton Laboratory for Energy Systems Analysis, PENSA, 2011-

Founder and director, CASTLE Laboratory, which provides a unique university/industry interface for developing, testing and implementing operations research models for complex applications. Since 1990, CASTLE Lab has brought in over $20 million in funding.

Director of Graduate Studies, ORFE, 2005-2007.

Director of graduate studies for Civil Engineering and Operations Research 1988-1989.

Departmental Representative (undergraduate program director), Operations Research and Financial Engineering, 1999-2002. Departmental representative for Civil Engineering and Operations Research 1985-1987, 1989-1992.

Honorific fellowship subcommittee, Graduate School, 2005-2006.

School of Engineering, Strategic Planning Committee, Executive Council for Industrial Relations, 2003.

School of Engineering, Space Committee, 2003

School of Engineering, Masters of Engineering Program Committee 2001-2004.

Transportation Program Committee, Princeton School of Engineering and Applied Science, 2001 – 20202.

Member, MECA Advisory committee, 1999-2001.

Member, Departmental Awards Committee, 1998

Member, Departmental budget committee, 1997

Outside of Princeton University

Society for Transportation Science and Logistics (formerly Transportation Science Section)

Co-editor, Special issue of Transportation Science on Energy and Transportation, Vol. 48, No. 4, November, 2014.

Member, Editor selection committee for Transportation Science, 2008.

Communications Chair (elected position), Society on Transportation Science and Logistics, Informs, 2006-2007. Redesigned website, introduced electronic newsletter, created editorial board with representatives from all the SIGS.

Webmaster, 2005-2006.

Member, bylaws committee which created the Society for Transportation Science and Logistics. Played a central role creating the communications chair, bringing the newsletter

editor and webmaster under a single title, and introducing the three international liaisons as board members.

President, Transportation Science Section, 1992-1994. – Instituted Special Interest Groups, reorganized prize committees to a rotation with broader participation in the selection of members, and balanced the budget (in deficit for many years).

Secretary/treasurer (circa 1988-1992). Primarily responsible for producing the newsletter.

Chair, Best Paper Prize committee, 2007. Member 2005-2006.

Chair, Robert Herman Lifetime Achievement Prize, 2006. Member 2004-2005.

Chairman, Transportation Science Section dissertation prize committee, 1989 – 1990. Judging committee for Transportation Science Section dissertation prize, 1984 – 1988.

Co-founder and chairman - TRISTAN - Triennial Symposium on Transportation Analysis (first meeting, June, 1991 in Montreal). Member of program committee since 1991.

Member, Review and Editor Selection Committee for *Transportation Science*, 1989.

Associate editor, *Transportation Science*, 1985- 1994. Advisory Board of Editors, *Transportation Science*, 1995 - .

Editorial advisory board, *Transportation Research*, 1986- 1992.

Cluster chairman for Logistics, ORSA/TIMS conference, Philadelphia - December 31, 1992, session on Dynamic Modeling in Transportation, ORSA/TIMS conference, Las Vegas, May, 1990.

Cluster chairman, sessions for the Transportation Science Section, at the ORSA/TIMS conference, San Francisco, 1984.

Informs (previously ORSA/TIMS)

Member, Diversity, Equity and Inclusion Committee for Informs, November 2017- August 2018. https://www.informs.org/About-INFORMS/Governance/Committees/Specialty/Diversity-Equity-and-Inclusion-Committee

General chair, Biannual conference for the Informs optimization society, held in Princeton in March, 2016, with over 210 presentations.

Speaker, Doctoral Student Colloquium, “Writing a good dissertation” (2014, 2015)

Speaker, New Faculty Colloquium, “So you want to get money from industry?” (2014, 2015)

Vice Chair for Optimization under Uncertainty, Informs Optimization Society, 2014-2016.

Stochastic Programming Society Ad-hoc Committee on Computation (2014-)

Cluster chair, Computational Stochastic Optimization, Informs Computing Society Biannual Workshop, January, 2015.

Cluster chair, Stochastic Optimization in Energy, IFORS 2014, Barcelona.

Associate Editor, *Operations Research*, 2012-

Chair, Appeals committee for a plagiarism case, October-December, 2011.

Chair, Editor review and selection committee for Transportation Science, reporting to the Publications Committee for Informs.

Chair, Subcommittee on plagiarism for Informs Publications Committee (2009) - Responsible for drafting Informs policies on plagiarism.

Member, review and editor selection committee for Decision Science (2009)

Board of directors, Informs Computing Society, 2009-2011.

Expository writing committee (core member), 2009-2011.

General chair – Fellows Selection Committee of Informs, 2007. Member (and co-chair) 2005-2006).

Chair, Informs Impact Prize, 2004. Biannual prize recognizing contributions with a widespread impact on society or the profession.

Chair, Professional Recognition Committee of Informs, 2003-2005. During this time, introduced the Informs Impact Prize, an Informs-level award.

Member, Professional recognition committee, INFORMS, 2001-2002. This was the committee that introduced the Informs Fellow Award.

Chair, 1996 George Nicholson Student paper prize competition for the Institute for Operations Research and Management Sciences. Served as a member of the judging committee again in 1999.

Board of Directors (elected position) for Informs - Institute for Operations Research and the Management Sciences (National society for operations research) 1996-98.

Area editor, Distribution, Transportation and Logistics, *Operations Research*, 1988-1995.

Co-editor for special issue of Operations Research on Stochastic and Dynamic Models in Transportation.

Chair, Review and Editor Selection Committee for *Transportation Science*, 1994 (appointing Gilbert Laporte).

Associate Editor for *Interfaces*, 1996 – 1999.

Associate Editor, Naval Research Logistics, 2005-

Member, Sections and Societies Committee 2006-2007

Member, Publications Committee (2008-2009).

Member, Editor selection committee for Transportation Science, 2008.

Member (elected) Council on Subdivisions, Informs, 2006 – 2007.

Member, Subdivisions Council of Informs, 2006-2007.

Member, Subdivisions Committee, Informs, 1997-98.

Judge, MSOM Student paper award, 2002.

IEEE

Vice chair, ADPRL technical program committee 2019 (with Jennie Si).

IEEE Task Force on Decision Support Tools for Energy Storage Investment and Operations (Sioshansi chair), 2014-

Associate editor, IEEE Transactions on the Smart Grid for special issue on Optimization Models and Algorithms for the Smart Grid, 2012.

Member - Taskforce on Important Applications of ADP and RL for the IEEE Computational Intelligence Society - ADPRL Technical Committee

Member – ADPRL Technical Committee (2012-)

Advisory committees

Advisory board, DIMACS Education Project in Sustainability, 2012 -

Scientific Committee of the Interuniversity Research Centre on Enterprise Networks, Logistics and Transportation (CIRRELT) 2008-2010.

Executive advisory board, CCICADA Center for Homeland Security based at Rutgers University.

IEEE Computational Intelligence Society Technical advisory committee on Adaptive Dynamic Programming and Reinforcement Learning. 2008-

Departmental review committee, Management Science and Engineering, Stanford University, 2008.

Program committees (incomplete list):

21st EURO Working Group on Transportation Meeting 2018

Program committee for ICIST 2018.

Scientific committee, Odysseus 2018.

Program committee, RLDM 2017.

Program committee, IJCNN, 2017.

Program committee, Tristan 2016

Program committee, Global Conference on Artificial Intelligence, 2015.

Program committee, ADPRL 2015.-2016.

IJCNN, Kilkarney, Ireland, July, 2015.

Program committee, RLDM 2015, Edmonton, 2015.

Program committee, TSL Workshop, Germany, 2015.

International Workshop Committee for 9th Workshop on Logistics and Supply Chain Management, Berkeley, California, October 5-7, 2015.

Program committee, ADPRL 2014.

Program committee, TSL Workshop, Chicago, 2014.

Organizing committee (for computational stochastic optimization) for the 2015 Informs Computing Society Conference.

Program committee for ComSust track for IJCAI 2013

Program committee for ComSust track for AAAI 2013

Program Committee for TRISTAN VIII, June, 2013, Chile.

Program Committee, IEEE SSCI April, 2013, IEEE Symposium Series on Computational Intelligence, Singapore.

Program Committee, AAAI 2012, July, 2012, Computational Sustainability track.

Program Committee of the 2nd International Conference on Computational Logistics, September 2011, in Hamburg, Germany.

Program committee for 2011 International Joint Conference on Neural Networks, San Jose, California, July 31-August 5, 2011.

Program committee for Odysseus 2012, 5th International Conference on Freight Transportation and Logistics, Mykonos Island, Greece, May, 2012.

Program committee for 14th Meeting of the EURO Working Group on Transportation.

Program committee for IEEE CIS Conference, ADP workshop, Paris, 2011.

Program committee for 2011 Informs Computing Society workshop, Monterey, California, January, 2011.

Program committee for TRISTAN VII, Norway, June, 2010.

Program committee for 12th annual Conference on Stochastic Programming (August, 2010)

Program committee for 2009 IEEE International Symposium on Adaptive Dynamic Programming and Reinforcement Learning, Nashville, TN.

Program committee for IEEE International Conference on Intelligence and Security Informatics (ISI-2009)

Program committee for Conference on Logistics Management 2009 Conference, Hamburg, Germany, 2009.

Program committee for Informs Information and Computing Society, March, 2009.

Program Committee of the conference LM09 - International Conference on Logistics Management, Hamburg, Germany.

Scientific program committee for EuroISI 2008 European Conference on Intelligence and Security Informatics

Program Committee for Workshop-Conference on Interdisciplinary Studies in Information Privacy and Security in 2008

Program committee for IEEE International Conference on Intelligence and Security Informatics (ISI 2008)

Program committee for 14th International Conference on Computing in Economics and Finance, University of Sorbonne, Paris.

Program committee, IEEE International Conference on Intelligence and Security Informatics 2008

Program Committee, 7th New Jersey Universities Homeland Security Research Consortium Symposium, November, 2006.

Program Committee: "Seventh New Jersey Universities Homeland Security Research Consortium Symposium," Rutgers University, November 20, 2006.

Member, program committee for IEEE International Symposium on Approximate Dynamic Programming and Reinforcement Learning (2007 IEEE ADPRL), April, 2007, in Honolulu, Hawaii

Scientific Program Committee, International Workshop on Distribution Logistics, Brescia, Italy, October, 2006.

Program committee, Conference on Stochastics in Logistics and Transportation, Molde University, Norway, June, 2006.

Program Committee, 10th International Conference on Stochastic Programming, University of Arizona, October, 2004.

Program committee member for Tristan meeting, every three years since 1990.

Conference organizing

Organizing committee, SIOPT 2014, San Diego, CA, May 19-24, 2014.

Co-organizer, NSF Workshop, "A Conversation between AI and OR on stochastic optimization," DIMACS Center, Rutgers, May 31/June 1 2012. http://www.castlelab.princeton.edu/nsfcsandor.htm.

Co-organizer, Dagstuhl conference on Sampling Based Optimization under Uncertainty, April, 2009.

Co-chair, 2009 IEEE International Conference on Service Operations, Logistics and Informatics (SOLI), July 22-24, Chicago, IL.

Co-organizer, Eighth New Jersey Universities Homeland Security Research Consortium Symposium *Homeland Security: From Face Recognition to Disease Detection, Natural Disasters to Transit Security*, Princeton University, December 5, 2008.

Chair, NSF Workshop and Outreach Tutorials on Approximate Dynamic Programming, Cocoyoc, Mexico, April, 2006.

Conference co-chair, Workshop on Stochastics in Transportation and Logistics, Molde University College, Molde, Norway, June, 2006.

Co-Director, Oberwolfach Conference on Traffic and Transport Optimization, to be held in Germany, November, 1999.

Co-chair and founder, First Tristan meeting, Montreal, 1988.

Miscellaneous

Referee for Genomics, PLOS One, Transportation Science, Operations Research, Management Science, Mathematical Programming, Mathematics of Operations Research, Interfaces, Transportation Research B, C and E, Transportation Research Board, Naval Research Logistics, European Journal of Operations Research, Journal of Optimization Theory and Applications, IEEE Transactions on Automatic Control, IEEE Transactions on Power Systems, Automatica Journal of Control Theory and Applications, Informs Journal on Computing, Omega, Queueing Systems, Journal of Machine Learning Research, Machine Learning, Statistics in Medicine, Energy Systems Journal, Energy Economics, Applied Mathematics and Computation, IMA Journal of Management Mathematics, J. Topics in Signal Processing, National Science Foundation, AFOSR, NSERC (Canada) and FCARS (Canada), Army Research Office, Israel Science Foundation.

NSF panels (almost every year) and Department of Energy.

Judge, The 36th International Science and Engineering Fair, Shreveport, LA, May, 1985.

GRANTS and CONTRACTS $54 million (in 2022 $$)

AFOSR, "Stochastic Optimization and Learning for Planning in Autonomous Systems," $878,152, July 1, 2019 – June 30, 2022.

Roomsage "Optimal Learning Methods for Electronic Commerce," $240,000, 9/1/2019-8/31/2021.

NeuTiger, "Sequential decision analytics in health,", $81,000, April 1, 2019 – March 30, 2020.

Lockheed Martin, "Theory of Mind Adviser for Decision Support (ToMADS)", $140,000, 2019-2022.

YRC Worldwide, "Interactive Optimization of Dynamic, Multiattribute, Multilayered Resource Scheduling Problems using Informational Decomposition," $1,403,561, Sept 15, 2017 - Sept 14, 2020.

Roomsage.com, "Optimal Learning of Dynamic Ad-Click Response Rates," $240,000, Sept 1, 2016-August 30, 2018.

"Adaptive decision making using probabilistic programming and stochastic optimization," $112,523, DARPA project through Carnegie Mellon University (Zico Alter PI).

Air Force Office of Scientific Research, "Optimal Learning for Efficient Experimentation in Nanotechnology and Biochemistry," $828,800, November 15, 2015-November 14, 2017.

National Science Foundation, "Parametric Cost Function Approximations for Robust Energy Systems Planning,", $250,000, Sept 1, 2015-August 31, 2018.

YRC Worldwide, "Interactive Optimization of Dynamic, Multiattribute, Multilayered Resource Scheduling Problems using Informational Decomposition," $456,000, Sept 15, 2014 - Sept 14, 2015.

Yield Planet, "Optimal Adaptive Learning of Prices and Commitments for Hotel Resource Management," $510,000, July 1, 2014 – June 30, 2016

Andlinger Center for Energy and the Environment, "Energy Storage and Renewables in New Jersey: Complementary Technologies for Reducing our Carbon Footprint," $150,000, 2/1/2014-1/31/2015.

Air Force Office of Scientific Research, "Optimal Learning for Efficient Experimentation in Nanotechnology and Biochemistry," $1,915,534, July 1, 2012-June 30, 2015.

United Parcel Service, "Real Time Optimization for Network Operations," $260,881, April 1,2012 – March 31, 2013.

National Science Foundation, Workshop on Artificial Intelligence and Operations Research, $42,000, 2012.

Lawrence Livermore National Laboratory, Machine Learning for High-Dimensional Stochastic Optimization for Robust Design and Control of the Smart Grid, $300,000, October 1, 2011 – September 30, 2013.

Air Force Office of Scientific Research, $420,000, "Optimal learning and approximate dynamic programming for high-dimensional stochastic search and control," 12/1/2010 – 11/30/2013.

National Science Foundation, ECCS Division, Scalable, approximate dynamic programming algorithms for high-dimensional storage portfolios, $360,000, September 1, 2011 – August 31, 2014.

SAP, "SAP Initiative in Energy Systems Research," $3.5 million, June 1, 2011 – May 30, 2016.

United Parcel Service, "Real Time Optimization for Network Operations," $253,130, April 1,2012 – March 31, 2013.

Department of Energy, Mid-Atlantic Offshore Wind Interconnection and Transmission (MAOWIT), $118,000, September 1, 2011 – August 31, 2013 (subcontract from University of Delaware).

Lawrence Livermore National Laboratory, "High Performance Computing for Stochastic Optimization in Energy Systems Analysis," $260,000, November, 2010 – October, 2011.

United Parcel Service, "Real Time Optimization for Network Operations," $242,000, April 1,2010 – March 31, 2011.

Columbia University, "Stochastic Control of Distributed Energy and Storage: Managing the Smart Grid for New York City," $527,000, 5/4/2010-5/1/2012.

SAP, "Approximate Dynamic Programming and Optimal Learning for Efficient Business Processes," $400,000, 7/1/2010 – 6/31/2012.

Department of Homeland Security (joint with Rutgers), Center of Excellence for Command, Control and Interoperability, $68,150, 9/1/2009-8/31/2010.

ExxonMobil, Grant to support research in energy, $50,000, 2009-2010.

Netjets, Grant to support research in stochastic resource allocation, $120,000, 2009-2010.

National Science Foundation, "Stochastic Multi-Scale Optimization for Energy Resource Planning," $246,000, September 1, 2009 – August 31, 2011.

Department of Homeland Security, $122,955, $249,537 "Sequential Sampling and Dynamic Sensor Management for Nuclear Detection" 9/15/2008-8/31/2010.

Air Force Office of Scientific Research, $420,000, "Optimal Learning and Approximate Dynamic Programming for Robust Decisions," 2/1/2008 – 11/31/2010.

National Science Foundation and the Department of Homeland Security, $119,500, "Sequential Sampling and Dynamic Sensor Management." 9/1/2007 – 8/31/2008.

Department of Homeland Security, $135,000, Center for Dynamic Data Analysis, 10/1/2006-9/30/2007.

Princeton Consultants, $60,000, 1/1/2006-12/31/2006.

Lawrence Livermore National Laboratories, $80,000, "Approximate dynamic programming for R&D portfolio management in the energy sector," April 1, 2007 – March 31, 2008.

Schneider National, $1,078,000, "Modeling Technologies for Dynamic Resource Management in Truckload Trucking," 7/2/2002 – 12/31/2007.

United Parcel Service, $1,095,000, "Real-Time Optimization Models," 3/1/2005 – 2/28/2010.

Embraer, $37,624, "Optimization algorithms for stochastic, asset allocation in the presence of low-frequency, nonstationary demands," 3/1/2007 – 9/1/2007.

Lawrence Livermore National Laboratories,$15,000, "Approximate dynamic programming for R&D portfolio management in the energy sector," Summer, 2006

Air Force, $181,000, "Knowledge Networks and Coordination in Multiagent Dynamic Resource Management," 2006-2007 (1 year)

PJM Interconnection, $150,000, "Approximate dynamic programming for robust equipment planning," January 1, 2006 – December 31, 2008..

National Science Foundation, $40,000, "Workshop on Approximate Dynamic Programming and Reinforcement Learning," 2006.

Defense Research Canada, $64,000, The Optimizing-Simulator for Planning Military Logistics Operations, 2005.

Air Force Office of Scientific Research, $420,000, Information Acquisition and Representation Methods for Real-Time Asset Management, 1/1/2005 – 12/31/2007.

National Science Foundation, $130,000, "Dynamic Game Theoretic Models for Urban Freight Systems", 9/1/2003 – 8/31/2005. NSF grant CMS-0324380.

Air Force Office of Scientific Research, $510,000, “Command and control: Planning the organization and flow of information and decisions in complex operations,” 1/1/2002 – 12/31/2004.

Canadian National Railway, $274,000, “Optimization Models for Dynamic Asset Management,” 1/1/2000 – 12/31/2001.

National Science Foundation, “An Internet-based Distributed Architecture for Real-Time Control of Freight Transportation Operations,” 9/1/2000 – 8/30/2001.

Air Force Office of Scientific Research, $505,000, "Representation and Analysis of Dynamic Resource Transformation Problems," 1/1/99 - 12/31/01

Burlington Northern Sante Fe Railroad, $719,082, “Optimal Control Technologies for Dynamic Resource Management,” 1/1/98 – 12/31/02.

Air Force Office of Scientific Research, $481,000, "A Modeling Strategy for the Optimal Control of Complex Operations," 5/1/96 - 12/31/98.

Air Products and Chemicals, $510,189, Dynamic Resource Management Technologies for Continuous Demand Operations," 9/1/95 – 9/30/02.

Norfolk Southern Railroad, $ 1,410,000, "Dynamic Resource Management Technologies for Rail Operations," 1/1/95-12/31/02.

Burlington Motor Carrier, Inc., $228,000, "Field Testing of a Stochastic, Dynamic Assignment Model for Motor Carrier Operations," 9/1/94-9/31/96.

Triple Crown Services, Inc., $291,000, "Optimization Technologies for Intermodal Operations," 1/1/93 - 1/1/95.

Air Force Office of Scientific Research, $385,000, "Stochastic Set Partitioning Methods for Operational Planning of Aircraft and Crews," 1/1/93 - 12/31/96.

National Science Foundation, $219,432, "Dynamic Planning Models for Common Carrier Operations," 7/1/91 –air 6/31/94.

Yellow Freight System, Inc. $2,426,000, "Advanced Decision Support Systems for Linehaul Network Planning," 9/1/90 – 12/31/02.

Yellow Freight System, Inc. $208,333, "Real-Time Linehaul Dispatching: Formulations, Models and Algorithms," 1989-1990.

Burlington Northern Motor Carriers, $80,000, "Pricing and Fleet Planning Models for Truckload Motor Carriers," 1987- 1989.

Sea-Land Inc., $112,500, Industry Matching Funds for PYI award, 1987-1990.

Whirlpool Corp., $15,000, Industry Matching Funds for PYI award, 1986-1987.

IU International, Inc., $10,000, Industry Matching Funds for PYI award, 1985-1986.

North American Van Lines, $30,000, Industry Matching Funds for PYI award, 1984-1987.

Norfolk Southern Corporation, $20,000, Industry Matching Funds for PYI award, 1984-1985.

Roadway Package System, $10,000, Industry Matching Funds for PYI award, 1984-1985.

National Science Foundation Presidential Young Investigator Award, $312,500. "Dynamic Models for Large Scale Transportation Problems," 1984-1990.

National Science Foundation Grant, $128,476, "A Numerical Approach for Describing the Performance of Large Scale Transportation Networks,"9/1/84- 8/31/86.

IU International, Inc., $223,309, "Large-Scale Optimization Methods for the Load Planning and Breakbulk Location Problems of LTL Motor Carriers," 9/1/82-8/31/85.

National Science Foundation Research Initiation Grant, $47,650, "Investigation of Time-Based Dispatch Strategies in Bulk Service Queues," 9/1/82-8/31/84.

COMPANIES STARTED:

Optimal Dynamics, Inc. – Founded in 2016 by my son, Daniel Powell, to market SMART-TL, the ADP-based truckload simulator for truckload trucking and trucking brokerages.

Transport Dynamics, Inc. - Founded in 1995. First managing director was Derek Gittoes, who received his MSE under Warren Powell in 1995. The company was started with a new model and algorithmic technology for real-time scheduling of drivers and loads. This was the first technology to handle short-haul routing and scheduling in real-time.

Princeton Transportation Consulting Group – Founded in 1988 with two optimization models developed at Princeton: SUPERSPIN, the first interactive-optimization planning model for less-than-truckload motor carriers, and MicroMAP, the first real-time driver dispatching model for truckload motor carriers which simultaneously handled driver assignment and a stochastic model for future loads. The first management team consisted of David Cape ’87, and Ken Nickerson ’84, who both worked under Warren Powell as undergraduates.

INVITED TALKS (410 – 88 since 2020):

Forthcoming talks:

========== 2026 ==========

Given:

Tutorial: “Reinforcement Learning” as a Sequential Decision Problem using the Universal Modeling Framework, May 14, 2026. 2026 AIMOR workshop organized by Haskayne School of Business at the University of Calgary.

“If You Want to Run a Better {Anything} You Have to Make Better Decisions: The Universal Modeling Framework for Analytical Thinking,” Informs Analytics+ Conference, National Harbor Md, April 12-14, 2026.

“The Next Generation of AI: A Universal Framework for Sequential Decision Problems,” Society of Decision Professionals - Decision analysis conference – Boston – March 24-26 2026 (Diana Swift, Hilda Cherekdjian, Jennifer Harrington, Jim Spanier): Conference website: www.sdpevents.com; SDP website: www.decisionprofessionals.com;

“The Next Generation of AI: A Universal Framework for Sequential Decision Problems,” Talk recorded for Global Program on Innovating Digital Economy Service Research and Innovation Institute run by Kris Sing, March 28, 2026.

"From Optimization Models to Policies: The Power of Parameterized Deterministic Optimization Models", FICOWorld, Feb 20, 2026.

"The Universal Modeling Framework for Sequential Decision Problems: The Next Generation of AI," MIT xPro Leadership Program, Feb 13, 2026.

"Making Better Decisions: From Framing to Modeling to Solutions," Loyola University, Quinlan School of Business, Lab for Applied Artificial Intelligence, January 21 1-2pm ET

"Decisions: What they are, how they are made", Podcast with Ritavan, Dec 18 2025.

"The Universal Modeling Framework for Sequential Decision Problems," Operations Analysis course (taught by Prof. David Ding) at Rutgers University, Dec 3, 2025.

"Framing Decision Problems," Operations Analysis course (taught by Prof. David Ding) at Rutgers University, Nov 19, 2025.

"A Unified Framework for Sequential Decision Problems: Bridging Machine Learning and Stochastic Optimization," Gurobi Optimization, Nov 12, 2025.

"A Universal Framework for Sequential Decision Problems: The Next Generation of AI," Ross B. Corotis Lecture, Department of Civil and Systems Engineering, Johns Hopkins University, November 3, 2025.

The Decision Intelligence Lab with Michael Watson and Vijay Mehrotra, and Adam DeJans. October 23, 2025.

R3ciprocity podcast with David Malachi. October 17, 2025. Sequential decision modeling for career choices.

"The Road to Digital Automation at Toyota: Learning How to Be an Informed Consumer," Toyota's North American Headquarters, Dallas, TX, July 10, 2025.

"A Fresh Approach to Teaching Optimization: From Deterministic Optimization to the Jungle of Stochastic Optimization," Cornell Department of Operations Research and Information Engineering, April 29, 2025

"How to Make (Good) Decisions: From Framing the Problem to Sequential Decisions," D2A2 Council, April 25, 2025.

"Teaching How to Make (Good) Decisions: From Framing the Problem to Sequential Decisions," Rutgers Department of Supply Chain Management (recorded for YouTube), April 18, 2025

"A Universal Framework for Sequential Decision Problems with Applications in Finance," Program in Digital Finance, University of Twente, Feb 4, 2025.

"Making Better Decisions to Create Better Supply Chains," Rutgers SCM Orientation, Rutgers University, Department of Supply Chain Management, January 16, 2025.

"A Universal Framework for Sequential Decisions: The Next Generation of AI," Rutgers, Department of Industrial and Systems Engineering, Nov 20, 2024.

