Curriculum Vita

Dimitris Bertsimas

Sloan School of Management, MIT

I. Education

- National Technical University of Athens (N.T.U.A.), Greece	Diploma in Electrical Engineering	1985
- Massachusetts Institute of Technology	M.S. in Operations Research	1987
- Massachusetts Institute of Technology	Ph.D. in Operations Research and Applied Mathematics	1988

II. Academic appointments

Associate Dean of Business Analytics, Sloan School, MIT	2019-present
Co-director, J-clinic, MIT	2020-present
Co-director, Operations Research Center, MIT	2006-2019
Faculty Director of the Master of Business Analytics, MIT	2013-present
Boeing Professor of Operations Research, Sloan School, MIT	1997-present
Miller Visiting Professor, University of California, Berkeley	2002
Visiting Professor, Stanford University	1996
Professor of Operations Research, Sloan School, MIT	1995-1997
E. Pennell Brooks Professor of Operations Research, Sloan School, MIT	1994-1996
Associate Professor of Operations Research, Sloan School, MIT	1992-1993
Assistant Professor of Management Science, Sloan School of Management, MIT	1988-1992

III. Principal Research Interests: Optimization, Machine Learning, Health Care and Medicine, Transportation, Applied Probability, Finance.

IV. Awards

- Finalist in Edelman competition, INFORMS for work with Janssen	2022
- Honorary Doctorate, University of Athens, Greece	2021
- The Frederick W. Lanchester Prize, INFORMS	2021
- The Innovative Applications in Analytics Award, INFORMS	2021
- Finalist in Edelman competition, INFORMS for work with OCP	2021
- The William Pierskalla best paper award in health care	2020
- The John von Neumann Theory Prize, INFORMS	2019
- The President's award, INFORMS	2019
- Finalist in Edelman competition, INFORMS for work with Boston Public Schools	2019
- Outstanding teaching award, MIT Sloan	2017
- Distinguished IFORS Lecturer	2016
- The Harold Larnder Prize	2016
- The Military Operations Research Best Paper Prize	2015
- The Jamieson prize, MIT	2015
- The Philip Morse lectureship award, INFORMS	2013
- The William Pierskalla best paper award in health care	2013
- Best paper award in Transportation Science	2013
- Farkas prize, INFORMS Optimization Society	2008
- INFORMS fellow	2007
- Member of the National Academy of Engineering	2005
- OR Gold medal for Greek Scientists, Greek OR society	2004

- Miller fellowship, University of California, Berkeley 2002
- Samuel M. Seegal Prize awarded annually to an MIT faculty who excels in inspiring students to pursue and achieve excellence 1999
- Bodossaki prize awarded every two years to most distinguished Greek scientists under 40 1998
- Finalist in Edelman competition of INFORMS for work with GMO 1998
- Erlang prize, INFORMS 1996
- SIAM Optimization Prize 1996
- Presidential Young Investigator award , NSF 1991-1996
- First prize in the George E. Nicholson, INFORMS 1989
- First prize in the dissertation competition in Transportation, INFORMS 1989

V. Professional Activities

1. Member of the board of the Bodosakis Foundation, 2021-present.
2. Member of the board for mathematical sciences of the National Research Council, 2001-2004.
3. Member of the committee to elect new members for Section 8 (Industrial Engineeering), National Academy of Engineering, 2008-2011.
4. Member of the von Neuman award committee of INFORMS, 2010-2012, (chairman in 2012).
5. Member of the board for the Institute of Mathematics and its Applications (IMA), 2001-2004.
6. Member of the committee to select the EURO Gold award, 2005.
7. Chairman of the Lanchester prize committee of INFORMS, 2000-2001.
8. External reviewer for the Risk Lab, ETH, Switzerland, 2003, the Department of IE/MS, Northwestern University, 2004, New York University Stern School of Business in 2012.

9. External Advisory Board, Systems Engineering Division at Boston University, 2010.

10. Chairman of the Edgerton prize committee of MIT, 2006-2007.

11. Chairman of the board of directors, National University of Athens, Greece, 2013-2016.

12. Member of Institute for Operations Research and Management Sciences (INFORMS), Society of Industrial and Applied Mathematics (SIAM), Mathematical Optimization Society, Institute of Mathematical Statistics.

VI. Industrial Experience

1. Consultant for over one hundred leading companies, 1991-present.

2. Founder of Dynamic Ideas, LLC, 1998-present. Assets of the company sold to American Express in 2002. It operates as a consulting and publishing company.