"Sequential Decision Analytics: Direct Lookahead Approximation Policies," ISE 7210, Graduate course in Large Scale Sequential Optimization Under Uncertainty, Ohio State University, Nov 12, 2024.

"A Universal Framework for Sequential Decision Problems: The Next Generation of AI," Department of Integrated Systems Engineering, Ohio State University, Nov 13, 2024.

"A Universal Modeling Process for Sequential Decision Problems," ISE 3710, Undergraduate course in Nonlinear and Dynamic Programming, Ohio State University, Nov 12, 2025

"The Next Generation of AI: A Universal Framework for Sequential Decision Analytics," Synthetic Intelligence Forum, Vik Pant, October 14 2024.

"An Academic Roadmap to Supply Chain Excellence: Revisiting the SCM curriculum," Road to Supply Chain Leadership, Rutgers Business School, Oct 11, 2024

"A Universal Framework for Sequential Decision Problems: The Next Generation of AI," Global Program on Improving the Digital Economy, Service Research and Innovation Institute, Sept 10, 2024

"Making Better Decisions to Create Better Supply Chains," Orientation talk to incoming students to Rutgers program in Supply Chain Analytics, August 27, 2024.

"A Unified Framework for Sequential Decision Problems: From Dynamic Programming/RL to Stochastic Programming," ISMP, July 26, 2024, Montreal, Canada.

"A Universal Framework for Sequential Decision Analytics, with applications to supply chain management," Rutgers Supply Chain Analytics Institute Conference, June 6, 2024. 2024 Supply Chain Analytics Institute Annual Conference Day 1 Warren Powell - Rutgers University Media Space (kaltura.com)

Probabilistic Forecasts & Sequential Decision-Making (with Warren Powell) - Lokad TV, May 2, 2024.

"A Universal Framework for Sequential Decision Problems with Energy Applications," Data Mining Society, March 22, 2024.

"A Universal Framework for Sequential Decision Problems with Applications in Supply Chain Management," Global Program on Improving the Digital Economy, Service Research and Innovation Institute, March 11, 2024.

"A Universal Framework for Sequential Decision Problems: The Next Generation of AI," Emerging Techniques Forum, Military Operations Research Society, Johns Hopkins Applied Physics, Dec 7, 2023.

"A Universal Framework for Sequential Decision Problems: The Next Generation of AI," PUCV – Chile – School of Industrial Engineering, Pontificia Universidad Catolica de Valparaiso, organized by PUCV Informs Student Chapter, Nov 16 2023 Nov 16, 2023.

"A Universal Framework for Sequential Decision Problems: The Next Generation of AI," Auto-Twin Project, Italy, Nov 8, 2023.

"Sequential Decision Analytics in Energy," Iowa State, Oct. 3, 2023

"A Universal Framework for Sequential Decision Problems: The Next Generation of AI," Sanjivani Rural Educational Society, state of Maharashtra, India, Sept 27, 2023.

"A Universal Framework for Sequential Decision Problems in Health," 12th CHOIR/ORAHS International Seminar…, University of Twente, Sept 26, 2023.

"A Universal Framework for Sequential Decision Problems", ICISE Keynote, Ferdowsi University of Mashhad (Iran), Sept 13, 2023.

"A Universal Framework for Sequential Decision Problems: The Next Generation of AI," Global Program on Innovating Digital Economy, Service Research and Innovation Institute, Sept 5, 2023.

Optimal Dynamics – Future Opportunities for Analytics at Optimal Dynamics, New York, Aug 30 2023

"The Next Generation of AI: From Machine Learning to Sequential Decision Analytics," Columbia University – EC-America talk June 19 2023.

"A Universal Framework for Sequential Decision Problems: The Next Generation of AI," Target Conference, India, June 7, 2023.

"A Universal Framework for Sequential Decision Problems: The Next Generation of AI," Industrial Engineering, Tsinghua University, May 25, 2023.

A Universal Framework for Sequential Decision Analytics with Supply Chain Applications, Data analytics group, Honeywell, May 17, 2023.

"From Reinforcement Learning to Sequential Decision Analytics, with Applications in Transportation and Logistics," Workshop on Data-Driven Approaches to Transportation: Bridging Research and Practice, NSF workshop, University of South Carolina, April 28, 2023.

"Sequential Decision Problems in Energy," Zero Lab, Princeton University, April 21, 2023.

Tutorial: Sequential Decision Analytics for Freight Transportation and Supply Chain Management, Proctor & Gamble, March 29, 2023.

"Sequential Decision Analytics: A new framework for making decisions under uncertainty," Crunch DAO podcast, March 24, 2023.

"From Reinforcement Learning to Sequential Decision Analytics, with Applications in Transportation and Logistics," MIT Mobility Forum, March 24, 2023.

"Reinforcement Learning and Stochastic Optimization: Toward a universal framework for sequential decision problems," Peking University, March 23, 2023.

"Reinforcement Learning and Stochastic Optimization: Toward a universal framework for sequential decision problems," Informs Data Mining Society, February 24, 2023.

"Reinforcement Learning and Stochastic Optimization: Toward a universal framework for sequential decision problems," Synthetic Intelligence Forum, invited by Vik Plant (online), January 11, 2023.

"Sequential Decision Analytics for Transportation and Logistics," MIDAS Workshop on Decision Analytics, University of Michigan, Dec 9, 2022.

"Sequential Decision Analytics with Energy Applications," Norlys Energy Trading, Nov 30, 2022.

"Reinforcement Learning and Stochastic Optimization," Time Series Analysis and Forecasting Society, Vienna webinar, November 16 2022, Resul Akay

"Sequential Decision Analytics: A Unified Framework," Lev Academic Center, Nov 14, 2022.

"Sequential Decision Analytics: The Next Frontier for Artificial Intelligence," The Hamilton Mann Conversation, INSEAD, Paris, France, Nov 11, 2022.

"From Reinforcement Learning to Sequential Decision Analytics," Thalesian Talk, November 2, 2022.

"From Reinforcement Learning to Sequential Decision Analytics," Penn State, Operations Research Colloquium, October 25, 2022.

"From Trucking to Sequential Decision Analytics," Robert Herman Lifetime Achievement Award presentation, Informs, Oct 18, 2022.

"Sequential Decision Analytics for Supply Chain Management: The Next Generation of AI," CSCMP Edge 2022 conference, Sept 20, 2022.

"On Languages for Sequential Decision Problems," Keynote speech, 2022 Global Logistics Technology (GLT) Conference organized by the China Federation of Logistics & Purchasing (CFLP) July 29 2022.

"Sequential Decision Analytics for Transportation and Logistics," Plenary talk, 2022 Global Logistics Technology (GLT) Conference organized by the China Federation of Logistics & Purchasing (CFLP) July 28 2022.

Keynote: How Sequential Decision Analytics Builds Supply Chain Flexibility," Workshop on Designing Flexibility to Address Uncertainty in the Supply Chain, Loyola University in Chicago, June 29, 2022.

"A Unified Framework for Sequential Decisions Under Uncertainty: An Illustration Using Supply Chain Management," Raytheon Technologies Research Center, Fellow Seminar Series, June 21, 2022.

"Tutorial: A Unified Framework for Sequential Decisions under Uncertainty," Informs Optimization Society Greenville, SC, March, 2022.

"A Universal Framework for Sequential Decision Analytics," SiteRx (startup for clinical trials), Feb 27, 2022.

"A Unified Framework for Sequential Decisions under Uncertainty," Canada Distinguished Speaker Series for Supply Chain Management, Jan 7, 2022, http://tinyurl.com/sdasupplychainjan2022.

"A Universal Framework for Reinforcement Learning," Workshop on Ecological Theory of Reinforcement Learning, NeurIPS Workshop: Ecological Theory of RL, December 14, 2021

"Planning into an Uncertain Future: Modern Analytics for Truckload Trucking," Webinar for Optimal Dynamics, Nov 10, 2021.

"From Trucking to Sequential Decision Analytics: A Personal History," presentation at Informs for the Robert Herman Lifetime Achievement Award, October 25, 2021.

"Sequential Decision Analytics: A Tutorial for JB Hunt," Oct 6, 2021.

"A Unified Framework for Optimization under Uncertainty: From stochastic optimization to sequential decision analytics," Keynote talk for Conference on Optimization under Uncertainty, Montreal, Sept 27, 2021.

"Sequential Decision Analytics: A Tutorial for Home Depot, Sept 17, 2021.

Keynote talk: "From Bandit Problems to Derivative-free Stochastic Search: A Universal Modeling Framework for Active Learning Problems," Opening keynote speech for KDD 2021, Multi-Armed Bandits and Reinforcement Learning: Advancing Decision Making in E-Commerce and Beyond, August 15, 2021. https://sites.google.com/view/marble-kdd,Sept

"A Unified Framework for Sequential Decisions under Uncertainty," Carnegie Mellon University, Civil Engineering, Sept 17, 2021. (~275 attendees)

"Sequential Decision Analytics: A unified framework," talk given to Microsoft, April 7, 2021.

"Sequential Decision Analytics," REFASHIOND Ventures Executive Salon Series, March 11, 2021.

"Renewable Energy: A Path to a Carbon-Free Future," Princeton University Energy Association workshop "When Texas Froze Over," March 9, 2021

"Tutorial: A Universal Framework for Optimization under Uncertainty and Learning," Informs, 90-minute tutorial, November, 2020.

"Automating Transportation and Logistics in the Digital Age: Past, present and future challenges," International Conference on Computational Logistics, U. Twente, September 28, 2020.

"From Reinforcement Learning to Stochastic Optimization: A Universal Framework for Sequential Decision Analytics," Kellogg Business School, Northwestern University, Evanston, Feb 19 2020.

"A Unified Framework for Sequential Decision Analytics," Facebook Workshop, New York City, February 13, 2020.

"From Reinforcement Learning to Stochastic Optimization: A Universal Framework for Sequential Decision Analytics," Stanford University, Jan 29, 2020.

"Advanced Modeling and Policy Design in Reinforcement Learning: Applications in Energy Systems Analysis," Stanford University, Jan 30, 2020.

"Unified Framework for Sequential Decisions Under Uncertainty," Department of Civil and Environmental Engineering, Princeton University, January 15, 2020.

"Optimization under Uncertainty in Energy: Managing the Transition to a Renewable System," ARPA-e, Washington, D.C., Nov. 18, 2019.

"Models and Algorithms for Energy Storage," Georgia Tech Workshop on Energy Systems and Optimization, Georgia Tech, Atlanta, GA, Nov 14-15, 2019.

"A Unified Framework for Sequential Decision Analytics," University of Washington, St. Louis, Nov 5-6, 2019. 2-day tutorial.

"A Unified Framework for Optimization under Uncertainty," Olin Business School, University of Washington, St. Louis, Nov 4, 2019 (90 minute presentation)

"A Unified Framework for Optimization under Uncertainty," Special tutorial session at Informs, Seattle, October, 2019.

"Energy and Uncertainty: Planning for a Renewable Future," Air Liquide, Delaware, Sept 9, 2019.

"Stochastic Optimization and Learning for Planning in Autonomous Systems," AFOSR grantees meeting, August 22, 2019.

"A Unified Framework for Sequential Decision Analytics in Energy Systems" - keynote speaker at Foundations of Process Analytics and Machine Learning (FOPAM), August 6-9, 2019 in Raleigh, North Carolina.

"Minisymposium: A Unified Framework for Stochastic Optimization," International Conference on Stochastic Programming, Trondheim, Norway, Norwegian University of Science and Technology, July 29, 2019.

"A Unified Framework for Optimization under Uncertainty in Transportation and Logistics," tutorial for the Transportation Science and Logistics Workshop, Vienna, July 15 2019.

"A Unified Framework for Stochastic Optimization and Learning," ARO Workshop on Distributed Reinforcement Learning and Reinforcement Learning Games, University of Maryland, College Park, April 12-13, 2019. Frank Lewis Workshop.

"SMART-ISO: Practical Stochastic Optimization for Managing Renewables at PJM," PJM Interconnections, Audubon, PA, March 5, 2019.

"A Survey of Energy Storage Research at PENSA Lab," PJM Interconnections, Audubon, PA, March 5, 2019.

"Stochastic optimization in energy systems: Managing the transition to a renewable system" Department of Energy, January 28, 2019 (Sam Baldwin invitation)

"A Unified Framework for Stochastic Optimization in Energy" – Louis Wehenkel's workshop in Cambridge, Jan 7-11, 2019.

"A Unified Framework for Sequential Decision Analytics," Distinguished speaker seminar series, University of Toronto, Dept of Mechanical Engineering, November 16, 2018.

"Stochastic Optimization for Offshore Wind Integration," Operations Research Seminar series, University of Toronto, Dept of Mechanical and Industrial Engineering, Nov 16, 2018.

"A Unified Framework for Sequential Decision Analytics in Energy Systems," 2nd Georgia Tech Workshop on Electric Energy Systems and Optimization at Georgia Tech on November 15, 2018.

"Tutorial: A unified modeling framework for sequential decision analytics in computational sustainability," Doctoral consortium on computational sustainability, Cornell University, September 14, 2018.

"Tutorial: A unified modeling framework for sequential decision analytics in computational sustainability," Enterprisewide Optimization Group, Carnegie Mellon University, September 11, 2018 (50 minute version).

"A Unified Framework for Stochastic Optimization," AFOSR workshop, Washington, D.C., August 23-24, 2018.

"Tutorial: A Unified Modeling and Algorithmic Framework for Optimization under Uncertainty," Army Research Laboratory, July 30, 2018.

"From Seconds to Years: Multiscale Modeling of Energy Systems under Uncertainty," Workshop on Mathematics of Planet Earth – The Future, Rutgers, DIMACS, July 25, 2018.

"Tutorial: A Unified Modeling and Algorithmic Framework for Optimization under Uncertainty," United Technologies Research Center, Hartford, CT, July 16, 2018.

"Tutorial: A Unified Modeling and Algorithmic Framework for Optimization under Uncertainty," StochMod2018, University of Lancaster, Lancaster, UK, June 13, 2018.

"From Multiarmed Bandits to Stochastic Optimization," Multi-armed bandits workshop, Erasmus University, Rotterdam, May 24, 2018.

"Tutorial: A Unified Modeling and Algorithmic Framework for Optimization under Uncertainty," Maersk, Florham, NJ, May 15, 2018.

"Tutorial: A Unified Modeling and Algorithmic Framework for Optimization under Uncertainty," Stanford University, AAAI Spring Symposium Series, March 26, 2018.

"Tutorial: A Unified Modeling and Algorithmic Framework for Optimization under Uncertainty," Informs Optimization Society Conference, University of Colorado, March 23-25, 2018.

"Stochastic Optimization and Learning," Short course given to Air Liquide, Paris-Saclay Research Center, Versailles, France, March 20, 2018.

"Integrating Renewables in our Energy System: Challenges and Vision Forward," SigmaX Institute, Versailles, France, March 19, 2018.

"Tutorial: A Unified Framework for Stochastic Optimization," Department of Operations Research and Financial Engineering, Princeton University, March 6, 2018.

"Tutorial: A Unified Framework for Stochastic Optimization," Department of Electrical Engineering, Princeton University, Feb 1, 2018.

"Understanding Variability and Uncertainty in the Integration of Renewables in our Energy System," Department of Energy, Jan 16, 2018.

"Understanding Variability and Uncertainty in Energy Systems Modeling," Air Liquide, Delaware Research and Technology Center, Dec 20, 2017.

"Stochastic Optimization and Learning," Full-day workshop, Air Liquide, Delaware Research and Technology Center, Dec 18, 2017.

"Tutorial: A Unified Framework for Optimization under Uncertainty," Lockheed Martin Advanced Technology Laboratory, Cherry Hill, NJ, Dec 7, 2017.

"The economics of renewables: Managing Uncertainty and Variability," PECS dinner presentation, Nov 14, 2017.

"A Unified Framework for Stochastic Optimization," Department of Industrial Engineering and Manufacturing, Penn State, November 7, 2017.

"A Unified Framework for Stochastic Optimization," Department of Industrial and Enterprise Systems Engineering, University of Illinois, November 3, 2017.

"A Unified Framework for Stochastic Optimization," European Conference on Stochastic Optimization, Rome, October 22, 2017.

"Design and Control of Driverless Fleets of Electric Vehicles using Approximate Dynamic Programming," First biannual conference for the Society for Transportation Science and Logistics, Chicago, July 26, 2017 (with Lina al-Kanj).

"From stochastic search to bandit problems to dynamic programs: Fresh perspectives of some old problems," Institute for Mathematics and its Applications, Minneapolis, July 24-25, 2017.

"Optimal Learning for Efficient Sequential Experimental Design in Nano-Bio Research," AFOSR grantees meeting, Florida, December 5, 2016.

"Tutorial: A Unified Framework for Handling Decisions and Uncertainty," Webinar for Computational Sustainability series, sponsored by Cornell, Nov 29, 2016.

"Tutorial: A Unified Framework for Optimization under Uncertainty," Invited tutorial, Informs annual meeting, Nashville, November, 2016.

"Stochastic Optimization Challenges in Energy," Cornell Computational Sustainability Workshop, July 7, 2016.

Four-day workshop: "Intermittent Renewable Energy and its Impacts on Interconnected Power Systems," University of Campinas, Brazil, August 8-11, 2016.

First two days: 8-lecture sequence on optimization under uncertainty
Second two days: 6-lecture sequence on stochastic optimization in energy, focusing on unit commitment.

"Learning policies for sequential stochastic optimization: Bridging stochastic optimization and machine learning," International Conference on Stochastic Programming," Buzios, Brazil, June 28, 2016.

"The Information-Collecting Vehicle Routing Problem: Stochastic Optimization for Emergency Storm Response," PSE&G, Newark, NJ, June 22, 2016 (with Lina al-Kanj).

"A Unified Framework for Optimization under Uncertainty: Bridging Communities," Operations Research and Financial Engineering, Princeton University, June 17, 2016.

"Optimal Learning for Efficient Sequential Experimental Design for Nano-Bio Research," Air Force Research Laboratory, Dayton, OH, June 1, 2016.

"Optimal Learning in Health Care and Medical Research," Meridian Health, Monmouth Shores Corporate Park, NJ, April 14, 2016.

"A Unified Framework for Optimization under Uncertainty," Princeton Undergraduate Math Colloquium, Princeton University, April 14, 2016.

"Designing Robust Restoration Policies to Minimize Storm Outages," Data Driven Storm Outage Restoration, Miami, FL, Jan 25, 2016.

"A Unified Framework for Stochastic Optimization," First COUR Symposium on Stochastic Optimization, IBM TJ Watson Research Center, Yorktown Heights, New York, January 21, 2016.

"Clearing the Jungle of Stochastic Optimization: From learning to optimize to optimal learning," General Motors Technical Center, Warren, MI, Jan 19, 2016.

"From Seconds to Years: Multiscale modeling of energy systems under uncertainty," Texas A&M, Oct 23, 2015.

"Optimal Learning in Health Care and Medical Research," Fourth annual probability workshop, Rutgers University, Oct 3, 2015.

"The Renewables Challenge: Keeping the lights on while managing variability and uncertainty," Princeton alumni reunions, Oct 2, 2015.

"Managing the Uncertainty of Renewables: Stochastic Optimization for Robust Energy Systems Planning," SEGE 2015, IEEE International Conference on Smart Energy Grid Engineering, University of Ontario Institute of Technology, Toronto, August 17, 2015.

"Optimal Learning for Parametric Estimation for Nonlinear Belief Models in Materials Science" Air Force Research Laboratory Workshop on Autonomous Research Systems for Materials Development UES, Incorporated, 4401 Dayton-Xenia Road, Beavercreek, Ohio 45432, 13 August 2015.

"Exploiting Structure in Approximate Dynamic Programming," Simulation Workshop, Purdue University, July 25-27, 2015 (with Daniel Jiang and Tsvetan Asamov).

"Clearing the Jungle of Stochastic Optimization," Simulation workshop, Purdue University, July 25-27, 2015 – 60 minute version.

"The SAP Initiative for Energy Systems Research: From energy to decisions under uncertainty," SAP Headquarters, Walldorf, Germany, July 17, 2015.

"Clearing the Jungle of Stochastic Optimization," Talk to Vince Poor's research group, Department of Electrical Engineering, Princeton University, July 1, 2005. – 90 minute version.

"SMART-Invest: A stochastic, dynamic policy model for optimizing investment in wind, solar and storage," FERC Workshop, Washington, D.C. June 21-23, 2015 (w. Javad Khazaei)

"Co-optimization of battery storage over multiple revenue streams and time scales," FERC Workshop, Washington, D.C. June 21-23, 2015 (w. Harvey Cheng)

"Clearing the Jungle of Stochastic Optimization," Invited tutorial, CORS-Informs International Meeting, Toronto, June 14, 2015. – 90 minute version.

"Clearing the Jungle of Stochastic Optimization," Nomura Lecture, Mathematics Institute, Oxford University, May 14, 2015. – 60 minute version

"From Seconds to Years: Multiscale modeling of energy systems under uncertainty," Oxford-Man Institute for Quantitative Finance, Oxford University, May 13, 2015.

"From Seconds to Years: Multiscale modeling of energy systems under uncertainty," Colorado School of Mines, Golden, CO, April 14, 2015.

"SMART-ISO: A Stochastic, Multiscale Model for Analyzing High Penetrations of Renewables in the PJM Grid," National Renewable Energy Laboratory, Golden Colorado, April 13, 2015.

"Clearing the Jungle of Stochastic Optimization," Colorado School of Mines, Golden, CO, April 13, 2015.

"Clearing the Jungle of Stochastic Optimization," Rutgers University School of Business, Feb 27, 2015.

"From Seconds to Years: Multiscale modeling of energy systems under uncertainty," ExxonMobil Corporate Strategic Research, January 29, 2015.

"Exploiting Convexity in Approximate Dynamic Programming for High-Dimensional Resource Allocation Problems," NIPS Workshop on Large Scale Reinforcement Learning and Markov Decision Processes, Dec. 13, 2014.

"Practical Models and Algorithms for Energy and Transportation," Pierce Laboratory Seminar Series, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology, Nov 19, 2014.

"Clearing the Jungle of Stochastic Optimization," Invited tutorial, Informs annual meeting, San Diego, November, 2014.

"Stochastic Optimization Made Easy: Practical Strategies for Planning Under Uncertainty," ISyE, Georgia Institute of Technology, Atlanta, GA, October 30, 2014.

"Stochastic Optimization Made Easy: Practical Strategies for Planning Under Uncertainty in Transportation and Logistics," Manhattan Associates, Atlanta, GA, October 29, 2014.

"Managing the Uncertainty of Renewables: Stochastic Optimization for Robust Energy Systems Planning," Princeton Plasma Physics Laboratory, Princeton Forrestal Campus, Princeton, NJ, September 11, 2014.

"Bridging the Fields of Stochastic Optimization," Plenary presentation, MOPTA, Lehigh University, August 15, 2014.

"Optimal Learning in Materials Science: Designing Method into the Madness of Experimentation," Air Force Research Laboratory Workshop on Autonomous Research Systems for Materials Development, Wright Patterson Air Force Base, Dayton, OH, August 12, 2014 (with K. Reyes, Si Chen).

"Tutorial: Stochastic Optimization in Energy," Federal Energy Regulatory Commission, Washington, D.C., August 6, 2014. Also given at ISO-NE, August 18, 2014.

"Unifying the Fields of Stochastic Optimization in Transportation and Logistics," Plenary talk, 3rd annual conference for the Society on Transportation and Logistics, Loyola University, Chicago, June 30, 2014.

"Evaluating High Penetrations of Off-Shore Wind using SMART-ISO," FERC Workshop on Software, Washington, D.C., June 24, 2014.

"Robust Policies for Unit Commitment," FERC Workshop on Software, Washington, D.C., June 25, 2014.

"Approximate Dynamic Programming and Policy Search: Does Anything Work?" 3rd Annual Applied Probability Conference, Rutgers University, June 6, 2014.

"The (Rocky) Path to 80 Percent Renewables," STEP Seminar, Princeton University, April 14, 2014.

"Clearing the Jungle of Stochastic Optimization," Plenary talk, International Conference on Applied Mathematical Optimization and Modeling, University of Warwick, England, April 10, 2014.

"The (Rocky) Path to 80 Percent Renewables," CIRRELT Speakers Series, HEC, Montreal, April 3, 2014.

"Designing Robust Energy Systems for Brazil," CPFL Energia, Campinas, Brazil, March 19, 2014.

"Stochastic Optimization Challenges in Energy Systems," The University of Campinas (UNICAMP), Brazil, March 19, 2014.

"SMART-ISO: Understanding the Energy Portfolio in the Presence of Renewables," ANEEL (Brazilian Energy Regulatory Agency), Brasilia, Brazil, March 18, 2014.

"Operation Planning of Power Systems with Penetration of Intermittent Renewables: SMART-ISO Model applied to PJM Market," Unicamp, Brazil, March 19, 2014.

"Clearing the Jungle of Stochastic Optimization," CASTLE Lab talk, Princeton University, February 17, 2014.

"The (Rocky) Path to 80 percent Renewables: Pitfalls, Myths and Barriers," Princeton E-Filliates Workshop, ETC, Princeton, NJ, Feb 8, 2014.

"Clearing the Jungle of Stochastic Optimization," Johns Hopkins University, Applied Mathematics, January 30, 2014.

"Energy and Uncertainty: From the Laboratory to Policy, Unifying the Fields of Stochastic Optimization," Johns Hopkins University, January 30, 2014.

"Clearing the Jungle of Stochastic Optimization," University of Toronto, School of Management, Toronto, Canada, January 24, 2014.

"Optimal Learning for Efficient Sequential Experimental Design for Materials Science," University of Florida at Eglin Air Force Base, Shalimar, FL, Dec 10, 2013.

"Energy and Uncertainty: Clearing the Jungle of Stochastic Optimization," 3rd Colloquium of the NSERC/Hydro-Quebec Industrial Research Chair on Stochastic Optimization of Electricity Generation, Montreal, Quebec, Nov 25, 2013.

"On Languages for Stochastic Optimization," University of Quebec at Montreal, Nov 22, 2013, given on the occasion of receiving the honorary doctorate from the University of Quebec a Montreal.

"CASTLE Labs: From the laboratory, to the field, and back," Schlumberger-Doll Research, Cambridge, MA, Nov 8, 2013.

"Approximate dynamic programming for storage applications: Empirical results, theoretical insights," Princeton-Humboldt Workshop, Princeton, Nov 1, 2013.

"Energy and Uncertainty: From the laboratory to policy, unifying the fields of stochastic optimization," Department of Industrial and Manufacturing Engineering, Pennsylvania State University, October 30, 2013.

"SMART-ISO: A Stochastic, Dynamic Model of the PJM Energy Market," Princeton-USP Joint Workshop on Energy Systems, Sept 3-4, Princeton, NJ.

"Computational Stochastic Optimization in Energy," Princeton-USP Joint Workshop on Energy Systems, Sept 3-4, Princeton, NJ.

"Approximate Dynamic Programming for Energy Storage: A Comparison of Algorithmic Strategies, Princeton-USP Joint Workshop on Energy Systems, Sept 3-4, 2013, Princeton, NJ.

"SMART-ISO: A Stochastic Multiscale Model of the PJM Energy Markets," Fields Institute, Workshop on Electricity, Energy and Commodities Risk Management, Toronto, August 14, 2013.

"Optimal Learning for Networks and Algorithms in Transportation," NOW 2013, Syracuse, Sicily, June 26, 2013.

Tutorial: Clearing the Jungle of Stochastic Optimization for Transportation and Logistics," Tristan VIII, Calama, Chile, June 11, 2013.

"SMART-ISO: A Stochastic, Multiscale Model of the PJM Power Grid," IBM TJ Watson Research Center, May 18, 2013.

"Models and Algorithms for Energy Markets with High Penetrations of Renewables," CPAIOR 2013, IBM TJ Watson Research Center, May 18, 2013.

"SMART-ISO: Stochastic Optimization for Nested Energy Markets," 10th International Conference on Computational Management," Ecole Polytechnique, HEC, Montreal, May 2, 2013.

"Learning, Optimal Learning and Approximate Dynamic Programming," AFOSR grantees meeting, Washington, D.C., April 17, 2013.

"Optimal Learning for Environmental Science, Technology and Policy," Princeton Environmental Institute, Princeton, April 12, 2013.

"Dr. Watson: Belief Extraction for Optimal Learning in the Materials Sciences," Los Alamos National Laboratory (video teleconference), April 3, 2013.

"Bridging Stochastic and Dynamic Programming: A Unified Framework for Sequential Decision Problems," ISyE, Georgia Tech, Atlanta, GA, March 27, 2013.

"Energy and Uncertainty: From the Laboratory to Policy, Unifying the Fields of Stochastic Optimization," Center for Energy, University of Pittsburgh, Pittsburgh, PA, March 18, 2013.

"Calibration of a Multi-fidelity Approximate Dynamic Programming Model with Correlated Knowledge-Gradients," SIAM Conference on Computational Science and Engineering, Boston, March 1, 2013 (P. Frazier, with W. B. Powell, H. Simao).

"SMART-ISO: Integration of Wind Power to the Transmission Grid," University of Delaware, Feb 27, 2013 (with Hugo Simao).

"SMART-ISO: Modeling the PJM Energy Markets and Power Grid," Department of Energy, Washington, D.C., January 30, 2013.

"Unifying the Jungle of Stochastic Optimization," Rutgers Center for Operations Research, Rutgers, January 28, 2013.

"Modeling Decision Problems in Energy and the Environmental Sciences," PECS Dinner presentation, Princeton University, January 17, 2013.

"Optimal Learning for Sequential Experimental Design in Nano-Bio Research," AFOSR Natural Materials, Systems and Extremophiles Grantees Conference, Washington D.C., January 11, 2013 (with P. Frazier).

"The Knowledge Gradient Policy for Optimal Learning," Los Alamos National Laboratory, Los Alamos, NM, January 9, 2013.

"Clearing the Jungle of Stochastic Optimization," Invited tutorial, Informs Computing Society Workshop, Sante Fe, NM, January 6, 2013.

"Bridging Online and Offline Learning using the Knowledge Gradient Policy," First Rutgers Applied Probability Day, Computational Methods of Applied Probability in Business Analytics, Nov 30, 2012.

"Energy and Uncertainty: Navigating the Jungle of Stochastic Optimization," Synergize 2012, Princeton University, November 13, 2012.

"Unifying the Jungle of Stochastic Optimization," University of Michigan, Department of Industrial and Operations Engineering, October 24, 2012.

"Unifying the Jungle of Stochastic Optimization," Advanced tutorial, Conference on the Principles and Practices of Constraint Propagation, Quebec City, October 12, 2012.

"Unifying the Jungle of Stochastic Optimization," University of Texas, Computer Science, September 21, 2012.

"Energy and Uncertainty: Navigating the Jungle of Stochastic Optimization," Invited lecturer at Master's class, CompSust2012, Copenhagen, Denmark, July 4, 2012.

"The Knowledge Gradient for Optimal Learning," ICML 2012, Workshop on Exploration vs. Exploitation, Edinburgh, Scotland.

"Wind Energy: Fundamental constraints and future research needs," Energypath 2012, Desales University, June 25-29, 2012, (with Elie Bou-Zeid (presenter), Hossein Hezaveh, Yinzhen Jin, and Lex Smits).

"SMART-ISO: A Stochastic, Multiscale Model of the PJM Power Grid," 32nd CNLS Annual Conference, Center for Nonlinear Systems, Los Alamos National Laboratory, Sante Fe, New Mexico.

"Learning, Optimal Learning and Approximate Dynamic Programming, "ASFOR grantees meeting for discrete mathematics, April 19, 2012.

"Strategic, Tactical and Real-Time Planning of Locomotives at Norfolk Southern using Approximate Dynamic Programming," April 17, 2012.

"Energy and Uncertainty: Navigating the Jungle of Stochastic Optimization," Princeton Environmental Institute, Princeton, March 30,2012.

"Navigating the Jungle of Dynamic Programming," University of South Florida, Tampa, January 13, 2012.

"Harnessing Wind in China: Controlling Variability through Location and Regulation," DIMACS Workshop:U.S.-China Collaborations in Computer Science and Sustainability, September 19-20. 2011 (joint with Hui Fang and Rui Zhang).

"Navigating the Jungle of Stochastic Optimization for Energy Systems," Current Challenges in Computing: Energy Resource Modeling Conference, Institute for Scientific Computing Research, Lawrence Livermore National Laboratory, August 22-24, 2011.

"Stochastic Models for Energy Resource Planning: Sorting through the jungle of stochastic optimization," FERC Technical Conference on Increasing Real-Time and Day-Ahead Market Efficiency Through Improved Software," FERC, Washington D.C., June 28, 2011.

"An Integrated Framework for Stochastic Programming, Dynamic Programming, Stochastic Search and Simulation-Optimization," DIMACS Workshop on Risk Averse Decision Making, Rutgers, May 10,2011.

"Finding the Best Policy: The Curious Case of Approximate Dynamic Programming," Invited plenary speech, Optimization Days, May 2, 2011, Montreal.

"PENSA: Princeton laboratory for Energy Systems Analysis," PJM Innovations Forum, Philadelphia, April 28, 2011.

"Learning, Optimal Learning and Approximate Dynamic Programming," AFOSR Grantees conference, Washington, D.C., April 18, 2011.

"The Opportunities and Challenges of Stochastic Optimization in Energy Systems," Tepper School of Management, Carnegie Mellon University, April 1, 2011.

"Energy and Information: Capturing uncertainty in energy economics," Princeton Energy and Climate Scholars Program, March 3, 2011.

"Statistics on Steroids: Machine Learning and Signal Processing in Stochastic Optimization," Workshop on Statistics and Machine Learning at Princeton, February 18, 2011.

"Celebrating Academic-Industrial Collaborations: SAP Support for research in energy systems," Presentation to SAP and NRG, Princeton University, February 15, 2011.

"Simulation-Optimization, Stochastic Search and Dynamic Programming: Is it all the same?" NSF Workshop on simulation optimization, Baltimore, Md, Dec 4, 2010.

"Optimal Learning: Efficient Data Collection for the Information Age," Plenary speaker, Beta Conference, Eindhoven University, Netherlands, November 2, 2010.

"Simulation vs.Optimization – Why are we asking this question?" AFOSR Workshop on Logistics, Massachusetts Institute of Technology, October 20, 2010.

"Stochastic Optimization in Energy Systems," DIMACS Workshop on Algorithmic Decision Theory, Rutgers University, October 27, 2010.

"Approximate Dynamic Programming for High-Dimensional Resource Allocation Problems," Department of Mathematics, VU University Amsterdam, September, 2010.

"Optimal Learning: Efficient Data Collection for the Information Age," Department of Mathematics, VU University Amsterdam, September, 2010.

"Optimal Learning: Efficient Data Collection for the Information Age," SAP Laboratories, Palo Alto, July 15, 2010.

"Optimal Learning: Efficient Data Collection for the Information Age," Keynote speaker, IIE annual meeting, Cancun, Mexico, June 6, 2010.

"Approximate Dynamic Programming for Stochastic, Multiscale Energy Policy Modeling," DIMACS Workshop, Rutgers University, May 21, 2010.

"Optimal Learning," North Carolina State University, Raleigh, NC, April, 2010.

"Optimal Learning for Homeland Security," CCICADA Workshop, Morgan State, Baltimore, Md., March 7, 2010.

"Opportunities for Machine Learning in Stochastic Optimization, with Applications in Energy Resource Planning," Seminar series in computational sustainability, Cornell University, Department of Computer Science, March 5, 2010.

"Approximate Dynamic Programming for Energy Resource Management," Invited presentation for mini-symposia at Neural Information Processing Society, Vancouver, December 10, 2009.

"Solving High-Dimensional Stochastic Optimization Problems using Approximate Dynamic Programming," Princeton Program for Applied and Computational Mathematics seminar series, Princeton University, November 23, 2009.

"Approximate Dynamic Programming for Very Large-Scale Graphs," AFOSR Workshop on Network Mathematics, Computing and Applications, Harvard University, November 18, 2009.

"Approximate Dynamic Programming for High-Dimensional Resource Allocation Problems," Lehigh University, Department of Industrial and Systems Engineering, Nov. 13, 2009.

"Optimal Learning," School of Industrial and Systems Engineering, Georgia Institute of Technology, Nov 3, 2009.

"Research in Energy Systems Design and Control," Princeton Environmental Institute, October 2, 2009.

"Approximate Dynamic Programming for Freight Transportation," Norfolk Southern Railroad, August 21, 2009.

"Optimal Learning," IBM T.J. Watson Research Center, September 28, 2009.

"Optimal Learning: Efficient Information Collection for the Department of Homeland Security," Rutgers University, August 12, 2009.

"Approximate Dynamic Programming for High-Dimensional Resource Allocation Problems," Plenary speaker, IEEE International Conference on Automation and Logistics, Shenyang, China, August 6, 2009.

"Approximate Dynamic Programming for High-Dimensional Applications," Invited plenary speaker, Multidisciplinary Symposium on Reinforcement Learning (MSRL), McGill University, Montreal, June, 2009.

"Approximate Dynamic Programming for High-Dimensional Problems in Energy Modeling," Cornell Workshop on Computational Sustainability, Cornell University, June, 2009.

"Tutorial: Optimal Learning," Dagstuhl workshop on Sampling-Based Optimization in the Presence of Uncertainty, Dagstuhl, Germany, April, 2009.

"Approximate Dynamic Programming: Solving the curses of dimensionality," Cornell University, April 15, 2009.

"Optimal Learning," Cornell University, April 14, 2009.

"Optimal Learning using the Knowledge Gradient Policy," Rutgers University, March 23, 2009.

"Optimal Learning," London School of Economics, February 6, 2009.

"Approximate Dynamic Programming: Solving the curses of dimensionality," University of Nottingham (England), February 4, 2009.

"Approximate Dynamic Programming: Solving the curses of dimensionality," University of Lancaster (England), February 3, 2009.

"Optimal Learning," University of Lancaster (England), February 2, 2009.

Invited tutorial: "Approximate Dynamic Programming: Making Simulations Intelligent," Winter Simulation Conference, Miami, December, 2008.

"Optimal Learning and Change Detection," Workshop on Homeland Security, Princeton University, December 5, 2008.

"SMART: A Stochastic Multiscale Energy Policy Model using Approximate Dynamic Programming," Department of Energy, Washington, D.C., December 1, 2008.

"SMART: A Stochastic Multiscale Model for Energy Policy Model," 2nd Annual Western Region Energy Workshop, organized by Lawrence Livermore National Laboratories, November 4, 2008.

"From Transportation to Energy: A History of CASTLE Laboratory," 2nd Annual Western Region Energy Workshop, organized by Lawrence Livermore National Laboratories, November 3, 2008.

Tutorial for Informs Computing Society: "Approximate Dynamic Programming" Informs Annual Meeting, Washington D.C., 2008.

Tutorial: "Optimal Learning" Informs Annual Meeting, Washington D.C., 2008 (with Peter Frazier)

"Approximate Dynamic Programming for High-Dimensional Problems," Duke University, September 17, 2008.

"Optimal Learning for Nuclear Detection," Rutgers University, DyDAn Center, September 15, 2008.

"A Multiscale Energy Policy Model," Western Region Energy Workshop, Berkeley, CA, September 11, 2008.

"Approximate Dynamic Programming: Solving the Curses of Dimensionality," Invited plenary speaker, ICPR Americas, Sao Paulo, Brazil, June 6, 2008.

"The Optimizing-Simulator for Capturing Real-World Military Operations," Air Mobility Command, Scott AFB, May 27, 2008.

"Approximate Dynamic Programming: Solving the Curses of Dimensionality," Invited plenary speaker, CIRRELT Workshop, Quebec City, May, 2008.

"Information collection and learning for nuclear detection," Rutgers University, April, 2008.

"Approximate Dynamic Programming for High-Dimensional Problems," Boston University, February 29, 2008.

Invited tutorial: "Approximate Dynamic Programming for Intelligent Simulation," Winter Simulation Conference, Washington, D.C., 2007.

"Modeling control centers: Using approximate dynamic programming to model collective intelligence," CHARRD Workshop, Department of Mechanical and Aeronautical Engineering, Princeton University, November, 2007.

"So You Want to get Funding From Industry," Future Academicians Colloquium, Informs, Seattle, November, 2007.

Workshop on Modeling the National Ignition Facility, Lawrence Livermore National Laboratory, October 31, 2007.

"Dynamic Sensor Management," Workshop on Nuclear Detection, Rutgers University, October 19, 2007.

"The Dynamic Energy Resource Model," Energy Workshop, Lawrence Livermore National Laboratories, September, 2007.

Invited tutorial: "Approximate dynamic programming for high-dimensional applications," Lawrence Livermore National Laboratory, Livermore, CA, July, 2007.

"Approximate Dynamic Programming for High-Dimensional Problems," ExxonMobil, New Jersey, May 6 2007.

"Approximate Dynamic Programming for High-Dimensional Problems," Department of Management Science and Engineering, Stanford University, May 4, 2007.

Invited tutorial: "Approximate Dynamic Programming: Solving problems the way people do," Informs Practice Meeting, Vancouver, April 20, 2007.

Invited tutorial: "Approximate Dynamic Programming for High-Dimensional Problems," IEEE Workshop on Approximate Dynamic Programming and Reinforcement Learning, Honolulu, Hawaii, April, 2007.

Distinguished UTC Seminar speaker: "Approximate Dynamic Programming for High-Dimensional Problems," University of California at Davis, February, 2007.

"Approximate dynamic programming for High-Dimensional Resource Allocation," University of Michigan, Department of Operations and Industrial Engineering, Ann Arbor, January, 2007.

"Approximate dynamic programming for military applications," Joint mathematics meeting, New Orleans, January, 2007.

"From stochastic optimization to housing permits: Navigating the pot-holes to implementation in the real-world," Seventh New Jersey Universities Homeland Security Research Consortium Symposium, Rutgers University, November 20, 2006.

Invited Tutorial:" Approximate Dynamic Programming for Large-Scale Resource Allocation," Informs Annual Meeting, Pittsburgh, November, 2006.

"Tutorial: Approximate Dynamic Programming in Transportation and Logistics," Workshop on Stochastics in Transportation and Logistics, Molde, Norway, June, 2006.

"Approximate Dynamic Programming for Solving High Dimensional Resource Allocation Problems in Transportation and Logistics," DIMACS Workshop, ExxonMobil Research Center, New Jersey, April, 2006.

"Approximate Dynamic Programming for the Car Distribution Problem," DIMACS Workshop, ExxonMobil Research Center, New Jersey, April, 2006.

"Tutorial: Modeling dynamic programs," NSF Workshop and Outreach Tutorials on Approximate Dynamic Programming, April, 2006.

"Merging machine learning and math programming for solving high-dimensional resource allocation problems," NSF Workshop and Outreach Tutorials on Approximate Dynamic Programming, April, 2006.

"Approximate Dynamic Programming for High-Dimensional Asset Allocation," University of Iowa, January, 2006.

"Computational Methods for High Dimensional Dynamic Programs for Discrete Resource Allocation," PICASSO Seminar series, Department of Computer Science, Princeton University, December, 2005.

"Approximate Dynamic Programming: Solving the Curses of Dimensionality," IMA Workshop, University College London, September, 2005.

"A Robust Modeling and Algorithmic Strategy for Discrete, Dynamic Resource Allocation Problems," AFOSR Grantees conference, St. Louis, August, 2005.

Powell, W.B., A. George, B. Bouzaiene-Ayari and H. Simao, "Approximate Dynamic Programming for High Dimensional Resource Allocation Problems," International Joint Conference of the Neural Network Society, Montreal, August 2005

"Markov Decision Processes: AI vs. OR", AFOSR Workshop on Decision-Making in Adversarial Domains, Washington, D.C., May, 2005.

"Approximate Dynamic Programming for High-Dimensional Asset Allocation Problems," University of Wisconsin, February, 2005.

"The Optimizing-Simulator for Freight Transportation," Transportation Research Board, Washington, D.C., January, 2005.

"Approximate Dynamic Programming for High-Dimensional Asset Allocation Problems," Georgia Institute of Technology, Department of Industrial and Systems Engineering, November, 2004.

"The Optimizing Simulator for Defense Logistics,", Defense Research Valcartier (Canadian Defense Research), Quebec City, September, 2004.

"Missing Data, Noise and Lies: The Evolving Discovery of Misinformation in the Management of Boxcars in Rail Transportation," Plenary talk, 10th International Symposium on Stochastic Programming.

"CI and OR: The challenge of real-time", NSF Workshop on Cyberinfrastructure, Washington, D.C., August, 2004.

"The Optimizing Simulator for Military Airlift Problems," Air Force Institute of Technology, July, 2004.

"Real-Time Optimization for Real-World Problems," Air Mobility Command, Scott Air Force Base, June, 2004.

"The Optimizing Simulator: Modeling the Organization and Flow of Information and Decisions," Air Mobility Command, Scott Air Force Base, June, 2004.

"Optimization Technologies for Stochastic Resource Allocation Problems," Lawrence Livermore National Laboratories, San Francisco, CA, June, 2004.

"The "Optimizing Simulator" for Complex Dynamic Resource Allocation Problems," Laval University, Quebec, Canada, May, 2004.

"Adaptive Learning Algorithms for Stochastic Resource Allocation," Faculty Summit, IBM TJ Watson Research Center, May, 2004.

"Modeling Information for Freight Transportation," Spring School on Transportation and Logistics, University of Montreal, May, 2004.

"Approximate Dynamic Programming for High Dimensional Resource Allocation Problems," Ohio State Management Sciences Seminar, Ohio State University, April, 2004.

Tutorial: "Approximate dynamic programming for stochastic resource allocation problems," Twente University, Netherlands, January 2004.

"The Optimizing Simulator," Eindhoven University, Netherlands, January, 2004.

"Approximate Dynamic Programming for Dynamic Resource Allocation," Aladdin workshop on dynamic algorithms and applications, New Orleans, January, 2004.

"Cyberinfrastructure challenges: Capturing the organization and flow of information and decisions," talk invited by Suvrajeet Sen at NSF Grantees conference, Dallas, January, 2004.

"Approximate Dynamic Programming for High Dimensional Resource Allocation," NSF Workshop, Virginia, November, 2003.

"Optimization Technologies for Freight Transportation," presented to United Parcel Service Operations Research Group, Maryland, May, 2003.

"The Dynamic Assignment Problem," Route 2003 Workshop on Vehicle Routing, Denmark, June, 2003.

"Approximate Dynamic Programming for Stochastic Resource Allocation Problems," Invited tutorial, Canadian Operations Research Meeting, Vancouver, June, 2003.

"Adaptive Learning Strategies for Optimizing Simulators," AFOSR Grantees meeting, Estes Park, Colorado, May, 2003.

"Real Time Optimization for Real-World Problems," Invited speaker, Boston Chapter of Informs, March, 2003.

"Real Time Optimization for Real-World Problems," Hong Kong University of Science and Technology, January, 2003.

"The Optimizing-Simulator," invited presentation to OOCL, Hong Kong, January, 2003.

"Adaptive Learning Algorithms for Stochastic Resource Allocation," Hong Kong University of Science and Technology, January, 2003.

"Real Time Optimization for Real-World Operations," Informs Practice Meeting, Montreal, May, 2002.

"Adaptive Dynamic Programming for Large-Scale Resource Allocation: Solving the three curses of dimensionality," NSF Workshop on Learning and Approximate Dynamic Programming and NSF Workshop on the Electric Power Industry, Mexico, April, 2002.

"The Optimizing Simulator: Raising the 'IQ' of Airlift Simulations," Informs Chapter presentation, Air Mobility Command, Scott Air Force Base, March, 2002.

"The Optimizing Simulator: Understanding Information in the Modeling of Airlift Operations," Minnowbrook Conference Center, November, 2001.

"An Information-Theoretic Approach to Solving the Locomotive Power Management Problem," University of Linkoping, Linkoping, Sweden, March, 2001.

"Modeling Information in Dynamic Resource Management," NJ Chapter of Informs Meeting, RUTCOR, February, 2001.

"Adaptive Dynamic Programming for Dynamic Resource Management," University of Chicago, Graduate School of Business, November, 2000.

"Information Theory in Resource Management," Seminar given at the Universite de Montreal, February, 2000.

"Tutorial on Dynamic Resource Management," Mathematisches Forschungsinstitut, Oberwolfach, Conference on Traffic and Transport Optimization, Germany, November, 1999.

"Optimization Models for the Motor Carrier Industry: An Emerging Information Technology," Truckload Motor Carriers Conference, Birmingham, September, 1999.

"Dynamic Programming Approximations in Multi-Stage Linear Programming," New World Vistas Conference, Sponsored by Air Force Office of Scientific Research, New York, May, 1999.

Plenary speech: "An Information Theoretic Approach to Dynamic Resource Management," Optimization Days, Montreal, Quebec, May, 1999.

"Dynamic Programming Approximations for Multicommodity Network Flows: Deterministic and Stochastic Problems," DIMACS Workshop on Logistics, Rutgers, February, 1999.

"Tutorial: Dynamic Optimization Models for Complex Operations," Seminar, University of Montreal, Montreal, Quebec, February, 1999.

"Real-Time Decision Systems in Logistics," Practice Forum, hosted by the College for the Practice of Management Science (CPMS), Seattle Informs Meeting, October, 1998.

"Optimization Models for the Motor Carrier Industry: An Emerging Information Technology," Tom McLeod Users Group Conference, Birmingham, AL, October, 1998.

"Approximate Methods for Multistage Dynamic Programs for Discrete Dynamic Resource Allocation Problems," Stochastic Programming Conference, Vancouver, BC, August, 1998 (with G. Godfrey).

"Models, Formulations and Algorithms for Multi-Layered Resource Scheduling Problems," Air Products and Chemicals, Allentown, PA, July, 1998.

"Locomotive Scheduling as a Dynamic Resource Transformation Problem," Research conference, Norfolk Southern Railroad, Atlanta, GA, July, 1998.

Invited tutorial: "A Representational Paradigm for Dynamic Resource Transformation Problems," Triennial Symposium on Transportation Analysis III, Puerto Rico, June, 1998.

"Dynamic Resource Transformation Problems: Problem Representation and Solution Algorithms", New World Vistas Conference, sponsored by Air Force Office of Scientific Research, Monterey, CA, May, 1998.

"Dynamic Resource Transformation Problems: A New Modeling Approach for Air Mobility Problems," Air Mobility Users Group Conference, Air Force Academy, Colorado Springs, CO, May, 1998.

"Management Issues in Transportation Modeling and Optimization," Freight Transportation Short Course, Georgia Institute of Technology, Atlanta, Georgia, August, 1997.

"Control of Dynamic Resource Transformation Problems: An Overview of CASTLE Laboratory," Airlift Mobility Command, St. Louis, MO, July, 1997.

"Real-Time Optimization of Stochastic Resource Scheduling Problems: A Research Agenda," EURO Meeting, Barcelona, Spain, July, 1997. (Invited tutorial)

"Control of Dynamic Resource Transformation Problems," New World Vistas Conference, sponsored by the Air Force Office of Scientific Research, June, Lynnfield, MA, June, 1997.

"Managing Industry/University Partnerships - The CASTLE Lab experience", NSF Conference on Manufacturying Logistics, Lehigh University, May, 1997.

"Massive Dynamic Decomposition Methods for Dynamic Network Flows," DIMACS Conference, Princeton, April, 1997.

"Real-Time Optimization of Stochastic Resource Allocation Problems: A Research Agenda", Rutgers University, April, 1997.

“Control of Dynamic Resource Transformation Problems,” Airlift Mobility Users Group Meeting, Embry-Riddle University, Daytona, Florida, March, 1997.

"Real-Time Optimization of Dynamic Resource Allocation Problems: A Research Agenda", Lehigh University, November, 1997.

“Languages for Dynamic Resource Scheduling Problems,” Montreal, Quebec, February, 1997.

TUTORIAL: Dynamic Resource Management Problems in Transportation, Informs National Meeting, November, 1996.

"Real-Time Optimization of Dynamic Resource Allocation Problems: A Research Agenda", Operations Research Center, Massachusetts Institute of Technology, October, 1996.

“Approximations for Multistage Stochastic Networks,” Center for Applied Optimization, University of Florida, Gainesville, February, 1996.

“Optimization Models for Real-Time Logistics”, Centre de recherche sur les transports, University of Montreal, Montreal, Quebec, February, 1996.

“Optimization Models for Real-Time Logistics”, Center of Excellence in Intelligent Transportation Systems, University of Michigan, January, 1996.

“Tutorial: Stochastic Models for Dynamic Resource Management," NSF/IFIP Workshop on Stochastic Programming and Applications, University of Arizona, January, 1996.

“An Algorithm for Solving Multi-Stage Stochastic Dynamic Resource Allocation Problems," NSF/IFIP Workshop on Stochastic Programming and Applications, University of Arizona, January, 1996. (with Greg Godfrey)

“Real-Time Control of Logistics: Models and Algorithms," RUTCOR, Rutgers University, November, 1995.

“Real-Time Control of Logistics: Models and Algorithms," Conference sponsored by the Office of Naval Research, George Mason University, July, 1995.

“Dynamic Models in Transportation: Issues and Applications", Keynote address to the Rail Special Interest Group, University of Pennsylvania, Philadelphia, July, 1995.

“Autonomous Control of Logistics Systems," The Northwestern University Manufacturing Management Symposium Series, Evanston, Illinois, May, 1995.

“Optimization Models for Real-Time Logistics," invited tutorial presented at the Mathematical Programming Symposium, Ann Arbor, Michigan, July, 1994.

“Dynamic Models in Transportation and Logistics," invited plenary presentation at TRISTAN Symposium, Capris, Italy, July, 1994.

“Stochastic Programming for Dynamic Fleet Management," University of Montreal, Montreal, Canada, April, 1994.

“Dynamic Models in Transportation and Logistics," Department of Industrial Engineering, Iowa State University, Ames, Iowa, August, 1994.

“High Tech Trucking: Information Technologies for Motor Carrier Operations," Center for Energy and Environmental Studies, Princeton University, October, 1993.

“A Dynamic Assignment Formulation of the Multiattribute Resource Scheduling Problem," Optimization Days, University of Montreal, Montreal, Quebec, May, 1993.

“Optimization Techniques for Intelligent Fleet Management," IEEE Regional Conference on Control, New Jersey Institute of Technology, August, 1993.

"Service and Productivity in the Motor Carrier Industry: Managing the Implementation of Advanced Technologies", Service Quality Conference, Wharton School, University of Pennsylvania, October, 1992.

"Dynamic Models in Freight Transportation," New Jersey Chapter of TIMS/ORSA, RUTCOR, Rutgers University, December, 1992.

"Stochastic Programming formulations of the Dynamic Vehicle Allocation Problem," University of Montreal, Canada, April, 1992.

"Telecommunications and Optimization: A Synergy of New Technologies in Transportation," Operations Research Interest Group Seminar Series, Bell Laboratories, Holmdel, October, 1991.

Tutorial: "Dynamic Models in Transportation and Logistics," TIMS/ORSA meeting, Nashville, May, 1991.

"Network Models for Dynamic Fleet Management," Massachusetts Institute of Technology, April 16, 1991.

"Stochastic Programming Algorithms for Networks with Random Arc Capacities", Department of Industrial Engineering and Operations Research, Columbia University, March, 1991.

"Stochastic Programming Algorithms for Dynamic Fleet Management Models," Rensselaer Polytechnic Institute, Department of Decision Sciences and Engineering Systems, February 6, 1991.

"Real-Time Dispatching for Less-Than-Truckload Motor Carriers," Advanced Technology Conference, Washington, D.C., November, 1990.

"Optimization Models for Motor Carriers," presentation before the American Trucking Association Research Foundation, August, 1990.

"A Stochastic Programming Formulation for Real-Time Dispatching," Department of Decision Sciences, Wharton School, University of Pennsylvania, May, 1988.

"Optimization Models for the Fleet Management Problem Under Uncertainty," Lecture given at the University of Montreal, February 1988.

"Recourse Strategies for Stochastic, Dynamic Networks," College Militaire, St. Jean, Quebec, Canada, January, 1988.

"Alternative Formulations of the Stochastic, Dynamic Vehicle Allocation Problem," University of Montreal, Canada, November, 1987.

"Local Improvement Heuristics for the Network Design Problem of LTL Motor Carriers," University of Montreal, Canada, March 1984.

"Bulk Service Queues with General Control Strategies," University of Montreal, Canada, March, 1984.

CONFERENCE PRESENTATIONS with refereed papers/abstracts (42)

"A Comparison of Approximate Dynamic Programming Techniques on Benchmark Energy Storage Problems: Does Anything Work?," IEEE Symposium Series on Computational Intelligence, Workshop on Approximate Dynamic Programming and Reinforcement Learning, Orlando, FL, December, 2014. (with Daniel Jiang).

Warren B. Powell. "Clearing the Jungle of Stochastic Optimization." INFORMS Tutorials in Operations Research: Bridging Data and Decisions, pp. 109-137, November, 2014, http://dx.doi.org/10.1287/educ.2014.0128.

"A Hybrid Human-Machine Decomposition using Informational Decomposition for Load Planning for a Large-Scale Express Package Network," Tristan VIII, Calama, Chile, June 10, 2013 (with Belgacem Bouzaiene-Ayari).

"A Strategic Model for the Operation of a Fractional Aircraft Ownership Company," Tristan VIII, Calama, Chile, June 10, 2013 (with Hugo Simao).

"An Intelligent Battery Controller using Bias-Corrected Q-Learning," AAAI, Toronto, July, 2012 (with Donghun Lee).

"Bayesian Active Learning With Basis Functions," SSCI 2011 ADPRL - 2011 IEEE Symposium on Adaptive Dynamic Programming and Reinforcement Learning, Paris, April, 2011 (with Ilya Ryzhov).

"Calibrating Simulation Models Using the Knowledge Gradient with Continuous Parameters," Winter Simulation Conference, Baltimore, Md, December 4, 2010 (w. Warren Scott).

"Optimal Learning of Transition Probabilities in the Two-Agent Newsvendor Problem," Winter Simulation Conference, Baltimore, Md, December 4, 2010 (w. I. Ryzhov and Martin Valdez-Vivas).

"Approximate Dynamic Programming with Correlated Bayesian Beliefs," Forty-Eighth Annual Allerton Conference on Communication, Control, and Computing September 29 – October 1, 2010 Allerton Retreat Center, Monticello, Illinois (with Ilya Ryzhov).

"Nonparametric Density Estimation for Stochastic Optimization with an Observable State Variable," Neuro-Information Processing Society, Vancouvery, December, 2010 (with Hannah, L., D. Blei).

"On the Robustness of a One-Period Look-Ahead Policy for Multiarmed Bandit Problems," (with I. Ryzhov, P. Frazier), International Workshop on Computational Stochastics, Netherlands, June 1, 2010.

"A Monte Carlo Knowledge Gradient Method for Learning Abatement Potential of Emissions Reduction Technologies," Winter Simulation Conference, Austin, TX, December 14, 2009 (with I. Ryzhov).

"Simulation Optimization with Correlated Knowledge Gradient," Winter Simulation Conference, Austin, TX, December 14, 2009 (with P. Frazier and H. P. Simao)

"A Monte-Carlo Knowledge Gradient Method For Learning Abatement Potential Of Emissions Reduction," Winter Simulation Conference, Houston, 2009 (with I. Ryzhov).

"Simulation Model Calibration with Correlated Knowledge Gradients," Winter Simulation Conference, Houston, 2009 (with P. Frazier)

"A convergent recursive least squares policy iteration algorithm for multi-dimensional Markov decision process with continuous state and action spaces," IEEE Conference on Approximate Dynamic Programming and Reinforcement Learning, Nashville, March 31, 2009 (with Jun Ma)

"The Knowledge Gradient Algorithm For Online Subset Selection", IEEE Conference on Approximate Dynamic Programming and Reinforcement Learning, Nashville, March 31, 2009 (with Ilya Ryzhov).

"The Knowledge Gradient Stopping Rule for Ranking and Selection," Winter Simulation Conference, Miami, December, 2008 (with P. Frazier).

"Locomotive Optimization for Norfolk Southern Railroad Using Approximate Dynamic Programming," Informs Annual Meeting, Washington D.C., 2008 (with Belgacem Bouzaiene-Ayari, Clark Cheng, Ricardo Fiorillo)

"Monte Carlo Evolutionary Policy Iteration with Applications to Energy R&D Portfolio Optimization," Informs Annual Meeting, Washington D.C., 2008 (with Lauren Hannah and Jeffrey Stewart)

"A Dynamic Energy Resource Modeling System," Informs Annual Meeting, Washington D.C., 2008 (with Abraham George, Alan Lamont and Jeffrey Stewart).

"One-Stage R&D Portfolio Optimization with an Application to Solid Oxide Fuel Cells," Informs Annual Meeting, Washington D.C., 2008 (with Lauren Hannah and Jeff Stewart).

"Optimal Control of Disease Decisions in Controlled Ovarian Hyperstimulation," Informs Annual Meeting, Washington D.C., 2008 (with Miao He and Lei Zhao)

"Asymptotic Theory of Sequential Change Detection and Identification," Informs Annual Meeting, Washington D.C., 2008 (with Kazutoshi Yamazaki and Savas Dayanik).

"General Asymptotic Theory of Sequential Change Detection and Identification," NIPS, 2008.

"The Knowledge Gradient Policy for Off-Line Learning with Independent Normal Rewards," IEEE Symposium on Approximate Dynamic Programming and Reinforcement Learning, Hawaii, April, 2007 (with P. Frazier).

"An optimal ADP algorithm for a high-dimensional stochastic control problem," IEEE Symposium on Approximate Dynamic Programming and Reinforcement Learning, Hawaii, April, 2007 (with J. Nascimento).

"Approximate Dynamic Programming for Rail Operations," Tristan VI, Thailand, June, 2007.

"Scalable approximate dynamic programming algorithms for stochastic resource allocation," International Symposium on Mathematical Programming, Rio de Janeiro, Brazil, July 31, 2006..

"Approximate Dynamic programming for High-Dimensional Resource Allocation", http://faculty.uwb.edu/ijcnn05/, International Joint Conference on Neural Networks, Montreal, August, 2005.

Tongqiang Tony Wu and Warren B. Powell, "An Approximate Dynamic Programming Approach for the Military Airlift Problem" The Second International Symposium on Systems and Human Science, SSR2005, San Francisco, California, March 9-11, 2005.

"A Dynamic Car Distribution Model with Multiple Lagged Information Processes," TRISTAN V, Guadaloupe, June, 2004 (with B. Bouzaiene-Ayari and H. Topaloglu).

"Sensitivity Analysis of a Dynamic Vehicle Allocation Policy Using Approximate Dynamic Programming," TRISTAN V, Guadaloupe, June, 2004 (with H. Topaloglu).

"Hierarchical Aggregation Techniques for Estimating Value Functions for Dynamic Management of Multiattribute Resources," TRISTAN V, Guadaloupe, June, 2004 (with A. George).

"An optimal approximate dynamic programming algorithm for concave single asset management," International Symposium on Mathematical Programming, Rio de Janeiro, Brazil, July 31, 2006 (with J. Nascimento).

"Optimizing Complex Operational Problems under Incomplete Information, with an Application to Locomotive Power Management," TRISTAN IV, Azores, June, 2001 (with A. Marar and B. Bouzaiene-Ayari).

"The Multi-layered Resource Scheduling Problem," TRISTAN IV, Azores, June, 2001 (with H.P. Simao).

"Tutorial: Adaptive Dynamic Programming for Dynamic Resource Management," TRISTAN IV, Azores, June, 2001 (with H. Topaloglu).

"A Convergent Cutting Plane Algorithm for Multistage Stochastic Programs," Stochastic Programming Conference, Vancouver, BC, August, 1998 (with Z.-L. Chen).

"Approximate Methods for Dynamic Resource Allocation Problems," Triennial Symposium on Transportation Analysis III, Puerto Rico, June, 1998 (with G. Godfrey).

"Implementation of a Dynamic Fleet Management System," Triennial Symposium on Transportation Analysis III, Puerto Rico, June, 1998 (with A. Marar).

"The Load Planning Problem of Less-Than-Truckload Motor Carriers," Transportation Research Board, Washington, D.C., January, 1987.

CONFERENCE PRESENTATIONS (309)

"Energy and Uncertainty: Planning for a Renewable Future," Informs Annual Meeting, Seattle, Oct 20-23, 2019.

"The Parametric Cost Function Approximation for Practical Stochastic Optimization in Energy," Informs Annual Meeting, Seattle, Oct 20-23, 2019 (with Saeed Ghadimi)

"Locally Quadratic Knowledge Gradient for Energy Storage," Informs Annual Meeting, Seattle, Oct 20-23, 2019 (with Nana Aboagye and Michael Li)

"Information Collecting Vehicle Routing Problem," Informs Annual Meeting, Seattle, Oct 20-23, 2019 (with Lina al-Kanj).

"Zeroth-Order Recursive Optimization Of Mean-Semideviation Risk Measures," International Conference on Stochastic Programming, Trondheim, Norway, July 29-August 3, 2019. (with Dionysios Kalogerias).

"Decomposition Methods for Dynamic Load Planning and Driver Management in LTL Trucking, Transportation Science and Logistics Workshop, Vienna, July 15 2019.

"Decomposition Methods for Dynamic Load Planning and Driver Management in LTL Trucking," Transportation Science and Logistics Workshop, Vienna, July, 2019.

"Risk Averse Energy Storage Optimization for High Penetration of Wind Energy," Informs Annual Meeting, Phoenix, AZ, November, 2018 (with Juliana Nascimento and Joseph Durante).

"Learning to Learn Optimally: How to Bid in Sponsored Search Auctions," Informs Annual Meeting, Phoenix, AZ, November, 2018 (with Donghun Lee).

"Parametric Cost Function Approximations for Multistage Stochastic Optimization with an Energy Storage Application," Informs Annual Meeting, Phoenix, AZ, November, 2018 (with Saeed Ghademi).

"Approximate Dynamic Programming for Planning a Ride-Sharing System Using Driverless Fleets of Electric Vehicles," Informs Annual Meeting, Phoenix, AZ, November, 2018 (with Lina al-Kanj).

"Monte Carlo Tree Search with Sampled Information Relaxation Bounds," Informs Annual Meeting, Phoenix, AZ, November, 2018 (with Lina al-Kanj and Daniel Jiang),

"Approximate Dynamic Programming for Planning Driverless Fleets of Electric Vehicles," Informs Optimization Society Conference, University of Colorado, Denver, March 23, 2018 (with Lina al Kanj).

"Monte Carlo Tree Search with Sampled Information Relaxation Dual Bounds," Informs Optimization Society Conference, University of Colorado, Denver, March 23, 2018 (with Lina al Kanj, Daniel Jiang).

"Multistage Stochastic Programming with Parametric Cost Function Approximations," Informs annual meeting, Houston, October 22-24, 2017 (with Raymond Perkins).

"Monte Carlo Tree Search with Sampled information Relaxation Bounds," Informs annual meeting, Houston, October 22-24, 2017 (with Daniel Jiang and Lina al-Kanj).

"Offline Optimization of Google Ad-Click Auctions," Informs annual meeting, Houston, October 22-24, 2017 (with Donghun Lee).

"A Spectrum of Optimal Policies for Risk-Averse Electric Vehicle Charging," Informs annual meeting, Houston, October 22-24, 2017 (with Daniel Jiang).

"Backward ADP with Hidden semi-Markov Information Models," Informs annual meeting, Houston, October 22-24, 2017 (with Joseph Durante, Juliana Nascimento, Bolong Cheng).

"Optimal Learning with General Nonlinear Belief Models," Informs annual meeting, Houston, October 22-24, 2017 (with Xinyu He).

"Optimal Online Learning for Nonlinear Belief Models with Physical State Information," Informs annual meeting, Houston, October 22-24, 2017 (with Weidong Han).

"Ensemble Bayesian Optimization for Partially Controllable Sequential Information Processes," Informs annual meeting, Houston, October 22-24, 2017 (with Yingfei Wang).

"Speeding-up a Modified SDDP method for Risk Averse Energy Storage Optimization using Importance Sampling," Informs annual meeting, Houston, October 22-24, 2017 (with Juliana Nascimento, Joseph Durante, and Daniel Jiang).

"The Behavior of Value of Information Policies in the Presence of a Locally Quadratic Belief Model," Informs annual meeting, Houston, October 22-24, 2017 (with Nana Aboagye).

"SDDP using a hidden semi-Markov information model," IFORS annual meeting, Quebec City, July 18, 2017 (with J. Nascimento, J. Durante).

"Backward approximate dynamic programming with a hidden semi-Markov information state," IFORS annual meeting, Quebec City, July 18, 2017 (with J. Durante, J. Nascimento).

"A spectrum of risk-averse optimal policies for electric vehicle charging," IFORS annual meeting, Quebec City, July 18, 2017 (with D. Jiang).

"Approximate dynamic programming for planning driverless fleets of electric vehicles," IFORS annual meeting, Quebec City, July 18, 2017 (with Lina al-Kanj).

"Optimizing Sensor Type and Location for Rapid Restoration of Power Grids," FERC Workshop, Washington, D.C., June 26, 2017. (with Lina al-Kanj).

"Crossing State Stochastic Models and Backward Approximate Dynamic Programming in Energy Storage Optimization," FERC Workshop, Washington, D.C., June 26, 2017 (talk given by Joe Durante, joint with W.B. Powell, J. Nascimento, Harvey Cheng).

"Robust Unit Commitment using the Parametric Cost Function Approximation," FERC Workshop, Washington D.C., June 26, 2017 (with Raymond Perkins).

"Optimal Policies for Risk-Averse Electric Vehicle Charging with Spot Purchases," CEM 2017, Commodity and Energy Markets, Oxford, June 14-15 2017, (with Daniel Jiang)

"ADAPT: A Price-stabilizing Compliance Policy for Renewable Energy Certificates," Cem 2017, Commodity and Energy Markets, Oxford, June 14-15 2017 (with Michael Coulon and Javad Khazaei)

"A Regularized SDDP Method for Energy Storage Optimization Considering a Hidden Two Level Markov Stochastic Process for Wind Energy," Informs Computing Society workshop, Houston, January, 2017 (given by Juliana Nascimento).

"Optimal with Discrete Priors," Informs annual meeting, Nashville, November, 2016 (with Weidong Han).

"Optimal Learning in Urban Delivery Resource Allocation," Informs annual meeting, Nashville, November, 2016 (with Yixiao Huang, Lei Zhao, Ilya Ryzhov).

"Optimal Learning for Nonlinear Parametric Belief Models with Continuous Alternatives," Informs annual meeting, Nashville, November, 2016 (with Xinyu He).

"Optimal Policies for Risk-averse Electric Vehicle Charging with Spot Purchases," Informs annual meeting, Nashville, November, 2016 (with Daniel Jiang).

"The Information Collecting Vehicle Routing Problem for Emergency Storm Response," Informs annual meeting, Nashville, November, 2016 (with Lina al-Kanj).

"Risk Neural and Risk Averse Approximate Dynamic Programming Methods for Bidding in the Energy Market," Informs annual meeting, Nashville, November, 2016 (with Daniel Jiang).

"Hierarchical Knowledge-gradient with Stochastic Binary Feedbacks with an Application in Personalized Health Care," Informs annual meeting, Nashville, November, 2016 (with Yingfei Wang).

"Optimal Information Collection in the Vehicle Allocation Problem," Informs TSL workshop, Georgia Institute of Technology, July 2016 (given by Lei Zhao, with Ilya Ryzhov).

"Learning a Universal Policy," International Conference on Stochastic Programming, Buzios, Brazil, June 27-July 1, 2016 (with Stephan Meisel).

"Stochastic optimization using parametric cost function approximations," International Conference on Stochastic Programming, Buzios, Brazil, June 27-July 1, 2016 (with Raymond Perkins).

"Forecasting in Policy Search," International Conference on Stochastic Programming, Buzios, Brazil, June 27-July 1, 2016 (with Raymond Perkins and Haitham Bou Ammar)

"Regularized Decomposition of Stochastic Decomposition," International Conference on Stochastic Programming, Buzios, Brazil, June 27-July 1, 2016 (with Tsvetan Asamov)

"Optimal Learning of Transient Functions," Informs Optimization Society Conference, Princeton, March 17-19, 2016 (co-authored with Nana Aboague).

"Optimal Learning for Parametric Estimation for Nonlinear Belief Models," Informs Optimization Society Conference, Princeton, March 17-19, 2016 (co-authored with Xinyu He).

"Optimal Information Collection in the Vehicle Allocation Problem," Informs Optimization Society Conference, Princeton, March 17-19, 2016 (co-authored with Lei Zhao, Ilya Ryzhov, Yixiao Huang).

"The Information-Collecting Vehicle Routing Problem: Stochastic Optimization for Emergency Storm Response," Informs Optimization Society Conference, Princeton, March 17-19, 2016 (co-authored with Lina al-Kanj).

"Approximate Dynamic Programming for Dynamic Quantile-Based Risk Measures," Informs Optimization Society Conference, Princeton, March 17-19, 2016 (co-authored with Daniel Jiang).

"The Knowledge Gradient with Logistic Belief Models for Binary Classification," Informs Optimization Society Conference, Princeton, March 17-19, 2016 (co-authored with Yingfei Wang).

"Universal Learning Policies for Energy Storage Problems," Informs Optimization Society Conference, Princeton, March 17-19, 2016 (co-authored with Stephan Meisel).

"Non-Stationary Parametric Cost Function Approximation for Risk Averse Stochastic Optimization," Informs Optimization Society Conference, Princeton, March 17-19, 2016 (co-authored with Somayeh Moazeni).

"Optimal Learning on Regularized Trees," Informs Optimization Society Conference, Princeton, March 17-19, 2016 (co-authored with Yan Li).

"Stochastic Optimization using Parametric Cost Function Approximation," Informs Optimization Society Conference, Princeton, March 17-19, 2016 (co-authored with Raymond Perkins).

"Optimal Learning of Demand for the Nested Lagged Commitment Problem," Informs Annual Meeting, Philadelphia, November 1-5, 2015 (with Kobby Aboagye).

"Regularized Decomposition of High-Dimensional Multistage Stochastic Programs with Markov Uncertainty," Informs Annual Meeting, Philadelphia, November 1-5, 2015 (with Tsvetan Asamov).

"Co-Optimizing Battery Storage for Energy Arbitrage and Frequency Regulation," Informs Annual Meeting, Philadelphia, November 1-5, 2015 (with Harvey Cheng)

"Quantile Optimization for Heavy-Tailed Distributions using Asymmetric Signum Functions," Informs Annual Meeting, Philadelphia, November 1-5, 2015 (with Ricardo Collado)

"ADP for Risk Averse Markov Decision Processes using Dynamic Quantile-Based Risk Measures," Informs Annual Meeting, Philadelphia, November 1-5, 2015 (with Daniel Jiang)

"The Knowledge Gradient Policy with Regularized Trees," Informs Annual Meeting, Philadelphia, November 1-5, 2015 (with Yan Li)

"The Knowledge Gradient with Logistic Belief Models for Binary Classification," Informs Annual Meeting, Philadelphia, November 1-5, 2015 (with Yingfei Wang)

"Lagged Processes and Nested Decisions: Modeling for Renewables," Informs Annual Meeting, Philadelphia, November 1-5, 2015 (with Javad Khazaei).

"Real-Time Dynamic Load Planning for Less-Than-Truckload Motor Carriers," Informs Annual Meeting, Philadelphia, November 1-5, 2015 (with Belgacem Bouazaiene-Ayari, Hugo Simao)

"Optimal Information Collection in the Vehicle Allocation Problem in Mega Cities," Informs Annual Meeting, Philadelphia, November 1-5, 2015 (with Lei Zhao, Yixiao Huang, Ilya Ryzhov).

"Fast Decomposition of Multistage Stochastic Programs," ISMP, Pittsburgh, July 13-17, 2015 (with Tsvetan Asamov).

"Approximation Strategies for Multistage Stochastic Programs," ISMP, Pittsburgh, July 13-17, 2015 (with Tsvetan Asamov).

"Approximate Dynamic Programming using Dynamic Quantile-Based Risk Measures for Energy Bidding," ISMP, Pittsburgh, July 13-17, 2015 (with Daniel Jiang).

"A Non-Parametric Structural Hybrid Modeling Approach for Electricity Prices," CORS-Informs International Meeting, Toronto, June 16, 2015 (with S. Moazeni, Ismael Arciniegas Rueda, Michael Coulon)

"Optimal Learning with Nonlinear Belief Models," Informs Computing Society Workshop, Richmond, VA, January 11-14, 2015 (with Si Chen and Kris Reyes)

"The Knowledge Gradient Policy with a Sparse Additive Belief Model," Informs Computing Society Workshop, Richmond, VA, January 11-14, 2015 (with Yan Li and Han Liu)

"An Approximate Dynamic Programming Algorithm for Monotone Value Functions," Informs Computing Society Workshop, Richmond, VA, January 11-14, 2015 (with Daniel Jiang)

"Approximation Strategies for Multistage Stochastic Programs," Informs Computing Society Workshop, Richmond, VA, January 11-14, 2015 (with Tsvetan Asamov)

"99 percent from renewables? A fresh look at the question of maximum penetration," Informs annual meeting, San Francisco, October, 2014 (with Javad Khazaei)

"A Nested Newsvendor Model to Integrate Rolling Wind Forecasts in the Energy Commitment Problem," Informs annual meeting, San Francisco, October, 2014 (with Genna Gliner)

"Algorithms for derivative-free stochastic search for learning of noisy, expensive functions," Informs annual meeting, San Francisco, October, 2014 (with Yingfei Wang)

"Bayesian Optimal Learning with Discrete Prior Resampling," Informs annual meeting, San Francisco, October, 2014 (with Si Chen and Kris Reyes)

"Optimal Bidding Policies in the Electricity Market using Approximate Dynamic Programming, Informs annual meeting, San Francisco, October, 2014 (with Daniel Jiang)

"Dynamic measures of risk on dynamic programs," Informs annual meeting, San Francisco, October, 2014 (with Ricardo Collado)

"Approximation Strategies for Multistage Stochastic Programs," Informs annual meeting, San Francisco, October, 2014 (with Tsvetan Asamov)

"Optimal control of multi-agent consumption patterns using approximate dynamic programming," Informs annual meeting, San Francisco, October, 2014 (with Greg Kaplan, Erick Johnson and Daniel Jiang)

"Optimizing a Battery Storage for the Regulation Service Using Approximate Dynamic Programming," Informs annual meeting, San Francisco, October, 2014 (with Harvey Cheng)

"SMART-ISO – A Stochastic Model of PJM for Renewables with Robust Cost Function Approximations Informs annual meeting, San Francisco, October, 2014 (with Hugo Simao)

"The Knowledge Gradient for Sparse Additive Model Informs annual meeting, San Francisco, October, 2014 (with Yan Li and Han Liu)

"The Knowledge Gradient Policy using a Sparse Additive Model," MOPTA, Lehigh University, August 13-15, 2014. (with Yan Li and Han Liu)

"A Nested Newsvendor Scheduling Policy for Operations Planning in a System with Significant Wind Power Penetration," MOPTA, Lehigh University, August 13-15, 2014. (with G. Gliner)

"A Probability Model of Grid Failures using Incomplete Power Outage Information," MOPTA, Lehigh University, August 13-15, 2014. (with Lina Al-Kanj).

"Optimal Hour-Ahead Bidding in the Real-Time Electricity Market with Battery Storage using Approximate Dynamic Programming," MOPTA, Lehigh University, August 13-15, 2014. (with Daniel Jiang)

"Approximation Strategies for Multistage Stochastic Programs," MOPTA, Lehigh University, August 13-15, 2014. (with Tsvetan Asamov)

"The Knowledge Gradient with Discrete Priors," MOPTA, Lehigh University, August 13-15, 2014. (with Si Chen, Kris Reyes)

"Optimal Learning with a Local Parametric Belief Model," MOPTA, Lehigh University, August 13-15, 2014. (with Harvey Cheng).

"SMART-ISO: An Informationally Correct Model of the PJM Markets and Energy Grid," 20th IFORS Conference, Barcelona, Spain, July 14-19, 2014 (with Hugo Simao).

"Quantile Optimization in Electricity Trading in the Presence of Storage with Heavy-Tailed Prices," 20th IFORS Conference, Barcelona, Spain, July 14-19, 2014 (with Ricardo Collado, Jae Ho Kim).

"Approximation Strategies for Multistage Stochastic Programs," 20th IFORS Conference, Barcelona, Spain, July 14-19, 2014 (with Tsvetan Asamov)

"Modeling Energy Markets: An Illustration of the Four Classes of Policies," SIOPT 2014, San Diego, May, 2014 (with Hugo Simao)

"Risk Averse Computational Stochastic Programming," SIOPT 2014, San Diego, May, 2014 (with Somayeh Moazeni)

"Optimal Learning in Materials Science, with an application to characterizing nanoemulsion stability," 2014 Spring MRS meeting, (with Kris Reyes, and Si Chen, Maneesh Gupta, Nina Masters, Mike McAlpine).

"Bayesian Optimal Learning with Generalized Linear Models," Informs annual meeting, Minneapolis, MN, October, 2013 (with S. Chen and K. Reyes).

"SMART-ISO: An Informationally Correct Model of the PJM Energy Markets and Power Grid," Informs annual meeting, Minneapolis, MN, October, 2013 (with H. Simao).

"Optimal Learning with Local Parametric Models," Informs annual meeting, Minneapolis, MN, October, 2013 (with H. Cheng).

"On the Problem of Investment in SREC Markets," Informs annual meeting, Minneapolis, MN, October, 2013 (with J. Khazaei and M. Coulon).

"Parallel Risk Aversion Computational Stochastic Programming: Storage Operation Case," Informs annual meeting, Minneapolis, MN, October, 2013 (with S. Moazeni and B. Bouzaiene-Ayari).

"An Approximate Dynamic Programming Algorithm for Optimal Bidding in the Real-Time Electricity Market," Informs annual meeting, Minneapolis, MN, October, 2013 (with D. Jiang).

"Approximate Dynamic Programming for Distributed Grid-Level Storage: A Case Study of the PJM Grid," Informs annual meeting, Minneapolis, MN, October, 2013 (with D. Salas).

"Optimal Information Blending in the L-2 Sphere," Informs annual meeting, Minneapolis, MN, October, 2013 (with B. Defourny and I. Ryzhov).

"Risk Averse Optimal Stochastic Battery Storage Operation in the Presence of Price Impacts," Informs annual meeting, Minneapolis, MN, October, 2013 (with S. Moazeni).

"Computational Stochastic Programming for Trade Execution under Downside Risk Measures," Informs annual meeting, Minneapolis, MN, October, 2013 (with S. Moazeni, T. Coleman and Y. Li).

"Computational Risk Averse Dynamic Programming," International Conference on Stochastic Programming 2013, Bergamo, Italy (with Somayeh Moazeni).

"Automatic Inference of Decision Rules for Multistage Stochastic Programs," International Conference on Stochastic Programming 2013, Bergamo, Italy (with Boris Defourny, Damien Ernst, Louis Wehenkel).

"A Model for Solar Renewable Energy Certificates: Price Dynamics and Policy Analysis, 26th European Conference on Operational Research, Rome, Italy, July, 2013 (with Javad Khazaei).

"A Best Deterministic Approach to Stochastic Unit Commitment," 26th European Conference on Operational Research, Rome, Italy, July, 2013 (with Boris Defourny, Hugo Simao).

"Risk Management in Energy Storage Planning," Optimization Days, Montreal, Quebec, May 8, 2013 (with S. Moazeni and B. Bouzaiene-Ayari).

"Hybrid Policies for Stochastic Optimization of Grid-Level Markets," Informs Computing Society Workshop, Sante Fe, NM, January 6, 2013.

"High Performance Computational Stochastic Optimization for Energy Storage Management," Informs Computing Society Workshop, Sante Fe, NM, January 6, 2013 (with Somayeh Moazeni).

"A Universal Hybrid Policy for Approximate Dynamic Programming, with Applications to Energy Storage," Informs Computing Society Workshop, Sante Fe, NM, January 6, 2013 (with Stephan Meisel).

"Stochastic Optimization in Energy Systems: PFAs, VFAs and Lookahead Policies," Informs Computing Society Workshop, Sante Fe, NM, January 6, 2013.

"Risk-Averse Stochastic Dynamic Programming: A New Approach and Energy Applications," Informs Computing Society Workshop, Sante Fe, NM, January, 2013 (with Ricardo Collado)

"High Performance Computational Stochastic Optimization for Energy Storage Management," Informs Computing Society Workshop, Sante Fe, NM, January, 2013 (with Somayeh Moazeni)

"A Universal Hybrid Policy for Approximate Dynamic Programming, with Applications To Energy Storage," Informs Computing Society Workshop, Sante Fe, NM, January, 2013 (with Stephan Meisel)

"SMART-ISO: A Stochastic, Multiscale Model of the PJM Power Grid", Informs Annual Meeting, Phoenix, AZ, October, 2012 (with H. Simao, B. Defourny)

"Approximate Dynamic Programming for the Stochastic Control of a Wind Energy Storage System," Informs Annual Meeting, Phoenix, AZ, October, 2012 (with D. Salas)

"Emulating Stochastic Programming Effects in the Unit Commitment Problem," Informs Annual Meeting, Phoenix, AZ, October, 2012 (with B. Defourny)

"Approximate Dynamic Programming for an Energy Storage Problem," Informs Annual Meeting, Phoenix, AZ, October, 2012 (with W. Scott)

"Dynamic Optimization of Threshold Risk Measures & Applications to Energy Markets," Informs Annual Meeting, Phoenix, AZ, October, 2012 (with R. Collado)

"An Approximate Dynamic Programming Approach to Sponsored Search," Informs Annual Meeting, Phoenix, AZ, October, 2012 (with A. Mastin, P. Jaillet)

"Controlling Greedy Sample Bias through Bias Corrected Q Learning," Informs Annual Meeting, Phoenix, AZ, October, 2012 (with D. H. Lee)

"The Robust Approach to Simulation Optimization," Informs Annual Meeting, Phoenix, AZ, October, 2012 (with I. Ryzhov and B. Defourny)

"A quantile-based approach to unit commitment with wind," International Symposium on Mathematical Programming, Berlin, August, 2012 (with Boris Defourny, Ethan Fang, Hugo Simao)

"SMART-ISO: A Stochastic, Multiscale Model of the PJM Power Grid," FERC Technical Conference on Increasing Real-Time and Day-Ahead Market Efficiency through Improved Software, June 26, 2012 (with Hugo Simao and Boris Defourny).

"May the Best Man Win: Simulation Optimization for Match-Making in E-Sports," Winter Simulation Conference, Phoenix, Arizona, December 11-14 (with Ilya Ryzhov and Awais Tariq).

"A Distribution Grid Optimization Controller," Informs annual meeting, Charlotte, NC, Nov 13-16, 2011 (with Hugo Simao, Vince Jeong, Boris Defourny).

"Approximate Dynamic Programming for the Load Curtailment Problem," Informs annual meeting, Charlotte, NC, Nov 13-16, 2011 (with Hugo Simao and Boris Defourny).

"An Hour-Ahead Prediction Model for Heavy-Tailed Spot Prices," Informs annual meeting, Charlotte, NC, Nov 13-16, 2011 (with Jae Ho Kim).

"May the Best Man Win: Simulation-Optimization with E-sports," Informs annual meeting, Charlotte, NC, Nov 13-16, 2011 (with Awais Tariq and Ilya Ryzhov).

"Approximate Dynamic Programming for Energy Storage," Informs annual meeting, Charlotte, NC, Nov 13-16, 2011 (with Warren Scott).

"Bayesian Exploration for Approximate Dynamic Programming," Informs annual meeting, Charlotte, NC, Nov 13-16, 2011 (with Ilya Ryzhov and Gerald van den Berg).

"Stochastic Modeling for Energy Resource Planning," Informs annual meeting, Charlotte, NC, Nov 13-16, 2011 (with Hugo Simao and Boris Defourny).

"Information Collection in a Linear Program," Informs annual meeting, Charlotte, NC, Nov 13-16, 2011 (with Ilya Ryzhov).

"Bayesian Active Learning With Basis Functions," Optimization Days, Montreal, May 2, 20011 (with Ilya Ryzhov).

"Bayesian Exploration Strategies in Approximate Dynamic Programming," Informs Computing Society Workshop, Monterey, CA, January 9, 2011 (with Ilya Ryzhov).

"Approximate Dynamic Programming for Energy Storage," Informs Computing Society Workshop, Monterey, CA, January 9, 2011 (with Warren Scott)

"Policy Optimization for a Stochastic Unit Commitment Problem," Informs Computing Society Workshop, Monterey, CA, January 9, 2011. (with Warren Scott, Jessica Zhou and Ahsan Barkatullah).

"Optimal Control of Energy Storage using the Knowledge Gradient Algorithm with Nonparametric Beliefs," Informs Annual Meeting, Austin, TX, November, 2010 (w. Emre Barut)

"Using Machine Learning to Solve Multistage Sequential Math Programming Problems," Informs Annual Meeting, Austin, TX, November, 2010 (with L. Hannah)

"An Approximate Dynamic Programming Model for Locomotive Optimization," Informs Annual Meeting, Austin, TX, November, 2010 (w. Belgacem Bouzaiene-Ayari).

"Optimal Pricing using the Knowledge Gradient," Informs Annual Meeting, Austin, TX, November, 2010 (w. Emre Barut)

"Applying Approximate Dynamic Programming in Controlled Ovarian Hyperstimulation," Informs Annual Meeting, Austin, TX, November, 2010 (with L. Zhao, Miao He)

"Optimal Learning Strategies for Glycemic Control in Type 2 Diabetes," Informs Annual Meeting, Austin, TX, November, 2010 (w. I. Ryzhov and K. Hsih)

"Optimizing a Policy for the Storage of Natural Gas with the Approximate Knowledge Gradient," Informs Annual Meeting, Austin, TX, November, 2010 (w. Warren Scott)

"Optimal Stepsizes in Approximate Value Iteration," Informs Annual Meeting, Austin, TX, November, 2010 (w. Ilya Ryzhov)

"Approximate Dynamic Programming for a Stochastic Multiscale Energy Policy Model," Informs Annual Meeting, Austin, TX, November, 2010.

"Approximate Dynamic Programming in the Strategic Planning of a Fleet of Business Jets," Informs Annual Meeting, Austin, TX, November, 2010, (w. H.P. Simao)

"Stochastic Search with an Observable State," Informs Annual Meeting, Austin, TX, November, 2010 (w. L. Hannah and D. Blei)

"Information Collection in a Linear Program," International Symposium on Stochastic Programming XII, Dalhousie University, August, 2010 (with Ilya Ryzhov).

"Bridging the Gap between Dynamic Programming and Stochastic Programming," International Symposium on Stochastic Programming XII, Dalhousie University, August, 2010.

"Machine Learning: Bridging the Gap between Dynamic Programming and Stochastic Programming," International Symposium on Stochastic Programming XII, Dalhousie University, August, 2010 (with Lauren Hannah)

"Approximate Dynamic Programming for Management of High Value Spare Parts," Informs Annual Meeting, San Diego, CA, October, 2009. (with H. Simao)

"Optimization of Wind Farm Portfolios," Informs Annual Meeting, San Diego, CA, October, 2009. (with Yintao (Alex) Sun).

"Regression with a Dirichlet Process-Generalized Linear Mixture Models," Informs Annual Meeting, San Diego, CA, October, 2009. (with L. Hannah and D. Blei)

"Simulation Calibration with Correlated Knowledge Gradients," Informs Annual Meeting, San Diego, CA, October, 2009. (with Peter Frazier and H. Simao)

"The Correlated Knowledge Gradient for Continuous Decision Variables," Informs Annual Meeting, San Diego, CA, October, 2009. (with W. Scott and P. Frazier)

"Knowledge Gradients with Monte Carlo Simulation in Online Learning Problems," Informs Annual Meeting, San Diego, CA, October, 2009. (with I. Ryzhov)

"Energy Policy Conditional Optimization using Dirichlet Process-Generalized Linear Model Mixture," Informs Annual Meeting, San Diego, CA, October, 2009. (with L. Hannah)

"SMART: Stochastic, Multiscale Energy Policy Model," Informs Annual Meeting, San Diego, CA, October, 2009. (with A. George, A. Lamont, J. Stewart)

"Optimal Control of Wind Storage Process with Continuous States and Actions with Advance Commitments," Informs Annual Meeting, San Diego, CA, October, 2009. (with J. Kim)

"Hierarchical Knowledge-Gradient Policy for Sequential Sampling," Informs Annual Meeting, San Diego, CA, October, 2009. (with Martijn Mes)

"Convergent Least Squares Policy Iteration Algorithm for High Dimensional Markov Decision Processes," Informs Annual Meeting, San Diego, CA, October, 2009. (with J. Ma)

"Optimal Learning on a Graph," Informs Annual Meeting, San Diego, CA, October, 2009. (with I. Ryzhov)

"SMART: A Stochastic Multiscale Energy Policy Model using Approximate Dynamic Programming." Power Systems Modeling Conference, University of Florida, Gainesville, April, 2009 (with Abraham George, Jeffrey Stewart and Alan Lamont).

"One Stage R&D Portfolio Optimization with an Application to Solid Oxide Fuel Cells," Power Systems Modeling Conference, University of Florida, Gainesville, April, 2009 (with Lauren Hannah).

"Convergent Approximate Dynamic Programming Algorithm for Continuous State and Action Spaces," Informs Computing Society, Charleston, SC, January, 2009 (with Jun Ma).

"Approximate Dynamic Programming for Management of High-Value Spare Parts," Informs Computing Society, Charleston, SC, January, 2009 (with Hugo Simao).

"The Knowledge Gradient Algorithm for Sequential Information Collection," Informs Computing Society, Charleston, SC, January, 2009 (with Ilya Ryzhov and Peter Frazier).

"Optimal Control of Dosage Decisions in Controlled Ovarian Hyperstimulation," Informs Annual Meeting, Washington D.C., 2008 (with M. He and L. Zhao).

"A Dynamic Energy Resource Modeling System," "One Stage R&D Portfolio Optimization with an Application to Solid Oxide Fuel Cells", Informs Annual Meeting, Washington D.C., 2008 (with A. George, A. Lamont and J. Stewart)

"One Stage R&D Portfolio Optimization with an Application to Solid Oxide Fuel Cells", Informs Annual Meeting, Washington D.C., 2008 (with L. Hannah and J. Stewart)

"Asymptotic Theory of Sequential Change Detection and Identification" Informs Annual Meeting, Washington D.C., 2008 (with Kazutoshi Yamazaki and Savas Dayanik).

"Asymptotic Theory of Sequential Change Detection and Identification" Informs Annual Meeting, Washington D.C., 2008 (with Kazutoshi Yamazaki and Savas Dayanik).

"Monte Carlo Evolutionary Policy Iteration with Applications to Energy R&D Portfolio Optimization," Informs Annual Meeting, Washington D.C., 2008 (with L. Hannah).

"Information Collection With A Physical State," Informs Annual Meeting, Washington D.C., 2008 (with Ilya Ryzhov)

"Knowledge Gradient for Bandit Problems," Informs Annual Meeting, Washington D.C., 2008 (with Ilya Ryzhov).

"Locomotive Optimization for Norfolk Southern using Approximate Dynamic Programming," Informs Annual Meeting, Washington D.C., 2008 (with B. Bouzaiene-Ayari, C. Cheng, R. Fiorillo, J. Chang)

"Optimal Learning for the Newsvendor Problem," Informs Annual Meeting, Washington D.C., 2008 (with Diana Negoescu and Peter Frazier)

"Convergence of Sequential Sampling Policies for Bayesian Information Collection Problems," Informs Annual Meeting, Washington D.C., 2008 (with Peter Frazier)

"The Knowledge-Gradient Policy for Ranking and Selection with Correlated Normal Beliefs," Informs Annual Meeting, Washington D.C., 2008 (with Peter Frazier)

"Approximate Dynamic Programming for the Single Machine Scheduling Problem," ICPR Americas, Sao Paulo, Brazil, June, 2008 (with Debora Ronconi).

"Approximate Dynamic Programming for the Management of High Value Spare Parts," ICPR Americas, Sao Paulo, Brazil, June, 2008 (with Hugo Simao)..

"An Index Policy for the Discounted Bandit Problem with Availability Constraints," Informs Annual Meeting, Seattle, November, 2007. (with Kazu Yamazaki)

"An Approximate Dynamic Programming Approach to the R&D Portfolio Problem," Informs Annual Meeting, Seattle, November, 2007. (with Lauren Hannah)

"A Knowledge Gradient Policy for Sequential Bayesian Ranking and Selection," Informs Annual Meeting, Seattle, November, 2007. (with Peter Frazier)

"Approximate Dynamic Programming for a Spare Parts Problem: The Challenge of Rare Events," Informs Annual Meeting, Seattle, November, 2007. (with Hugo Simao)

"A Dynamic Model for the Mitigation of Transmission Failure Risk," Informs Annual Meeting, Seattle, November, 2007. (with Johannes Enders)

"An Optimal Dynamic Hedging Strategy for Jet Fuel Costs," Informs Annual Meeting, Seattle, November, 2007. (with J. Nascimento).

"Value Function Approximations for Multistage Linear Programs," Informs Annual Meeting, Seattle, November, 2007.

"Pricing in Freight Transportation," Informs Annual Meeting, Pittsburgh, November, 2006 (with H. Topaloglu).

"An Optimal Approximate Dynamic Programming Algorithm to a Mutual Fund Problem," Informs Annual Meeting, Pittsburgh, November, 2006 (with J. Nascimento).

"Computational Experimentation with Two-Stage Stochastic Programs", Informs National Meeting, San Francisco, November, 2005. (with H. Topaloglu, J. Higle and L. Zhao).

"Merging Stochastic Programming and Approximate Dynamic Programming for High Dimensional Problems", Informs National Meeting, San Francisco, November, 2005. (with A. George).

"An Optimal Learning Algorithm for Purchasing Assets Over Time", Informs National Meeting, San Francisco, November, 2005. (with J. Nascimento)

"Stochastic Optimization for an Aging Electric Power Infrastructure", Informs National Meeting, San Francisco, November, 2005. (with J. Enders)

"Incorporating Pricing Decisions into the Stochastic Dynamic Fleet Management Problem", Informs National Meeting, San Francisco, November, 2005. (with H. Topaloglu)

"Using Distributed Computation to Accelerate Optimizing Simulators" IFORS Meeting, Hawaii, July, 2005. (with Jeff Day, Hugo Simao).

"Optimal Stepsizes for Approximate Dynamic Programming," Informs Computing Conference, Washington, D.C., January, 2005.

"A Rail Car Distribution Model with Multiple Information Streams", Informs, Denver, October, 2004 (with B. Bouzaiene-Ayari).

"Using Distributed Computing to Solve Large Transportation Networks", Informs, Denver, October, 2004 (with J. Day, H. Simao, B. Bouzaiene-Ayari).

"A Distributed Decision-Making Structure for Dynamic Resource Allocation", Informs, Denver, October, 2004 (with H. Topaloglu).

"The Optimizing Simulator for the Military Airlift Problem with MOG", Informs, Denver, October, 2004 (with T. Wu and A. Whisman).

"A Scalable Approximate Dynamic Programming Algorithm for the Single-Link Dispatch Problem," Informs National Meeting, Atlanta, October, 2003 (with K. Papadaki).

"The Single-Node Dispatching Problem and Dynamic Service Network Design," Informs National Meeting, Atlanta, October, 2003 (with T. Crainic, L. Dall;Orto, J. E. Leal)

"Adaptive Learning Algorithms for the Dynamic Assignment Problem," Informs National Meeting, Atlanta, October, 2003 (with A. George).

"Adaptive, Hierarchical Algorithms for Short-Term, Tactical Forecasting," Informs National Meeting, Atlanta, October, 2003

"Dynamic Programming Approximation Techniques for Multi-stage Resource Allocation under Uncertainty," Informs National Meeting, Atlanta, October, 2003 (with H. Topaloglu)

"Solving a Large-Scale Driver Management Problem using Informational Decomposition and Data Pattern Matching," Informs National Meeting, Atlanta, October, 2003 (with H. Simao and J. Day)

"Statistical Techniques for Estimating High Dimensional Value Functions in Dynamic Programming," Informs National Meeting, Atlanta, October, 2003 (with A. George)

"The Optimizing Simulator: An Illustration for the Military Airlift Problem," Informs National Meeting, Atlanta, October, 2003 (with T. Wu)

"Separable, Piecewise-Linear Approximations for Two-Stage Stochastic Programs", Informs National Meeting, San Jose, November, 2002 (with H. Topaloglu and A. Ruszczynski).

"Rail Car Distribution Under Uncertainty Using the Separable, Projective Approximation Routine (SPAR)" Informs National Meeting, San Jose, November, 2002 (with H. Topaloglu).

"Approximate Dynamic Programming for Multistage Discrete Resource Allocation Problems," Informs National Meeting, San Jose, November, 2002 (with H. Topaloglu).

"An Information Theoretic Model of Locomotive Operations," IFORS 2002, Scotland (with Belgacem Bouzaiene-Ayari).

"A Multilayered Resource Scheduling Problem," IFORS 2002, Scotland (with Hugo Simao and Raymond Cheung).

"An Information Theoretic Approach to Modeling Car Distribution," IFORS 2002, Scotland (with Huseyin Topaloglu and S. Melkote).

"Solving a Large Scale Driver Management Problem Using Informational Decomposition," IFORS 2002, Scotland (with Hugo P. Simao).

"Tutorial: Emerging Developments in Adaptive Dynamic Programming for Stochastic Resource Management," Informs National Meeting, Miami, November, 2001.

"A Multi-Agent Approach for Stochastic Multicommodity Flow Problems with Applications in Fleet Management," Informs National Meeting, Miami, November, 2001.

"A Dynamic Optimization Model for Locomotive Management based on Information Modeling," Informs National Meeting, Miami, November, 2001.

"Dynamic Programming Approximations for Time-Staged Stochastic Integer Multicommodity Flow Problems," Informs National Meeting, San Antonio, November, 2001 (with H. Topaloglu).

"The Dynamic Assignment Problem," Informs National Meeting, San Antonio, November, 2001 (with M. Spivey).

"Adaptive Dynamic Programming for Real-Time Locomotive Management," Informs National Meeting, San Antonio, November, 2001 (with Belgacem Bouzaiene-Ayari).

"Adaptive Dynamic Programming Methods for Aging and Replenishment Problems with Applications to Inventory Management and Vehicle Dispatching," Informs National Meeting, San Antonio, November, 2001 (with K. Papadaki).

"Tutorial: Dynamic Resource Management – Problems, Models and Algorithms," Informs National Meeting, San Antonio, November, 2001.

"Dynamic Programming Approximations for the Dynamic Assignment Problem," Informs National Meeting, Salt Lake City, May, 2000 (with M. Spivey).

"Adaptive Dynamic Programming for Locomotive Scheduling," ," Informs National Meeting, Salt Lake City, May, 2000 (with Belgacem Bouzaiene-Ayari).

"Structural Dynamic Programming for Dynamic, Multicommodity Flow Problems in Transportation," Informs National Meeting, Salt Lake City, May, 2000 (with H. Topaloglu).

"A Multi-Layer Dynamic Routing and Scheduling Problem, Informs National Meeting, Seattle, October, 1998, (with H. Simao).

"Simulation Technologies for Railroad Operations," talk before the Rail Special Interest Group, Informs National Meeting, Seattle, October, 1998.

"Adaptive Approximation Algorithms for the Dynamic Service Network Design Problem," Informs National Meeting, Seattle, October, 1998 (with K. Papadaki).

"Dynamic Programming Approximations for Dynamic Resource Transformation Problems," Informs National Meeting, Montreal, April, 1998 (with G. Godfrey and J. Shapiro).

"A Convergent Algorithm for Multistage Stochastic Linear Programs with Recourse," Informs National Meeting, Montreal, April, 1998 (with Z.-L. Chen)

"Dynamic Programming Approximations for Dynamic Networks," Informs National Meeting, Montreal, April, 1998 (with G. Godfrey).

"Dynamic Locomotive Scheduling," Informs National Meeting, Montreal, April, 1998 (with A. Marar and A. Wijeratne).

"Solving Parallel Machine Scheduling Problems with Setup Times by Column Generation," Informs National Meeting, Montreal, April, 1998 (with Z.-L. Chen).

"A Dynamic Programming Approximation for Stochastic Resource Scheduling Problems," Informs National Meeting, October, 1997 (with G. Godfrey)

"Dynamic Service Network Design," Informs National Meeting, October, 1997 (with H. Simao, K. Papadaki and T. Crainic)

"An Object Architecture for Dynamic Resource Scheduling Problems," Informs National Meeting, October, 1997 (with Joel Shapiro).

"A Dynamic Programming Algorithm for Ultra-Large Scale Resource Allocation Problems," Informs National Meeting, May, 1997 (with J. Shapiro).

"Dynamic Routing Under Uncertainty," Informs National Meeting, May, 1997 (with M. Towns).

"An Adaptive, Nonlinear Control Algorithm For Dynamic Resource Allocation Problems," Informs National Meeting, May, 1997, (with G. Godfrey)

"An Optimal Control Formulation for Multiclass Machine Scheduling Problems," Informs National Meeting, May, 1997. (with Z.-L. Chen)

"A Comparative Study of Models and Algorithms for the Dynamic Assignment Problem," Informs National Meeting, November, 1996. (with W. Snow, G. Godfrey and H. Simao)

"The Stochastic Dynamic Resource Allocation Problem," Informs National Meeting, November, 1996. (with G. Godfrey).

"Dynamic Control of Complex Resource Scheduling Problems," Informs National Meeting, November, 1996. (with J. Shapiro)

"An Adaptive Labeling Algorithm for the Vehicle Scheduling Problem," Informs National Meeting, November, 1996. (with S. Shere).

"Modeling Issues for Real Time Operations," Informs National Meeting, November, 1996.

"A Simulation Architecture for Real-Time Routing and Scheduling," 14th Triennial Conference of IFORS, Vancouver, B.C., July, 1996.

"Dynamic Service Network Design for Less-Than-Truckload Motor Carriers," Informs National Meeting, May, 1996 (with B. Muralidharan, R. Cheung, and H. Simao)

"A Labeling Algorithm for the Dynamic Vehicle Scheduling Problem," Informs National Meeting, May, 1996 (with W. Snow)

"Dynamic Vehicle Scheduling Using Column Generation," Informs National Meeting, May, 1996 (with Z.-L. Chen).

"Dynamic Resource Allocation under Stochastic Demands," Informs National Meeting, May, 1996 (with G. Godfrey).

"Dynamic Linehaul Scheduling as a Multiattribute, Logistics Queueing Network," Informs National Meeting, May, 1996 (with J. Shapiro and H. Simao).

"Multiple Fleet Assignment as a Logistics Queueing Network," Informs National Meeting, May, 1996 (with T. Carvalho).

"Solving Hard Machine Scheduling Problems by Column Generation," Informs National Meeting, May, 1996 (with Z.-L. Chen).

"Real-Time Vehicle Scheduling," ORSA/TIMS National Meeting, October, 1995 (with Z.-L. Chen, W. Snow, S. Sheres and D. Gittoes).

"Optimal Control Methods for Dynamic Fleet Management," ORSA/TIMS National Meeting, October, 1995 (with T. Carvalho).

"An Adaptive Control Method for Dynamic Fleet Management," ORSA/TIMS National Meeting, April, 1995 (with T. Carvalho).

"Dispatch Strategies for Dynamic Routing and Scheduling," ORSA/TIMS National Meeting, April, 1995 (with G. Godfrey).

"Solution Methods for Stochastic, Multilocation Distribution Problems," ORSA/TIMS National Meeting, October, 1994 (with G. Godfrey)

"Optimal Control of Logistics Queueing Networks," ORSA/TIMS National Meeting, October, 1994 (with G. Godfrey, T. Carvalho).

"Stochastic Gradient Methods for the Dynamic Assignment Problem," ORSA/TIMS National Meeting, April, 1994 (with R. Cheung)

"Implementation Strategies for Advanced Decision Support Systems in the Motor Carrier Industry," ORSA/TIMS National Meeting, April, 1994.

"The Combined Traffic Assignment and Capacity Management Problem for Intermodal Operations," ORSA/TIMS National Meeting, April, 1994 (with T. Carvalho).

"Alternative Formulations of the Dynamic Fleet Management Problem" ORSA/TIMS National Meeting, November, 1993.

"Backward Recursion Techniques for Multistage Stochastic Networks," ORSA/TIMS National Meeting, November, 1993 (with R. Cheung)

"Dynamic Set Partitioning for Drayage Planning," ORSA/TIMS National Meeting, November, 1993 (with D. Gittoes, G. Godfrey and R. Vanderbei)

"A New Method for Multistage, Stochastic Distribution Problems," ORSA/TIMS National Meeting, May, 1993 (with R. Cheung).

"A Dynamic Model for Scheduling Relay Operations In Freight Transportation," ORSA/TIMS National Meeting, May, 1993 (with H. Simao, I. Lustig, and R. Cheung).

"A Dynamic Network Optimization Model of Linehaul Operations for Less-Than-Truckload Motor Carriers," ORSA/TIMS National Meeting, November, 1992 (with H. Simao, I. Lustig and R. Cheung).

Tutorial: "Stochastic Programming Models in Dynamic Fleet Management," ORSA/TIMS Nationoal Meeting, November, 1992.

"Modified Stochastic Approximation Procedures for Dynamic Networks with Random Arc Capacities," ORSA/TIMS National Meeting, November, 1992 (with R. K-L Cheung).

"Approximating the Expected Recourse Function for Stochastic Networks with Random Arc Capacities," ORSA/TIMS National Meeting, May, 1991 (with R. K. L. Cheung).

"Decomposition Strategies for Developing Approximate Analytical Recourse Functions," ORSA/TIMS National Meeting, May, 1991.

"Stochastic Programming in Fleet Management," ORSA/TIMS National Meeting, November, Philadelphia, 1990.(with L. F. Frantzeskakis).

"Specialized Algorithms for Dynamic Networks," ORSA/TIMS National Meeting, November, Philadelphia, 1990 (with E. Berkkam).

"Model Formulation Strategies for Dynamic Crew Scheduling Problems," ORSA/TIMS National Meeting, November, Philadelphia, 1990 (with J. M. Farvolden and I.J. Lustig).

"A Primal Partitioning Solution of the Crew Scheduling Problem," ORSA/TIMS National Meeting, November, Philadelphia, 1990 (with J. M. Farvolden and J.B. Kellerman).

"Approximate Recourse Functions for Large Scale Stochastic Programs," ORSA/TIMS National Meeting, November, Philadelphia, 1990.(with L. F. Frantzeskakis).

"A Dynamic Fleet Management Model for International Container Movements," ORSA/TIMS National Meeting, November, Philadelphia, 1990.

"Real-Time Dispatching for Truckload Motor Carriers," ORSA/TIMS National Meeting, May 7 - 9, 1990, Las Vegas.

"A Successive Linear Approximation Procedure for Stochastic Dynamic Networks," CORS/TIMS/ORSA Joint National Meeting, May 8-10, 1989, Vancouver, Canada, (with L. F. Frantzeskakis).

"Computational Experience for a Class of Multicommodity Network Flow Problems." CORS/TIMS/ORSA Joint National Meeting, May 8-10, 1989, Vancouver, Canada, (with J. M. Farvolden).

"Optimization Based Heuristics for Vehicle Routing with Time Windows," ORS/TIMS/ORSA Joint National Meeting, May 8-10, 1989, Vancouver, Canada, (with I. A. Koskosidis and M. M. Solomon).

"A Vehicle Routing Model for Dynamic Less-Than-Truckload Consolidation Networks," ORSA/TIMS Joint National Meeting, October 23-26, 1988, Denver, Colorado, (with J. M. Farvolden).

"Dynamic Fleet Allocation Model," ORSA/TIMS Joint National Meeting, October 23-26, 1988, Denver, Colorado, (with L. F. Frantzeskakis).

"A Method for Capacitated Multicommodity Network Flow Assignment," ORSA/TIMS Joint National Meeting, October 23-26, 1988, Denver, Colorado, (with C. Barnhart and Y. Sheffi).

"A Stochastic Programming Formulation of the Dynamic Vehicle Allocation Problem," ORSA/TIMS Joint National Meeting, October 23-26, 1988, Denver, Colorado, (with L. F. Frantzeskakis).

"Sensitivity Analysis in Acyclic Networks," ORSA/TIMS Joint National Meeting, Chaired session: Optimization Models in the Motor Carrier Industry, Sponsor: ORSA Transportation Science Technical Section, October 25-28, 1987, St. Louis, Missouri.

"Experiments with a Dynamic Fleet Dispatching Model, ORSA/TIMS Joint National Meeting, October 25-28, 1987, St. Louis, Missouri, (with L. F. Frantzeskakis).

"A Primal Partitioning Solution for Capacitated Multicommodity Network Flow Problems," ORSA/TIMS Joint National Meeting, Session: Routing and Scheduling in the Motor Carrier and Railroad Industries, October 25-28, 1987, St. Louis, Missouri, (with J. M. Farvolden).

"Experience with an Interactive Network Design System for Less-Than-Truckload Motor Carriers," TIMS/ORSA Joint National Meeting, May 4-6 1987, New Orleans, Louisiana, (with Y. Sheffi).

"Micro-Dispatch in the Dynamic Vehicle Allocation Problem,"TIMS/ORSA Joint National Meeting, May 4-6 1987, New Orleans, Louisiana, (with D. Cape).

"A Primal Partitioning Solution for Capacitated, Multicommodity, Network Flow Problems," TIMS/ORSA Joint National Meeting, May 4-6 1987, New Orleans, Louisiana, (with J. M. Farvolden).

"Numerical Simulation of Transportation Queueing Networks," TIMS/ORSA Joint National Meeting, May 4-6 1987, New Orleans, Louisiana, (with H. P. Simao).

"Vehicle Routing and Scheduling with Forecasting Uncertainties," ORSA/TIMS Joint National Meeting, October 27-29, 1986, Miami Beach, Florida, Chaired session: Advances in Vehicle Routing and Scheduling, (with I. A. Koskosidis).

"Vehicle Routing and Scheduling for Coordinated Production and Distribution," TIMS/ORSA Joint National Meeting, April 14-16, 1986, Los Angeles, California, (with I. A. Koskosidis).

"Stochastic Properties of Flows in Freight Consolidation Networks," Tenth International Symposium on Transportation and Traffic Theory, Boston, MA, 1986.

"Numerical Simulation of Transient Queueing Networks," TIMS/ORSA Joint National Meeting, April 14-16, 1986, Los Angeles, California, (with H. P. Simao).

"A Dynamic Formulation of the Load Planning Problem for Less-Than-Truckload Motor Carrier Networks," ORSA/TIMS Joint National Meeting, November 4-6, 1985, Atlanta, Georgia, (with J. M. Farvolden).

"The Shipment Routing Subproblem for Motor Carrier Networks: A Comparison of Alternative Algorithms," TIMS/ORSA Joint National Meeting, April 29-May 1, 1985, Boston, Massachusetts, (with I.A. Koskosidis).

"An Efficient Numerical Approach for Describing Queues in Stochastic Transportation Networks," TIMS/ORSA Joint National Meeting, April 29-May 1, 1985, Boston, Massachusetts, Session: Stochastic Models in Transportation, (with K. S. Nickerson).

BOOKS (8)

Monograph series: Bridging Decision Problems:

Volume I: Framing the Problem, Kindle Direct Publishing, January, 2026.

W.B. Powell, *A Modern Approach to Teaching Optimization,* Boston-Delft: NOW Publishers, 2024. Website: https://tinyurl.com/TeachingOpt/

W.B. Powell, *Reinforcement Learning and Stochastic Optimization: A unified framework for sequential decisions*, John Wiley and Sons, 2022. http://tinyurl.com/RLandSO/

W.B. Powell, "Sequential Decision Analytics and Modeling," Boston-Delft: NOW Publishers, 2022, http://dx.doi.org/10.1561/9781638280835, Website: https://tinyurl.com/sdamodeling/

W. B. Powell, I. O. Ryzhov, *Optimal Learning*, John Wiley and Sons, New York, 2012.

W. B. Powell, Approximate Dynamic Programming: Solving the curses of dimensionality, 2nd Edition, John Wiley and Sons, New York, 2011. Major revision of first edition.

W. B. Powell, Approximate Dynamic Programming: Solving the curses of dimensionality, John Wiley and Sons, New York, 2007.

J. Si, A. Barto, W.B. Powell and D. Wunsch (eds.), Learning and Approximate Dynamic Programming: Scaling up to the Real World, John Wiley and Sons, New York, 2004.

REFEREED JOURNAL PUBLICATIONS (190 total)

2010-current: (83)

Alexander Sommer, Peter Bazan, Behnam Babaeian, Jonathan Fellerer, Friedrich-Alexander-Universität Erlangen-Nürnberg, Germany, Warren B. Powell, Princeton University, USA, Reinhard German, Adaptive Self-Improvement for Smarter Energy Systems using Agentic Policy Search, ACM SIGENERGY Energy Informatics Review, Volume 5 Issue 3, September 2025.

Ghadimi, S., W.B. Powell, "Stochastic Search for a Parametric Cost Function Approximation: Energy storage with rolling forecasts," European J. of Operational Research, 312, No. 2, 641-652, 2024.

Larry Thul, W.B. Poweuropell, Stochastic Optimization for Vaccine and Testing Kit Allocation for the COVID-19 Pandemic," European J. of Operational Research, Vol. 304 (1), 325-338, 2023.

Dionysios Kalogerias, W.B. Powell, "Zeroth-Order Compositional Stochastic Gradient Algorithms for Risk-Aware Learning," SIAM J. on Optimization 32 (2), 386-416

Warren Powell, "Designing Lookahead Policies for Sequential Decision Problems in Transportation and Logistics," IEEE Open Journal of Intelligent Transportation Systems 3, 313-327, 2022.

Dionysios S. Kalogerias, Warren B. Powell, Zeroth-order Stochastic Compositional Algorithms for Risk-Aware Learning, SIAM J. on Optimization, Vol. 32, No. 2, pp. 386-416, 2022.

Zhili Tian, Weidong Han, W.B. Powell, "Optimal Patient Recruitment in Clinical Trials with Adaptive Learning of Drug Quality" Manufacturing and Service Operations Management, Published in Articles in Advance, March 24 2021, https://doi.org/10.1287/msom.2020.0936.

Vinicius Pinheiro, W.B. Powell, "Reinforcement learning for electricity dispatch in grids with high intermittent generation and energy storage systems: a case study for the Brazilian grid," International Journal of Energy Research, Vol. 44, No. 11, Pp. 8635-8653. 2000

Daniel Jiang, Lina al-Kanj, W.B. Powell, "Optimistic Monte Carlo Tree Search with Sampled Information Relaxation Dual Bounds," Operations Research, Vol 58, No. 6, pp. 1678-1697, 2020.

Xinyu He, Kristofer-Roy Reyes, W.B. Powell, "Optimal Learning with Local Nonlinear Parametric Belief Models over Continuous Designs," SIAM J. on Scientific Computing, Vol 42, No. 4, pp. A2134-2157.

Weidong Han, W.B. Powell, "Optimal Online Learning for Nonlinear Belief Models using Discrete Priors," Operations Research, Vol. 68, No. 5, pp. 1538-1556. https://doi.org/10.1287/opre.2019.1921, May, 2020.

S. Moazeni, W. R. Scott, W. B. Powell, "Least Squares Policy Iteration with Instrumental Variables vs. Direct Policy Search: Comparison Against Optimal Benchmarks Using Energy Storage," INFOR: Information Systems and Operational Research, Vol. 58, No. 1, pp. 141-166, 2020.

Lina al-Kanj, W.B. Powell, "Approximate Dynamic Programming for Planning a Ride-Sharing System using Autonomous Fleets of Electric Vehicles," European J. Operational Research, Vol. 284, No. 3, pp. 1088-1106, 2020.

Donghun Lee, W.B. Powell, "Bias-Corrected Q-Learning with Multistate Extension," IEEE Transactions on Automatic Control, Vol. 64, No. 10, pp. 4011-4023, 2019.

Yixiao Huang, Lei Zhao, W.B. Powell, Yue Tong, Ilya Ryzhov, "Optimal Information Collection in Urban Delivery Resource Allocation," Transportation Science, Vol. 53, No. 3, pp. 623-641, 2019.

W.B. Powell, A unified framework for stochastic optimization, European Journal of Operational Research, Vol. 275, No. 3, pp. 795-821 (2019). https://doi.org/10.1016/j.ejor.2018.07.014

Ilya Ryzhov, Martijn Mes, W.B. Powell, Gerald van den Berg, "Bayesian Exploration for Approximate Dynamic Programming," Operations Research, Vol. 67, No. 1, pp. 198-214 (2019)

Yan Li, Kristopher G. Reyes, Jorge Vazquez-Anderson, Yingfei Wang, Lydia M Contreras, Warren B. Powell, "A Knowledge Gradient Policy for Sequencing Experiments to Identify the Structure of RNA Molecules Using a Sparse Additive Belief Model," Informs. J. on Computing, Vol. 30, No. 4, 750-767 (2018)

Xinyu He, Warren B. Powell, "Optimal Learning for Nonlinear Parametric Belief Models for Multidimensional Continuous Space," SIAM J. Optimization, Vol. 28, No. 4, 2945-2974, 2018.

Jorge Vazquez-Anderson, Mia K. Mihailovic, Yan Li, Praveen Vimalathas, Victoria Fry, Richard A. Lease, Warren B. Powell and Lydia M. Contreras" "High throughput *in vivo* mapping of RNA accessible interfaces to identify functional sRNA binding sites" Nature Communications, Vol. 9, No. 1, Article 4084 (2018).

Bolong Cheng, Tsvetan Asamov, W.B. Powell, "Low Rank Value Function Approximation for Co-Optimization of Battery Storage," IEEE Transactions on Power Systems, Vol. 9, No. 6, pp. 6590-6598, 2018.

Xinyu He, Warren B. Powell, "Optimal Learning for Stochastic Optimization with Nonlinear Parametric Belief Models," SIAM J. Optimization, Vol. 28, No. 3, pp. 2327-2359, 2018.

J. Khazaei, W. B. Powell, "SMART-Invest -A stochastic, dynamic planning for optimizing investments in wind, solar, and storage in the presence of fossil fuels: The Case of the PJM Electricity Market," Energy Systems, Vol. 9, No. 2, pp. 277-303, 2018.

Daniel Salas, W. B. Powell, "Benchmarking a Scalable Approximation Dynamic Programming Algorithm for Stochastic Control of Grid Level Storage," Informs J. on Computing, Vol. 30, No. 1, pp.. 106-123, 2018.

Daniel R. Jiang, W. B. Powell, "Risk Averse Approximate Dynamic Programming with Quantile-Based Risk Measures," Mathematics of Operations Research, Vol. 43, No. 2, pp. 554-579, 2018.

B. Cheng, W.B. Powell, "Co-optimizing Battery Storage for Frequency Regulation and Energy Arbitrage using Multiscale Dynamic Programming," IEEE Transactions on the Smart Grid," Vol. 9, No. 3, pp. 1997-2005, 2018.

J. Durante, Raj Patel, W.B. Powell, "A Two-Level Markov Model for Replicating Crossing Time Distributions for Simulations of Renewables in Power Systems," SIAM J. Uncertainty Quantification, Vol 6, No. 2, pp. 595-626. DOI: 10.1137/17M1120555, 2018.

Wang, Yingfei. W. B. Powell, R. Schapire, "Finite-time analysis for the knowledge-gradient policy," SIAM J. Optimization and Control, Vol. 56, No. 2, pp. 1105-1129, 2018.

Tsvetan Asamov, W. B. Powell, "Regularized Decomposition of High-Dimensional Multistage Stochastic Programs with Markov Uncertainty," SIAM J. Optimization, Vol. 28, No. 1, pp. 575-595, 2018.

Javad Khazaei, Michael Coulon, W.B. Powell, "ADAPT: A Price Stabilizing Compliance Policy for Renewable Energy Certificates: The Case of SREC Markets," Operations Research, Vol, 65, No. 6, pp. 1425-1449, 2017.

Vazquez-Anderson, Jorge; Baldridge, Kevin; Reyes, Kristofer; Powell, Warren; Contreras, Lydia N, "Optimization of a novel biophysical model using large scale in vivo antisense hybridization data displays improved prediction capabilities of structurally accessible RNA regions," Nucleic Acids Research, Volume 45, Issue 9, pp. 5523–5538, 2017.

S. Moazeni, W.B. Powell, B. Defourny, B. Bouzaiene-Ayari, "Parallel Non-Stationary Direct Policy Search for Risk Averse Stochastic Optimization," Informs J. on Computing, Vol. 29, No. 2, pp. 332-349, 2017.

Lina al-Kanj, Belgacem Bouzaiene-Ayari, W. B. Powell, "A Probability Model for Grid Faults Using Incomplete Information," IEEE Transactions on the Smart Grid, Vol. 8, No. 2, pp. 956-968, 2017.

C. Archer, Hugo P. Simao, W. Kempton, W.B. Powell, M. Dvorak, "The challenge of integrating offshore wind power in the US electric grid. Part I: Wind Forecast Error," Renewable Energy, Vol. 103, pp. 346-360, 2017.

Hugo P. Simao, W.B. Powell, C. Archer, W. Kempton, "The challenge of integrating offshore wind power in the US electric grid. Part II: Simulation of electricity market operations," Renewable Energy, Vol. 103, pp. 418-431, 2017.

Arta Jamshidi and W. B. Powell, "A Recursive Local Polynomial Approximation Method using Dirichlet Clouds and Radial Basis Functions," SIAM J. on Scientific Computation, Vol. 38, No. 4, B619-B644, 2016.

Somayeh Moazeni, I. Arciniegas Rueda, M. Coulon, B. Song, W.B. Powell, "A Non-Parametric Structural Hybrid Modeling Approach for Electricity Prices," J. of Quantitative Finance. Vol. 16, No. 2 (2016), pp. 213-230.

W. B. Powell and S. Meisel, "Tutorial on Stochastic Optimization in Energy Part I: Models and Policies," IEEE Trans. on Power Systems, Vol. 31, No. 2, pp. 1459-1467, 2016.

W. B. Powell and S. Meisel, "Tutorial on Stochastic Optimization in Energy Part II: An Energy Storage Illustration," IEEE Trans. on Power Systems, Vol. 31, No. 2, pp. 1468-1475, 2016.

Harvey Cheng, Arta Jamshidi, W. B. Powell, "Optimal Learning with a Local Parametric Belief Model," J. Global Optimization, Vol 63, No. 2, pp. 401-425, 2015.

Daniel Jiang, W. B. Powell, "An Approximate Dynamic Programming Algorithm for Monotone Value Functions," Operations Research, Vol. 63, No. 6, pp. 1489-1511, 2015.

D. Jiang, W. B. Powell, "Optimal Hour-ahead Bidding in the Real-Time Electricity Market with Battery Storage Using Approximate Dynamic Programming" Informs J. on Computing, Vol. 27, No. 3, pp. 525-543 (2015).

Michael Coulon, Javad Khazaei, W. B. Powell, "SMART-SREC: A stochastic model of the New Jersey solar renewable energy certificate market," Journal of Environmental Economics and Management, Vol. 73, pp. 13-31, 2015.

Si Chen, K-R G. Reyes, M. Gupta, M. C. McAlpine, W. B. Powell, "Optimal Learning in Experimental Design Using the Knowledge Gradient Policy with Application to Characterizing Nanoemulsion Stability," SIAM J. Uncertainty Quantification, Vol. 3, pp. 320-345, 2015. DOI 10.1137/140971129.

Yingfei Wang, K. G. Reyes, K. A. Brown, C. A. Mirkin, W. B. Powell, "Nested Batch Mode Learning and Stochastic Optimization with an Application to Sequential Multi-Stage Testing in Materials Science," SIAM J. Scientific Computing, Vol. 37, No. 3, pp. B361-B381, DOI: 10.1137/140971117, 2015.

Boris Defourny, Ilya O. Ryzhov, W. B. Powell, "Optimal Information Blending with Measurements in the L2 Sphere," Mathematics of Operations Research, Vol. 40, No. 4, Nov 2015, pp. 1060-1088. http://dx.doi.org/10.1287/moor.2015.0712.

Moazeni, Somayeh, W.B. Powell, A. H. Hajimiragha, "Mean-Conditional Value-at-Risk Optimal Energy Storage Operation in the Presence of Transaction Costs," IEEE Transactions on Power Systems, Vol. 30, No. 3, pp. 1222-1232, 2015.

Ryzhov, I., P. I. Frazier and W. B. Powell, "A New Optimal Stepsize for Approximate Dynamic Programming," IEEE Transactions on Automatic Control, Vol. 60, No. 3, pp. 743-758, 2015.

W.B. Powell, B. Bouzaiene-Ayari, Clark Cheng, Sourav Das, Ricardo Fiorillo, Coleman Lawrence, "Locomotive Planning at Norfolk Southern: An Optimizing Simulator Using Approximate Dynamic Programming," Interfaces, Vol. 44, No. 6, pp. 567-578., 2014.

Belgacem Bouzaiene-Ayari, C. Cheng, S. Das, R. Fiorillo, W.B. Powell, "From Single Commodity to Multiattribute Models for Locomotive Optimization: A Comparison of Integer Programming and Approximate Dynamic Programming," Transportation Science, 50.2 (2014): 366-389 http://dx.doi.org/10.1287/trsc.2014.0536

Lauren Hannah, W.B. Powell, D. Dunson, "Semi-Convex Regression for Metamodeling-Based Optimization," SIAM J. on Optimization, Vol. 24, No. 2, pp. 573-597, (2014).

Shi, N., Song, H., & Powell, W. B. The dynamic fleet management problem with uncertain demand and customer chosen service level. *International Journal of Production Economics*, *148*, pp. 110–121 (2014). doi:10.1016/j.ijpe.2013.09.010

E. Barut and W. B. Powell, "Optimal Learning for Sequential Sampling with Non-Parametric Beliefs," Journal of Global Optimization, Vol. 58, pp. 517-543 (2014). DOI 10.1007/s10898-013-0050-5.

Coulon, Michael, Warren B. Powell, and Ronnie Sircar. "A model for hedging load and price risk in the Texas electricity market." Energy Economics 40 (2013): 976-988.

Hugo Simao, H. B. Jeong, B. Defourny, W. B. Powell, A. Boulanger, A. Gagneja, L. Wu, R. Anderson, "A Robust Solution to the Load Curtailment Problem," IEEE Transactions on the Smart Grid, Vol. 4, No. 4, pp. 2209-2019 (2013).

S. Dayanik, W.B. Powell, K. Yamazaki, "Asymptotically Optimal Bayesian Sequential Change Detection and Identification Rules," Annals of Operations Research, Vol. 208(1), pp. 337-370. DOI 10.1007/s10479-012-1121-6 (2013)

J. Nascimento, W. B. Powell, "An Optimal Approximate Dynamic Programming Algorithm for Concave, Scalar Storage Problems with Vector-Valued Controls," IEEE Transactions on

Automatic Control, Vol. 58, No. 12, pp. 2995-3010. http://dx.doi.org/10.1109/TAC.2013.2272973 (2013).

W. B. Powell, "Perspectives of Approximate Dynamic Programming," Annals of Operations Research, special issue for Cy Derman, Appeared online February, 2012. DOI 10.1007/s10479-012-1077-6

Powell, W. B., George, A., A. Lamont and J. Stewart, "SMART: A Stochastic Multiscale Model for the Analysis of Energy Resources, Technology and Policy," Informs J. on Computing, Vol. 24, No. 4, pp. 665-682 (2012).

Ryzhov, I., W. B. Powell, "Information Collection for Linear Programs with Uncertain Objective Coefficients," SIAM J. Optimization, Vol. 22(4), pp. 1344–1368 http://epubs.siam.org/doi/abs/10.1137/12086279X. (2012).

W. B. Powell, H. Simao, B. Bouzaiene-Ayari, "Approximate Dynamic Programming in Transportation and Logistics: A Unified Framework," European J. on Transportation and Logistics, Vol. 1, No. 3, pp. 237-284 (2012). DOI 10.1007/s13676-012-0015-8.

Miao He, L. Zhao, W. B. Powell, "Approximate Dynamic Programming Algorithms for Optimal Dosage Decisions in Controlled Ovarian Hyperstimulation," European J. of Operational Research, Vol. 222, No. 2, pp. 328–340, October (2012). DOI: 10.1016/j.ejor.2012.03.049

Ryzhov, I. W. B. Powell, P. I. Frazier, "The knowledge gradient algorithm for a general class of online learning problems," *Operations Research*, Vol. 60, No. 1, pp. 180-195 (2012). DOI: 10.1287/opre.1110.0999.

Scott, Warren, P. I. Frazier, and W. B. Powell. "The Correlated Knowledge Gradient for Simulation Optimization of Continuous Parameters Using Gaussian Process Regression." *SIAM J. on Optimization* 21, No. 3 (2011): 996-1026.

W. B. Powell, B. Bouzaiene-Ayari, J. Berger, A. Boukhtouta, A. George, "The Effect of Robust Decisions on the Cost of Uncertainty in Military Airlift Operations," *ACM Transactions on Modeling and Computer Simulation*, Vol. 22, No. 1, pp. 39-57 (2011), DOI: 10.1145/2043635.2043636.

Jae Ho Kim, W. B. Powell, "Optimal Energy Commitments with Storage and Intermittent Supply," *Operations Research*, Vol. 59, No. 6, pp. 1347-1360 (2011).

Kim, Jae Ho, Powell, Warren B., An hour-ahead prediction model for heavy-tailed spot prices, *Energy Economics* Vol. 33, pp. 1252-1266 (2011), doi:10.1016/j.eneco.2011.06.007

Mes, M., P. I. Frazier and W. B. Powell, "Hierarchical Knowledge Gradient for Sequential Sampling," *J. Machine Learning Research*, Vol.12, pp. 2931-2974, 2011.

D. Negoescu, P. Frazier and W. B. Powell, "The Knowledge Gradient Algorithm for Sequencing Experiments in Drug Discovery," Informs J. on Computing, Vol. 23, No. 3, pp. 346-363, 2011.

L. Hannah, D. Blei and W. B. Powell, "Dirichlet Process Mixtures of Generalized Linear Models," *J. Machine Learning Research*, Vol. 12, pp. 1923-1953, 2011.

W. B. Powell, J. Ma, "A Review of Stochastic Algorithms with Continuous Value Function Approximation and Some New Approximate Policy Iteration Algorithms for Multi-Dimensional Continuous Applications," *Journal of Control Theory and Applications*, Vol. 9, No. 3, pp. 336-352, 2011.

I. Ryzhov and W. B. Powell, "Optimal learning on a graph," *Operations Research*, Vol. 59, No. 1, pp. 188-201, 2011.

Anderson, B. R. N., Boulanger, A., Powell, W. B., & Scott, W. Adaptive Stochastic Control for the Smart Grid. *Proceedings of the IEEE*, *99*(6), 1098-1115, 2011.

P. Frazier and W. B. Powell, "Consistency of Sequential Bayesian Sampling Policies" SIAM J. Control and Optimization, Vol. 49, No. 2, 712-731 (2011). DOI: 10.1137/090775026

D. R. Ronconi and W. B. Powell, "Minimizing Total Tardiness in a Single Machine Scheduling Problem using Approximate Dynamic Programming," *Journal of Scheduling*. Vol. 13, No. 6, pp. 597-607, 2010. DOI: 10.1007/s10951-009-0160-6.

Frazier, P. I., and W. B. Powell, "Paradoxes in Learning and the Marginal Value of Information," *Decision Analysis*, Vol. 7, No. 4, pp. 378-403, 2010.

H. P. Simao, J. Day, A. P. George, T. Gifford, J. Nienow, W. B. Powell, "Approximate Dynamic Programming Captures Fleet Operations for Schneider National", *Interfaces*, Vol. 40, No. 5, pp. 342-352, 2010.

L. Hannah and W. B. Powell, "Evolutionary Policy Iteration Under a Sampling Regime for Stochastic Combinatorial Optimization," *IEEE Transactions on Automatic Control*, Vol. 55, No. 5, pp. 1254-1257, May, 2010.

Nascimento, J. and W. B. Powell, "Dynamic programming models and algorithms for the mutual fund cash balance problem," *Management Science*, Vol. 56, No. 5, pp. 801-815 (2010).

Powell, W.B., "Merging AI and OR to Solve High-Dimensional Resource Allocation Problems using Approximate Dynamic Programming," Informs J. on Computing, Vol. 22, No. 1, pp. 2-17 (2010).

He, M., L. Zhao and W. B. Powell, "Optimal control of dosage decisions in controlled ovarian hyperstimulation," *Annals of Operations Research*, Special issue on Health Care, Volume 178, pp. 223-245 (2010).

L. Hannah, W. B. Powell, and J. Stewart, "One-Stage R&D Portfolio Optimization with an Application to Solid Oxide Fuel Cells," *Energy Systems Journal*, Vol. 1, No. 1, 2010.

Enders, J., W. B. Powell and D. Egan "Robust Policies for the Transformer Acquisition and Allocation Problem," *Energy Systems Journal*, Vol. 1, No. 3, pp. 245-272 (2010).

Enders, J., W. B. Powell, and D. Egan, "A Dynamic Model for the Failure Replacement of Aging High-Voltage Transformers," *Energy Systems Journal*, Vol. 1, No. 1, pp. 31-59 (2010).

2000 - 2009: (40)

P. Frazier, W. B. Powell, S. Dayanik, "The Knowledge-Gradient Policy for Correlated Normal Beliefs," Informs J. on Computing, Vol. 21, No. 4, pp. 585-598 (2009)

Wu, Tongqiang, W.B. Powell and A. Whisman, "The Optimizing-Simulator: An Illustration using the Military Airlift Problem," *ACM Transactions on Modeling and Simulation*, Vol. 19, No. 3, Issue 14, pp. 1-31 (2009).

Simao, H. P., J. Day, A. George, T. Gifford, J. Nienow, W. B. Powell, "An Approximate Dynamic Programming Algorithm for Large-Scale Fleet Management: A Case Application," *Transportation Science*, Vol. 43, No. 2, pp. 178-197 (2009).

Marar, A. and W. B. Powell, "Capturing Incomplete Information in Resource Allocation Problems through Numerical Patterns," *European Journal of Operations Research*, Vol. 197, No. 1, pp. 50-58 (2009).

Powell, W. B. "What you should know about approximate dynamic programming," *Naval Research Logistics*, Vol. 56, No. 3, pp. 239-249, 2009.

Simao, H. P. and W. B. Powell, "Approximate Dynamic Programming for Management of High Value Spare Parts", *Journal of Manufacturing Technology Management*, Vol. 20, No. 2, pp. 147-160 (2009).

Nascimento, J. and W. B. Powell, "An Optimal Approximate Dynamic Programming Algorithm for the Lagged Asset Acquisition Problem," *Mathematics of Operations Research*, Vol. 34, No. 1, pp. 210-237 (2009).

George, A., W.B. Powell and S. Kulkarni, "Value Function Approximation Using Hierarchical Aggregation for Multiattribute Resource Management," *Journal of Machine Learning Research*, Vol. 9, pp. 2079-2111 (2008).

S. Dayanik, W. B. Powell, and K. Yamazaki, "Index policies for discounted bandit problems with availability constraints," *Advances in Applied Probability*, Vol. 40, No. 2, pp. 377-400 (2008).

Frazier, P., W. B. Powell and S. Dayanik, "A Knowledge-Gradient Policy for Sequential Information Collection," *SIAM J. on Control and Optimization*, Vol. 47, No. 5, pp. 2410-2439 (2008).

Cheung, R. K.-M., N. Shi, W. B. Powell, and H. P. Simao, "An Attribute-Decision Model for Cross-Border Drayage Problem," *Transportation Research E: Logistics and Transportation Review*, Volume 44, No. 2, pp. 217-234 (2008).

Topaloglu, H. and W.B. Powell, "Incorporating Pricing Decisions into the Stochastic Dynamic Fleet Management Problem," *Transportation Science*, Vol. 41, No. 3, pp. 281-301 (2007).

Topaloglu, H. and W. B. Powell, "Sensitivity Analysis of a Dynamic Fleet Management Model Using Approximate Dynamic Programming," *Operations Research*, Vol. 55, No. 2, pp. 319-331 (2007).

Papadaki, K. and W. B. Powell, "Monotonicity in Multidimensional Markov Decision Processes for Batch Service Problems," *Operations Research Letters*, Vol. 35, pp. 267-272 (2007).

George, A. and W. B. Powell, "Adaptive Stepsizes for Recursive Estimation with Applications in Approximate Dynamic Programming," *Machine Learning*, Vol. 65, No. 1, pp. 167-198, (2006).

Dall'Orto, L. C., T. G. Crainic, J. E. Leal and W. B. Powell, "The Single-Node Dynamic Service Scheduling and Dispatching Problem," *European Journal of Operations Research*, Vol. 170, No. 1, pp. 1-23 (2006).

Marar, A. W. B. Powell and S. Kulkarni, "Combining Cost-Based and Rule-Based Knowledge in Complex Resource Allocation Problems," *IIE transactions*, Vol. 38 (2), pp. 159-172 2006.

Topaloglu, H. and W.B. Powell, "Dynamic Programming Approximations for Stochastic, Time-Staged Integer Multicommodity Flow Problems," Informs J. on Computing, Vol. 18, No. 1, pp. 31-42 (2006).

Powell, W.B., J. Shapiro and H. Simao, "A Metastrategy for Dynamic Resource Management Problems based on Informational Decomposition," Informs J. on Computing, Vol. 18, No. 1, pp. 43-60 (2006).

Topaloglu, H. and W.B. Powell, "A Distributed Decision-Making Structure for Dynamic Resource Allocation with Nonlinear Functional Approximations," *Operations Research*, Vol. 53, No. 2, pp. 281-297 (2005)

Spivey, M. and W.B. Powell, "The Dynamic Assignment Problem," *Transportation Science*, Vol. 38, No. 4, pp. 399-419 (2004).

Powell, W.B., A. Ruszczynski and H. Topaloglu, "Learning Algorithms for Separable Approximations of Stochastic Optimization Problems," *Mathematics of Operations Research*, Vol 29, No. 4, pp. 814-836 (2004).

Powell, W.B., T. Wu, H. P. Simao and A. Whisman, "Using Low Dimensional Patterns in Optimizing Simulators: An Illustration for the Military Airlift Problem," *Mathematical and Computer Modeling,* 29, pp. 657-675 (2004).

Spivey, M. and W.B. Powell, "Some Fixed Point Results for the Dynamic Assignment Problem," *Annals of Operations Research*, Vol. 124, (G. Mitra, ed.), Kluwer Academic Publishers, pp. 15-33 (2003).

Papadaki, K. and W.B. Powell, "An Adaptive Dynamic Programming Algorithm for a Stochastic Multiproduct Batch Dispatch Problem," *Naval Research Logistics*, Vol. 50, No. 7, pp. 742-769, 2003.

Chen, Z.L. and W.B. Powell, "Exact Algorithms for Scheduling Multiple Families of Jobs on Parallel Machines," *Naval Research Logistics*, Vol. 50, No. 7, pp. 823-840, 2003.

Topaloglu, H. and W.B. Powell, "An Algorithm for Approximating Piecewise Linear Concave Functions from Sample Gradients," *Operations Research Letters*, Vol. 31, No. 1, pp. 66-76 (2003).

Papadaki, K. and W.B. Powell, "Exploiting structure in adaptive dynamic programming algorithms for a stochastic batch service problem," *European Journal of Operational Research*, Vol. 142, No. 1, pp. 108-127 (2002).

Powell, W.B., A. Marar, J. Gelfand, and S. Bowers, "Implementing Operational Planning Models: A Case Application from the Motor Carrier Industry," *Operations Research*, Vol. 50, No. 4, pp. 571-581 (2002).

Powell, W.B., J. Shapiro and H. P. Simao, "An Adaptive, Dynamic Programming Algorithm for the Heterogeneous Resource Allocation Problem," *Transportation Science*, Vol. 36, No. 2, pp. 231-249 (2002).

Godfrey, G. and W.B. Powell, "An Adaptive Dynamic Programming Algorithm for Dynamic Fleet Management, I: Single Period Travel Times," *Transportation Science*, Vol. 36, No. 1, pp. 21-39 (2002).

Godfrey, G. and W.B. Powell, "An Adaptive Dynamic Programming Algorithm for Dynamic Fleet Management, II: Multiperiod Travel Times," *Transportation Science*, Vol. 36, No. 1, pp. 40-54 (2002).

Powell, W.B., J. Shapiro and H.P. Simao, "A Representational Paradigm for Dynamic Resource Transformation Problems," *Annals of Operations Research on Modeling* (C. Coullard, R. Fourer, and J. H. Owen, eds), Springer, New York, Vol. 104, pp. 231-279, 2001.

Godfrey, G. and W.B. Powell, "An Adaptive, Distribution-Free Algorithm for the Newsvendor Problem with Censored Demands, with Application to Inventory and Distribution Problems," *Management Science*, Vol. 47, No. 8, pp. 1101-1112, (2001).

Shapiro, J, W.B. Powell and D.E. Bernstein, "A Flexible Java Representation for Uncertainty in Online Operations Research Models," Informs J. on Computing, Vol. 13, No. 1, pp. 29-55, 2001.

Carvalho, T. and W.B. Powell, "A Multiplier Adjustment Method for Dynamic Resource Allocation Problems," *Transportation Science*, Vol. 34, No. 2, pp. 150-164 (2000).

G. Godfrey and W.B. Powell, "Adaptive Estimation of Daily Demands with Complex Calendar Effects," Transportation Research B, Vol. 34, No. 6, pp. 451-469 (2000).

R. K.-L. Cheung and W.B. Powell, "SHAPE – A Stochastic, Hybrid Approximation Procedure for Two-Stage Stochastic Programs," *Operations Research*, Vol. 48, No. 1, pp. 73-79 (2000)

Powell, W.B., M.T. Towns and A. Marar, "On the Value of Globally Optimal Solutions for Dynamic Routing and Scheduling Problems," *Transportation Science*, Vol. 34, No. 1, pp. 50-66 (2000).

Powell, W.B., W. Snow and R. K.-M. Cheung, "Adaptive Labeling Algorithms for the Dynamic Assignment Problem," *Transportation Science*, Vol. 34, No. 1, pp. 67-85 (2000)

1990 - 1999: (38)

Chen, Z.-L. and W.B. Powell, "A Convergent Cutting Plane and Partial Sampling Algorithm for Multistage Linear Programs with Recourse," *Journal of Optimization Theory and Applications*, Vol. 102, No. 3, pp. 497-524 (1999).

Chen, Z.-L. and W.B. Powell, "A Column-Generation Based Decomposition Algorithm for a Parallel Machine Just-In-Time Scheduling Problem," *European Journal of Operations Research*, Vol. 116, pp. 220-232 (1999).

Chen, Z.-L. and W.B. Powell, "Solving Parallel Machine Scheduling Problems by Column Generation," Informs J. on Computing, Vol. 11, No. 1, pp. 78-94, Winter 1999.

Powell, W.B. and T. Carvalho, "Dynamic Control of Logistics Queueing Networks for Large Scale Fleet Management," *Transportation Science*, Vol. 32, No. 2, pp. 90-109, 1998.

Powell, W.B. and T. Carvalho, "Real-Time Optimization of Containers and Flatcars for Intermodal Operations," Transportation Science, Vol. 32, No. 2, pp. 110-126, 1998.

Powell, W.B. and D. Mayoras, "Finding the Yellow Brick Road: Part VII: I Finally Have a Brain!," *Interfaces*, Vol. 27, No. 5, pp. 9-14 (1997)

Powell, W.B. and D. Mayoras, "Finding the Yellow Brick Road: Part VI: Courage!" *Interfaces*, Vol. 27, No. 4, pp. 12-22 (1997).

Powell, W.B. and D. Mayoras, "Finding the Yellow Brick Road: Part V: Through the Crystal Ball" *Interfaces*, Vol. 27, No. 3, pp. 14-21 (1997).

Carvalho, T. and W.B. Powell, "Dynamic Control of Multicommodity Logistics Queueing Networks," *European Journal of Operations Research*, Vol. 98, No. 3, 1997.

Chen, Z.-L. and W.B. Powell, "A Note on Bertsekas' Small-Label-First Strategy," *Networks*, Vol. 29, No. 2, pp. 111-116. (1997)

Powell, W.B. and D. Mayoras, "Finding the Yellow Brick Road: Part IV, "I Wish I had a Brain", *Interfaces*, Vol. 27, No. 2, pp. 37-47 (1997).

Powell, W.B. and D. Mayoras, "Finding the Yellow Brick Road: Part III, "The Wizard of Oz", *Interfaces*, Vol. 27, No. 1, pp. 143-154 (1997).

Powell, W.B. and D. Mayoras, "Finding the Yellow Brick Road: Part II, "Lions and Tigers and Bears!", *Interfaces*, Vol. 26, No. 6, pp. 57-67 (1996).

Cheung, R. K.-M. and W.B. Powell, "An Algorithm for Multistage Dynamic Networks with Random Arc Capacities, with an Application to Dynamic Fleet Management," *Operations Research*, Vol. 44, No. 6, pp. 951-963. (1996).

Powell, W.B. and D. Mayoras, "Finding the Yellow Brick Road: Part I, "Toto, I Have a Feeling We're Not in Kansas Anymore!", *Interfaces*, Vol. 26, No. 5, pp. 26-33 (1996).

Powell, W.B., "A Stochastic Formulation of the Dynamic Assignment Problem, with an Application to Truckload Motor Carriers," *Transportation Science*, Vol. 30, No. 3, pp. 195-219 (1996).

Powell, W.B./"Restricted Recourse Strategies for Bounding the Expected Network Recourse Function" *Annals of Operations Research on Stochastic Programming*, (J. Higle and S. Sen, eds), Vol. 64, pp. 261-287, 1996 (with L. Frantzeskakis).

Powell, W.B., "Toward a Unified Framework for Real-Time Logistics Control," *Journal of Military Operations Research*, Vol. I, No. 4, Winter, 1996, pp. 69-79.

Cheung, R. K.-M. Cheung and W.B. Powell, "Models and Algorithms for Distribution Problems with Uncertain Demands," *Transportation Science*, Vol. 30, No. 1, pp. 43-59

"Dynamic Fleet Management as a Logistics Queueing Network," *Annals of Operations Research on Transportation*, (G. Laporte and M. Gendreau, eds.) Vol. 6, pp. 165--188 (1995) (with T. Carvalho, G. Godfrey and H Simao).

Cheung, R. K.-M. and W.B. Powell, "A Network Recourse Decomposition Method for Dynamic Networks with Random Arc Capacities," *Networks*, Vol. 24, No. 7, pp. 369-384, 1994.

Cheung, R.K.-M. and W.B. Powell, "Stochastic Programs over Trees with Random Arc Capacities," *Networks*, Vol. 24, No. 2, pp. 161-175 (1994).

Farvolden, J. M and W. B. Powell, "Subgradient Optimization for the Service Network Design Problem," *Transportation Science,* Vol. 28, No. 3, pp. 256-272, 1994.

Powell, W.B. and L.F. Frantzeskakis, "Restricted Recourse Strategies for Dynamic Networks with Random Arc Capacities," *Transportation Science* , Vol. 28, No. 1, pp. 3-23 (1994).

Frantzeskakis, L.F. and W.B. Powell, "Bounding Procedures for Dynamic Networks with Random Link Capacities, with Application to Stochastic Programming," *Networks* , Vol. 23, No. 7 pp. 575-595 (1993)..

Jones, K.L., I.J. Lustig, J.M. Farvolden, and W.B. Powell, "Multicommodity network flows: The impact of formulation on decomposition,", *Mathematical Programming*, Vol. 62, pp. 95-117 (1993).

"On Algorithms for Nonlinear Dynamic Networks", in *Network Optimization Problems: Algorithms, Complexity and Applications* (Dingzhu Du and Panox Pardalos, eds.) World Scientific Press, New Jersey, pp. 203-231 (1993). (with E. Berkkam and I. Lustig).

"A Primal Partitioning Solution for the Arc-Chain Formulation of a Multicommodity Network Flow Problem," *Operations Research*, Vol. 41, No. 4, pp. 669-693 (1993) (with J. M. Farvolden and I. Lustig).

Simao, H.P. and W.B. Powell, "Numerical Methods for Simulating Transient, Stochastic Queueing Networks - I: Methodology," *Transportation Science* , Vol. 26, No. 4, pp. 296-311 (1992).

Simao, H. P. and W.B. Powell, "Numerical Methods for Simulating Transient, Stochastic Queueing Networks - II: Experimental Results," *Transportation Science* , Vol. 26, No. 4, pp. 312-329 (1992).

Koskosidis, I A. and W.B. Powell, "Shipment Routing Algorithms with Tree Constraints," *Transportation Science* Vol 26, No. 3, pp. 230-245, 1992.

Koskosidis, I A. and W.B. Powell, "Clustering Algorithms for Consolidation of Customer Orders into Vehicle Shipments," *Transportation Research B*, Vol. 26B, No. 5, pp. 365-379 (1992) (with I. A. Koskosidis).

Braklow, J.B., W. Graham, S. Hassler, K. Peck and W.B. Powell, "Interactive Optimization Improves Service and Performance for Yellow Freight System," *Interfaces*, Vol. 22, No. 1, 1992, pp. 147-172.

Koskosidis, I A., W.B. Powell and M. Solomon, "An Optimization-Based Heuristic for Vehicle Routing and Scheduling with Time Window Constraints," *Transportation Science*, Vol. 26, No. 2, pp. 69-85, 1992.

Powell, W.B., "Optimization Models and Algorithms: An Emerging Technology for the Motor Carrier Industry," Special Issue of IEEE on Intelligent Vehicle/Highway Systems, pp. 68 - 80, 1990.

Koskosodis, I.A. and W.B. Powell, "Application of Optimization-Based Models on Vehicle Routing and Scheduling Problems with Time Window Constraints," *Journal of Business Logistics*, Vol. 11, No. 2, pp. 101-128), 1990.

Frantzeskakis, L.F. and W.B. Powell, "A Successive Linear Approximation Procedure for Stochastic, Dynamic Vehicle Allocation Problems," *Transportation Science*, Vol. 24, No. 1, pp. 40 - 57 (1990).

B.W. Lamar, Y. Sheffi and W.B. Powell, "A Capacity Improvement Lower Bound for Fixed Charge Network Design Problems," *Operations Research*, Vol. 38, No. 4, pp. 704-710 (1990).

1980 - 1989: (29)

Powell, W.B., "A Review of Sensitivity Results for Linear Networks and a New Approximation to Reduce the Effects of Degeneracy," *Transportation Science*, Vol. 23, No. 4, pp. 231-243 (1989).

Powell, W.B. and Y. Sheffi, "Design and Implementation of an Interactive Optimization System for Network Design in the Motor Carrier Industry," *Operations Research*, Vol. 37, No. 1, pp. 12-29 (1989).

Hughes, R. and W. B. Powell, "Mitigating End Effects in the Dynamic Vehicle Allocation Model," *Management Science*, Vol. 34, No. 7, pp. 859-379 (1988).

H.P. Simao, W.B. Powell, "Waiting Time Distributions for Transient Bulk Queues with General Vehicle Dispatching Strategies," *Naval Research Logistics Quarterly*, Vol. 35, pp. 285-306 (1988).

Powell, W.B., Y. Sheffi, K. Nickerson, K. Butterbaugh and S. Atherton, "Maximizing Profits for North American Van Lines' Truckload Division: A New Framework for Pricing and Operations," *Interfaces*, Vol. 18, No. 1, pp. 21-41 (1988).

D. P. Carlisle, K. S. Nickerson, S. B. Probst, Y. Sheffi, W.B. Powell, "A Turnkey, Microcomputer-Based Logistics Planning System: Process and Product," *Interfaces*, Vol. 17, No. 4, pp. 16-26 (1987).

Powell, W.B., "Waiting Time Distributions for Bulk Arrival, Bulk Service Queues with Vehicle Holding and Cancellation Strategies," *Naval Research Logistics Quarterly*, Vol. 34, No. 2, pp. 207-228 (1987).

Powell, W.B. "An Operational Planning Model for the Dynamic Vehicle Allocation Problem with Uncertain Demands," *Transportation Research B*, Vol. 21, No. 3, pp. 217-232 (1987).

H.P. Simao, W.B. Powell, "Numerical Simulation of Transient Bulk Queues with General Vehicle Dispatching Strategies," *Transportation Research B*, Vol. 20, No. 6, pp. 477-490 (1986).

W.B. Powell, Y. Sheffi, "Interactive Optimization for Motor Carrier Load Planning," *Journal of Business Logistics*, Vol. 7, No. 2, pp. 64-90 (1986).

Powell, W.B., "A Stochastic Model of the Dynamic Vehicle Allocation Problem," *Transportation Science* Vol. 20, pp. 117-129 (1986).

Powell, W.B. and P. Humblet, "The Bulk Service Queue with a General Control Strategy: Theoretical Analysis and a New Computational Procedure," *Operations Research*, Vol. 34, No. 2, pp. 267-275, 1986.

Powell, W.B. "A Local Improvement Heuristic for the Design of Less-Than-Truckload Motor Carrier Networks," *Transportation Science*, Vol 20, No. 4, pp. 246-257 (1986).

Powell, W.B. "Iterative Algorithms for Bulk Arrival, Bulk Service Queues with Poisson and non-Poisson Arrivals," *Transportation Science*, Vol. 20, No. 2, pp. 65-79 (1986).

Powell, W.B. "Approximate, Closed Form Moment Formulas for Bulk Arrival, Bulk Service Queues," *Transportation Science*, Vol. 20, No. 1, pp. 13-23 (1986).

Powell, W.B. "Analysis of Vehicle Holding and Cancellation Strategies in Bulk Arrival, Bulk Service Queues," *Transportation Science*, Vol. 19, No. 4, pp. 352-377 (1985).

Powell, W.B., "Marginal Cost Pricing of Truckload Services: A Comparison of Two Approaches," *Transportation Research B*, Vol. 19, No. 5, pp. 433-445 (1985).

W. B. Powell, Clifford Winston, "A Numerical Investigation of the Impact of Uncertain Demand and Varying Risk Preferences on the Pricing and Capacity Decisions of Transportation Firms: the Case of Airlines," *Transportation Research B*, Vol. 17, No. 6, pp. 471-490 (1983).

Y. Sheffi, W. B. Powell, "A Note on Optimal Signal Settings Over Transportation Networks," *Transportation Engineering Journal*, *American Society of Civil Engineers Transportation Journal*, Vol. 109, No. 6, pp. 824-839 (1983).

W. B. Powell and Y. Sheffi, "The Load Planning Problem of Motor Carriers: Problem Description and a Proposed Solution Approach," *Transportation Research A*, Vol. 17, No. 6, pp. 471-480, (1983).

W. B. Powell, "A Stochastic Passenger Loading Model of Airline Schedule Performance," *Transportation Research B*, Vol. 17, No. 5, pp. 399-410, (1983).

W. B. Powell, Y. Sheffi, "A Probabilistic Model of Bus Route Performance," *Transportation Science*, Vol. 17, No. 4, pp. 376-404, (1983).

Powell, W.B., "Bulk Service Queues with Deviations from Departure Schedules: The Problem of Correlated Headways," *Transportation Research B*, Vol. 17, No. 3, pp. 221-232, (1982).

Sheffi, Y. and W. B. Powell, "An Algorithm for the Equilibrium Assignment Problem with Random Link times," *Networks*, Vol. 12, No. 1, pp. 191-207, (1982).

Y. Sheffi, H. Mahmassani, W. B. Powell, "A Transportation Network Evacuation Model," *Transportation Research A*, Vol. 16, No. 3, pp. 209-218, (1982).

Powell, W. B., "Analysis of Airline Operating Strategies Under Stochastic Demand," *Transportation Research B*, Vol. 16, No. 1, pp. 31-44, (1982).

Powell, W. B., Y. Sheffi, "The Convergence of Equilibrium Algorithms with Predetermined Step Sizes," *Transportation Science*, Vol. 16, No. 1, pp. 45-55, (1982).

"Evacuation Studies for Nuclear Power Plant Sites: A New Challenge for Transportation Engineers," *Journal of the Institute of Traffic Engineers*, Vol. 51, No. 6, pp. 25-28, (1981), (co-authored with Yosef Sheffi and Hani Mahmassani).

"A Comparison of Stochastic and Deterministic Traffic Assignment Over Congested Networks," *Transportation Research B*, Vol. 15, No. 1, pp. 53-64, (1980), (co-authored with Yosef Sheffi).

BOOK CHAPTERS (24)

2010- current (9)

Warren B Powell, "From Reinforcement Learning to Optimal Control: A unified framework for sequential decisions" Book chapter for edited volume: *Handbook for Reinforcement Learning and Control* (Kyriakos Vamvoudakis, Yan Wan, Frank Lewis, Derya Cansever (eds)), Studies in Systems, Decision and Control, Springer, pp. 29-74, 2021. http://arxiv.org/abs/1912.03513 password wfa4d

Warren B. Powell, "The Next Generation of Optimization: A Unified Framework for Dynamic Resource Allocation Problems", in *Optimization in Large Scale Problems: Industry 4.0 and Society 5.0 Applications,* Springer volume, 2019., Fathi, Mahdi, Khakifirooz, Marzieh, Pardalos, Panos M. (Eds.), DOI 978-3-030-28565-4_9, pp. 47-52, 2019.

Warren B Powell, A Unified Framework for Optimization under Uncertainty, Informs TutORials, Informs, November, 2016, pp. 54-83.

Warren B. Powell. "Clearing the Jungle of Stochastic Optimization." INFORMS Tutorials in Operations Research: Bridging Data and Decisions, pp. 109-137, November, 2014, http://dx.doi.org/10.1287/educ.2014.0128

W. B. Powell, I. O. Ryzhov, "Optimal Learning and Approximate Dynamic Programming," *Reinforcement Learning and Approximate Dynamic Programming for Feedback Control*, (F. Lewis and D. Liu, eds.), John Wiley/CRC Press, New York, pp. 410-431, 2013.

J. Enders, W. B. Powell and D. Egan, "A Two-Stage Stochastic Program for the Allocation of High-Voltage Transformer Spares in the Electric Grid," *Handbook of Wind Power Systems I*, (Sorokin, A.; Rebennack, S.; Pardalos, P.M.; Iliadis, N.A.; Pereira, M.V.F. (Eds.)), Springer, New York, pp. 435-466, 2012.

Powell, W. B., "The Knowledge Gradient for Optimal Learning," Encyclopedia for Operations Research and Management Science, 2011.

Powell, W. B., "Approximate Dynamic Programming I: Modeling," Encyclopedia of Operations Research and Management Science, John Wiley and Sons, 2011.

Powell, W. B., "Approximate Dynamic Programming II: Algorithms," Encyclopedia of Operations Research and Management Science, John Wiley and Sons, 2011.

2000-2009 (9)

Powell, W. B. and P. Frazier, "Optimal Learning," TutORials in Operations Research, Chapter 10, pp. 213-246, Informs (2008).

Powell, W.B., B. Bouzaiene-Ayari and H.P. Simao, "Dynamic Models for Freight Transportation," Handbooks in Operations Research and Management Science: Transportation (G. Laporte and C. Barnhart, eds.), Elsevier, Amsterdam, pp. 285-365, 2007.

Powell, W.B. and H. Topaloglu, "Approximate Dynamic Programming for Large-Scale Resource Allocation," in *Tutorials in Operations Research*, M. P. Johnson, B. Normal and Nicola Secomandi, eds. INFORMS, 2006.

Powell, W.B., "Real-time dispatching for truckload motor carriers," in *Logistics Engineering Handbook* (G. Don Taylor, ed.), CRC Press, 2007, pp. 15-1 – 15-30.

Powell, W.B. and H. Topaloglu, "Fleet Management," in *Applications of Stochastic Programming*, (S. Wallace and W. Ziemba, eds.), Math Programming Society - SIAM Series in Optimization, Philadelphia,pp. 185-216, 2005.

Powell, W.B. and B. Van Roy, "Approximate Dynamic Programming for High Dimensional Resource Allocation Problems," (in *Learning and Approximate Dynamic Programming: Scaling up to the Real World*, J. Si, A. Barto, W.B. Powell and D. Wunsch, eds.), John-Wiley and Sons, New York, pp. 258-280, 2004.

Powell, W.B., "Dynamic Models of Transportation Operations," *Handbooks in Operations Research and Management Science: Supply Chain Management,* (S. Graves and T. A. G. de Tok, eds.), Elsevier, Amsterdam, pp. 677-756, 2003.

Powell, W. B. and H. Topaloglu, "Stochastic Programming in Transportation and Logistics," *Handbooks in Operations Research and Management Science: Stochastic Programming* (A. Shapiro and A. Ruszczynski, eds.), Elsevier, Amsterdam, pp. 555-635, 2003.

Powell, W.B. "Transportation and Logistics," Handbook of Applied Optimization, (P. M. Pardalos and M. G. C. Resende, eds.), Oxford University Press, New York. Chapter 18 (section 18.1), pp. 679-688. 2002.

1990-1999 (4)

Powell, W.B. "On Languages for Dynamic Resource Scheduling Problems," in Fleet Management and Logistics, (T. G. Crainic and G. Laporte, eds.), Kluwer Academic Publishers, Boston, 1998.

Chen, Z.L. and W.B. Powell, "A Generalized Threshold Algorithm for the Shortest Path Problem with Time Windows," in Network Design: Connectivity and Facilities (P. Pardalos, D. Du, eds.), pp. 303-318 (1998).

Chen, Z.L. and W.B. Powell, "An Optimal Control Formulation of Multiclass Machine Scheduling Problems," in *Network Optimization, Lecture Notes in Economics and Mathematical Systems,* (P. Pardalos, D. Hearn and W. Hager, eds.), Springer-Verlag, New York, pp. 423-440, 1997.

Powell, W.B. and D. Gittoes, "An Approximate Labeling Algorithm for the Dynamic Assignment Problem," Advanced Methods in Transportation Analysis, (L. Bianco, P. Toth, M. Bielli, eds.), Springer, New York, pp. 547-584, 1996.

1980-1989 (2)

Powell, W.B. "A Comparative Review of Alternative Algorithms for the Dynamic Vehicle Allocation Problem," *Vehicle Routing: Methods and Studies* (B. Golden and A. Assad, eds.), North Holland, pp. 249-291 (1988).

Powell, W.B. and A.R. Odoni and P. Jaillet, "Stochastic and Dynamic Networks and Routing," *Handbook in Operations Research and Management Science: Network Routing,* (M.O. Ball, T.L. Magnanti, C.L. Monma and G.L. Nemhauser, eds.), pp. 141-295 (1995).

REFEREED CONFERENCE PROCEEDINGS (46)

2010 – current (27)

Donghun Lee, W.B. Powell, "Online Learning with Regularized Knowledge Gradient," 26th Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD-22), 2022.

Yura Oh, W.B. Powell, "Optimal Policies for Routing Multi Sensor-Effector Combined Autonomous Devices," for MRS 2019, Rutgers. April 8, 2019.

Donghun Lee, W.B. Powell, "Meta-learning of Bidding Agent with Knowledge Gradient in a Fully Agent-based Sponsored Search Auction Simulator," Proceedings of the 18th International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2019), 2019.

Donghun Lee, Piotr Ziolo, Weidong Han, W.B. Powell, "Optimal Online Learning in Bidding for Sponsored Search Auctions," 2017 IEEE Symposium Series on Computational Intelligence/ADPRL (SSCI), Hawaii, November 27-December 1, 2017.

Angela Zhou, Haitham Bou-Ammar, W.B. Powell, "Data-Efficient Off-Policy Policy Evaluation for Reinforcement Learning," ICMP 2016 Workshop on Data-Efficient Machine Learning, New York City, June 24, 2016.

Yingfei Wang, Chu Wang, W. B. Powell, "The Knowledge Gradient for Sequential Decision Making with Stochastic, Binary Feedback," Proceedings of the 33rd International Conference on Machine Learning, June, 2016.

Yan Li, Han Liu, W.B. Powell, "A Lasso-based Sparse Knowledge Gradient Policy for Sequential Optimal Learning," AISTATS, May, 2016.

Kristofer Reyes, Si Chen, Yan Li, Warren Powell, "Quantifying experimental characterization choices in Optimal Learning and materials design" Proceedings Supplemental UE: TMS 2015 Conference Proceedings, Computational Modeling and Stochastic Methods for Materials Discovery and Properties, *TMS2015 Supplemental Proceedings*: 697-704, March, 2015.

Daniel Jiang, Thuy Pham, Warren B. Powell, Daniel Salas, Warren Scott, "A Comparison of Approximate Dynamic Programming Techniques on Benchmark Energy Storage Problems: Does Anything Work?," IEEE Symposium Series on Computational Intelligence, Workshop on Approximate Dynamic Programming and Reinforcement Learning, Orlando, FL, December, 2014.

Harvey Cheng, Arta Jamshidi, W. B. Powell, "The Knowledge Gradient Algorithm using Locally Parametric Approximations," Winter Simulation Conference, December, 2013.

D. Salas, W. B. Powell, "A Scalable Approximate Dynamic Programming Algorithm for Control of Multidimensional Energy Storage Portfolios," The 1st Multidisciplinary Conference on Reinforcement Learning and Decision Making, Princeton University, Princeton, NJ, 2013.

D. Jiang, W. B. Powell, "An Approximate Dynamic Programming Algorithm for Optimal Hour–Ahead Bidding in the Real–Time Electricity Market with Battery Storage," The 1st Multidisciplinary Conference on Reinforcement Learning and Decision Making, Princeton University, Princeton, NJ, 2013.

Donghun Lee, W. B. Powell, B. Defourny, "Bias-Corrected Q-Learning to Control Max Operator Bias in Q-Learning," IEEE Workshop on Adaptive Dynamic Programming and Reinforcement Learning, Singapore, 2013.

B. Defourny, W. B. Powell, H. P. Simao, "Robust Forecasting for Stochastic Unit Commitment with Wind," HICSS 2013.

Ilya Ryzhov, Boris Defourny, Warren Powell, "Ranking and Selection Meets Robust Optimization," Winter Simulation Conference, 2012.

D.H. Lee and W. B. Powell, "An Intelligent Battery Controller Using Bias-Corrected Q-learning," AAAI CompSust2012, July, 2012.

Powell, W.B., Belgacem Bouzaiene-Ayari, Clark Cheng, Ricardo Fiorillo, Sourav Das, "Strategic, Tactical and Real-Time Planning of Locomotives at Norfolk Southern using Approximate Dynamic Programming," *ASME Joint Rail Conference*, April, 2012.

Ryzhov, I. O., Awais Tariq, W. B. Powell, "May the Best Man Win: Simulation Optimization for Match-Making in E-Sports," *Proceedings of the Winter Simulation Conference*, Phoenix, Arizona, December 11-14.

Ilya O. Ryzhov, Warren B. Powell, The value of information in multi-armed bandits with exponentially distributed rewards, International Conference on Computational Science 4 1363–1372 (2011)

J. Berger, A. Boukhtouta, A. George, Powell, W. B., "An Adaptive-Learning Framework for Semi-Cooperative Multi-Agent Coordination," SSCI 2011 ADPRL - 2011 *IEEE Symposium on Adaptive Dynamic Programming and Reinforcement Learning*, Paris, April, 2011.

Ryzhov, I. O. and W. B. Powell, "Bayesian Active Learning With Basis Functions," SSCI 2011 ADPRL - 2011 *IEEE Symposium on Adaptive Dynamic Programming and Reinforcement Learning*, Paris, April, 2011.

Hannah, L., W. B. Powell, D. Blei, "Nonparametric Density Estimation for Stochastic Optimization with an Observable State Variable," Neural Information Processing Society, Vancouver, December, 2010.

Scott, W., W. B. Powell, H. P. Simao, "Calibrating Simulation Models using the Knowledge Gradient with Continuous Parameters," Proceedings of the 2010 Winter Simulation Conference (B. Johansson, S. Jain, J. Montoya-Torres, J. Hugan, and E. Yucesan, eds.,) Baltimore, Md, December, 2010.

Ryzhov, I. O., W. B. Powell, "Approximate Dynamic Programming with Correlated Bayesian Beliefs," Forty-Eighth Annual Allerton Conference on Communication, Control, and Computing, September 29 – October 1, 2010, Allerton Retreat Center, Monticello, Illinois., IEEE Press, pp. 1360-1367.

Ryzhov, I. O., M. Valdez-Vivas, W. B. Powell, "Optimal Learning of Transition Probabilities for the Two-Agent Newsvendor Problem," Proceedings of the 2010 Winter Simulation Conference B. Johansson, S. Jain, J. Montoya-Torres, J. Hugan, and E. Yucesan, eds., Baltimore, Md, December, 2010.

Ryzhov, I. O., P. I. Frazier, W. B. Powell, "On the Robustness of a One-Period Look-ahead Strategy for Multi-armed Bandit Problems," International Conference on Computer Science, Amsterdam, May, 2010.

Hannah, L., D. Blei, W. B. Powell, "Dirichlet Process Mixtures of Generalized Linear Models," AISTATS, Italy, May, 2010.

2000-2009 (16)

Ryzhov, I., W. B. Powell, "A Monte-Carlo Knowledge Gradient Method for Learning Abatement Potential of Emissions Reduction Technologies," *Winter Simulation Conference*, 2009. M. D. Rossetti, R. R. Hill, B. Johansson, A. Dunkin, and R. G. Ingalls, eds, 2009, pp. 1492-1502.

Frazier, P., W. B. Powell, H. P. Simao, "Simulation Model Calibration with Correlated Knowledge-Gradients," *Winter Simulation Conference*, M. D. Rossetti, R. R. Hill, B. Johansson, A. Dunkin, and R. G. Ingalls, eds, 2009, pp. 339-353.

Ma, J. and W. B. Powell, "A convergent recursive least squares policy iteration algorithm for multi-dimensional Markov decision process with continuous state and action spaces," *IEEE Conference on Approximate Dynamic Programming and Reinforcement Learning* (part of IEEE Symposium on Computational Intelligence), March, 2009.

Ryzhov, I. and W. B. Powell, "The Knowledge Gradient Algorithm For Online Subset Selection," *IEEE Conference on Approximate Dynamic Programming and Reinforcement Learning* (part of IEEE Symposium on Computational Intelligence), March, 2009.

P. Frazier, W. B. Powell, S. Dayanik and P. Kantor, "Approximate Dynamic Programming in Knowledge Discovery for Rapid Response," HICSS Conference, 2009.

S Dayanik, W. B. Powell and K. Yamazaki "An Asymptotically Optimal Strategy in Sequential Change Detection and Identification Applied to Problems in Biosurveillance" *Proceedings of the 3rd INFORMS Workshop on Data Mining and Health Informatics*, (J. Li, D. Aleman, R. Sikora, eds.), 2008.

Frazier, P. and W. B. Powell, "The knowledge gradient stopping rule for ranking and selection," *Proceedings of the Winter Simulation Conference*, December 2008.

H. P. Simao and W. B. Powell, "Approximate Dynamic Programming for Managing High Value Spare Parts," 2008 ICPR Americas Conference (recipient best paper prize for the conference). Also appeared in *Journal of Manufacturing Technology Management*.

Powell, W. B., "Approximate Dynamic Programming: Lessons from the field," Invited tutorial, Proceedings of the 40th Conference on Winter Simulation, pp. 205-214, 2008.

Powell, W. B., "Approximate Dynamic Programming for High-Dimensional Problems," Invited tutorial article for Winter Simulation Conference, (S.G. Henderson, B. Biller, M.-H. Hsieh, J. Shortle, JD Tew, and RR Barton, eds.) December, 2007.

Nascimento, J. and W. B. Powell, "An Optimal ADP Algorithm for a High-Dimensional Stochastic Control Problem," IEEE Conference on Approximate Dynamic Programming and Reinforcement Learning, April, 2007.

Frazier, P. and W. B. Powell, "The Knowledge Gradient Policy for Offline Learning with Independent Normal Rewards," in *Approximate Dynamic Programming and Reinforcement Learning*, IEEE International Symposium on Approximate Dynamic Programming and Reinforcement Learning, pp. 143-150, April, 2007.

Powell, W.B., "The Optimizing-Simulator: Merging Simulation and Optimization using Approximate Dynamic Programming," *Proceedings of the Winter Simulation Conference*, December, 2005.

Powell, W.B., A. George, B. Bouzaiene-Ayari and H. Simao, "Approximate Dynamic Programming for High Dimensional Resource Allocation Problems," *Proceedings of the IJCNN*, Montreal, August 2005.

Wu. T. W. and W. B. Powell, "Measuring the Cost of Imperfect Information for the Military Airlift Problem", *Proceedings for IIE Annual Conference* 2004.

J. Gelfand, S. Epstein and W. Powell, "Integrating Pattern Learning in Multimodal Decision Systems," Proceedings of the AAAI Spring Symposium on Multimodal Learning, TR.SS-98-04, Stanford University, March, 1998, AAAI Press, Menlo Park (1998) p. 96-101.

1990-1999 (0)

1980-1989 (3)

Powell, W.B. and H. Simao, "Stochastic Properties of Flows in Freight Consolidation Networks," Elsevier, pp. 437-457, 1987. Tenth International Symposium on Transportation and Traffic Theory, (N. Gartner and N. Wilson, eds.)

"The Dynamic Vehicle Allocation Problem with Uncertain Demands," Ninth International Symposium on Transportation and Traffic Theory (1984), (co-authored with Y. Sheffi and S. Thiriez).

"Short and Long Term Analysis of Airline Operating Strategies Under Deregulation," *Transportation Research Forum*, Vol. XXI, pp. 147-156 (1980).

RESEARCH REPORTS

Si Chen, Kristofer-Roy G. Reyes, Xinyu He, Maneesh K. Gupta, Jesse P. Goodman, Michael C. McAlpine, Warren B. Powell, "Optimal Learning for Release Profile Matching with a Noncentral Chi-Squared Noise Distribution",

Scott, W. R., W. B. Powell, "Portfolio Selection and Covariance Matrix Estimation using an Errors-in-Variables Factor Model with Applications to Portfolio Selection and Electricity Markets," Technical paper, Princeton University, 2013.

J. Nascimento and W. B. Powell, "An Optimal Solution to a General Jet Fuel Hedging Problem," Technical paper, Princeton University, 2009.

George, W. B. Powell, B. Bouzaiene-Ayari, J. Berger, A. Boukhtouta, "An Adaptive Learning Framework for Semi-Cooperative Multi-agent Cooperation," Working paper for Defense Research Canada, Summer, 2008.

Frazier, P. and W. B. Powell, "Approximate Value Iteration Converges Slowly When Smoothed with a 1/n Stepsize," Technical paper, Princeton University, 2007.

"Real-Time Linehaul Dispatching: Formulations, Models and Algorithms," Final project reported submitted to Yellow Freight System, Inc., July, 1990.

"A Case Study of St. Johnsbury Trucking," prepared for classroom use for courses in transportation management (1981).

Toward a Theory of Transportation Supply, PUR/DOT draft final report (1979) (co-authored with Marvin Manheim).

"Identification and Analyses of Specific Transportation System Phenomena," Working paper CTS-TECH-77-2 (1977), (co-authored with Marvin Manheim).

arXiv (22)

1. Xiaohe Luo, W>B. Powell, Entropy Minimization for Optimization of Expensive, Unimodal Functions, Feb 23 2022, arXiv preprint, http://arxiv.org/abs/2302.11386 (password duntn)
2. Lawrence Thul, W.B. Powell, An Information-Collecting Drone Management Problem for Wildfire Mitigation, Jan 18, 2023. http://arxiv.org/abs/2301.07013 Password 8cus7
3. Lina al-Kanj, Warren Powell, Belgacem Bouzaiene-Ayari, The Information-Collecting Vehicle Routing Problem: Stochastic Optimization for Emergency Storm Response, Jan 17, 2023 http://arxiv.org/abs/2301.06497 password kfv8f

4. Dionysios Kalogerias, W.B. Powell, "Recursive Optimization of Convex Risk Measures: Mean Semi-deviation Models," arXiv preprint arXiv:1804.00636
5. Daniel Jiang, W. B. Powell, "Practicality of Nested Risk Measures for Dynamic Electric Vehicle Charging," https://arxiv.org/abs/1605.02848. Oct 3, 2017.
6. Warren Powell, Saeed Ghadimi, "The Parametric Cost Function Approximation: A new approach for multistage stochastic programming," https://arxiv.org/abs/2201.00258, Jan, 2022.
7. Larry Thul, Warren Powell, "Stochastic Optimization for Vaccine and Testing Kit Allocation for the COVID-19 Pandemic," https://arxiv.org/abs/2004.05417
8. Kris Reyes, Warren Powell, "Optimal Learning for Sequential Decisions in Laboratory Experimentation," http://arxiv.org/abs/2004.05417, Password: ycanm.
9. Warren B. Powell, "On State Variables, Bandit Problems and POMDPs", arXiv Feb 2020. http://arxiv.org/abs/2002.06238 password 2787n
10. Warren B. Powell, From Reinforcement Learning to Optimal Control: A unified framework for sequential decisions, arXiv:1912.03513
11. Joseph Durante, Juliana Nascimento, Tsvetan Asamov, W.B. Powell, "Risk Directed Importance Sampling in Stochastic Dual Dynamic Programming with Hidden Markov Models for Grid Level Energy Storage," https://arxiv.org/abs/2001.06026, 2020.
12. Saeed Ghadimi, Raymond T. Perkins, Warren B. Powell, Reinforcement Learning via Parametric Cost Function Approximation for Multistage Stochastic Programming, arXiv:2001.00831
13. Lina Al-Kanj, Juliana Nascimento, Warren B. Powell, Approximate Dynamic Programming for Planning a Ride-Sharing System using Autonomous Fleets of Electric Vehicles, arXiv:1810.08124
14. Dionysios S. Kalogerias, Warren B. Powell, Zeroth-order Stochastic Compositional Algorithms for Risk-Aware Learning, arXiv:1912.09484
15. Dionysios S. Kalogerias, Warren B. Powell, Recursive Optimization of Convex Risk Measures: Mean-Semideviation Models, arXiv:1804.00636
16. D. S. Kalogerias and W. B. Powell, Recursive optimization of convex risk measures: Mean-semideviation models, arXiv preprint, arXiv:1804.00636, (2018), https://arxiv.org/abs/1804.00636.
17. Yingfei Wang, Juliana Martins Do Nascimento, Warren Powell, Reinforcement Learning for Dynamic Bidding in Truckload Markets: an Application to Large-Scale Fleet Management with Advance Commitments, arXiv:1802.08976
18. Joseph L. Durante, Juliana Nascimento, Warren B. Powell, Backward Approximate Dynamic Programming with Hidden Semi-Markov Stochastic Models in Energy Storage Optimization, arXiv:1710.03914
19. Yingfei Wang, Chu Wang, Warren Powell, Optimal Learning for Sequential Decision Making for Expensive Cost Functions with Stochastic Binary Feedbacks, arXiv:1709.05216
20. Yingfei Wang, Warren Powell, MOLTE: a Modular Optimal Learning Testing Environment, arXiv:1709.04553

21. Daniel R. Jiang, Lina Al-Kanj, Warren B. Powell, Monte Carlo Tree Search with Sampled Information Relaxation Dual Bounds, arXiv:1704.05963
22. Raymond T. Perkins III, Warren B. Powell, Stochastic Optimization with Parametric Cost Function Approximations, arXiv:1703.04644

CARTOONS (1)

Grady Klein, Sajan Saini, W. B. Powell, "Energy and Uncertainty," Princeton EQuad Newsletter, January, 2014:

http://energysystems.princeton.edu/resources/EnergyandUncertaintyCartoonJan2014.pdf

PATENTS (1)

WB Powell, DR Jiang, Method for bidding battery storage into hour-ahead energy markets, US Patent 9,965,802. Granted 2018.

POPULAR ARTICLES (12)

"From Optimization Models to Policies: The power of parameterized deterministic optimization models," ORMS Today, January, 2026.

"Working with Industry: From the Laboratory to the Field, and Back," ORMS Today, August, 2025.

"If You Want to Know What AI Does… Just Look at the Objective Function," AI Edge Newsletter, Loyola University in Chicago, 2024 (Steve Platt ed).

"We need to modernize how we introduce students to optimization," ORMS Today feature article, 2024.

"A Universal Framework for Sequential Decision Problems: Welcome to the jungle of stochastic optimization," ORMS Today, February 2023.

"The Jungle of Stochastic Optimization," SIAM News, November, 2015.

"Bridging the Fields of Stochastic Optimization," Optima Newsletter, January, 2015.

W. B. Powell, "Energy and Uncertainty: Models and Algorithms for Complex Energy Systems," AI Magazine, November, 2014.

"Optimal Learning," OR/MS Today, August, 2012.

"The Academic/Consultant: From the laboratory to the field and back", OR/MS Today, August, 2009.

"Approximate Dynamic Programming – A Melting Pot of Methods," Informs Computing Society Newsletter, Fall, 2008 (Harvey Greenberg, ed.)

"What do we do with all this information? Optimization Models Can Help Get a Handle on Data for Load-Matching," *Transport Topics*, May 17, 1993.

Working papers

Weidong Han, W.B. Powell, "Optimal Learning Approach to Budget Constrained Bidding in Online Advertisement Auctions,"

Yingfei Wang, W.B. Powell, "An optimal learning method for developing personalized treatment regimes,"