3. Member of the board of D2-Hawkeye, 2003-2009. Company sold to Verisk Health in 2009.

4. Co-founder of Savvi Financial, LLC, 2011-present.

5. Co-founder of Benefits Science, LLC, 2011-present.

6. Co-founder of ReClaim Health, LLC, 2016-present.

7. Co-founder of P2 Analytics, LLC, 2016-Present.

8. Co-founder of Interpretable AI, LLC, 2018-present.

9. Co-founder of Alexandria Health, LLC, 2018-present.

10. Founder of Holistic Hospital Optimization, LLC, 2022-present.

VII. Journal Service

1. Editor in Chief of INFORMS Journal of Optimization, 2017-present

2. Area Editor for optimization in Management Science, 2009-2015.

3. Area Editor for Financial Engineering, Operations Research, 2003-2008.

4. Former Associate editor for many journals.

VIII. Thesis Supervision

Completed PhD students

1. Michel Goemans, Probabilistic and worst case analysis of LP relaxations for a class of connectivity problems, 1990 (Tucker prize of Mathematical Programming Society, 1991, 2nd prize in Nicholson competition of INFORMS, 1991).

2. Daisuke Nakazato, Transient distributional results in queues with applications to queueing networks, 1990.

3. Garrett van Ryzin, Dynamic vehicle routing problems, 1991 (2nd prize in Transportation dissertation competition of INFORMS, 1992, honorable mention in Nicholson competition of INFORMS, 1991).

4. Peter Vranas, Ground holding strategies for a network of airports in air traffic control, 1992 (2nd prize in Transportation dissertation competition, 1992).

5. Michael Peterson, Transient congestion phenomena in air transportation, 1992.

6. Carolyn Haibt-Norton, Topics in discrete optimization, 1993.

7. Haiping Xu, Optimal policies for stochastic and dynamic vehicle routing problems, 1994.

8. Zhihang Chi, Dynamic and network effects in airline yield management, 1994.

9. Georgia Mourtzinou, An axiomatic approach to queueing systems, 1995 (2nd prize in Nicholson competition of INFORMS, 1996).

10. Jose Niño-Mora, Optimal resource allocation in a dynamic and stochastic environment: a mathematical programming approach, 1995.

11. Michael Ricard, Optimization of queueing networks: a linear control approach, 1995.

12. Joe Millner, A market approach to airtraffic control, 1995.

13. Andrew Luo, Continuous linear programming: Theory, algorithms and applications, 1995.

14. Chung-Piaw Teo, Constructing approximation algorithms via linear programming relaxations: primal dual and randomized rounding techniques, 1996 (honorable mention in Nicholson competition of INFORMS, 1996).

15. Ioannis Paschalidis, Large deviations in high speed communication networks, 1996 (2nd prize in Nicholson competition of INFORMS, 1997).

16. Sarah Stock, Stochastic and dynamic models for airtraffic flow management, 1997 (1st prize in Transportation Dissertation of INFORMS, 1997, 2nd prize in Dantzig award, 1997).

17. David Gamarnik, Stability and performance of multiclass queueing networks, 1997.

18. Thalia Chryssikou, Multiperiod portfolio optimization in the presence of transaction costs, 1998.

19. Ioana Popescu, Applications of optimization in probability, finance and revenue management, 1999, (honorable mention in Nicholson competition of INFORMS, 1999).

20. Jay Sethuraman, A stochastic control approach for multiclass queueing networks, 1999 (honorable mention in Nicholson competition of INFORMS, 2000).

21. Leon Hsu, The bottleneck phenomenon in transportation systems, 1999.

22. Ramazan Demir, Approximate dynamic programming for integer programming problems, 2000.

23. Dessi Pachamanova, A robust optimization approach to finance, 2002.

24. Sanne de Boer, Pricing and revenue management in a netwrok environment, 2003 (2nd prize in Nicholson competition of INFORMS, 2003).

25. Adam Mersereau, Adaptive and dynamic models in marketing, 2003.

26. Romy Shioda, An Integer programming approach to data mining, 2003.

27. Natasha Busheva, Finance without price dynamics, 2003.

28. Jeff Hawkins, A Lagrangean decomposition method for dynamci optimization and its applications, 2003.

29. Karthik Natarajan, Probabilistic Combinatorial Optimization: Moments, Semidefinite Programming and Asymptotic Bounds, (Honorable mention in Nicholson competition of INFORMS, 2003), Singapore-MIT-Alliance, 2004.

30. Melvyn Sim, Robust optimization, 2004 (2nd prize in Nicholson competition of INFORMS, 2002 and 2nd prize in Nicholson competition of INFORMS, 2004), 2004.

31. Aurelie Thiele, A robust optimization approach to supply chains and revenue management, (first prize in Nicholson competition of INFORMS, 2003), 2004.

32. Michele Aghassi, Robust Optimization, game theory and variational inequalities, 2005.

33. David Brown, Risk and robust optimization, 2006 (2nd prize in Nicholson competition of INFORMS, 2005).

34. Constantine Caramanis, Adaptive optimization, 2006.

35. Kwong Meng Teo, Nonconvex robust optimization, 2007.

36. David Czerwinski, Assessing quality of health care, 2008.

37. Premal Shah, Analysis of employee stock options and guaranteed withdrawal benets for life, 2008 (first prize in student paper competition in Financial Services Section of INFORMS, 2007).

38. Margret Bjarnadottir, A data driven approach to health care: applications using claims data, 2008.

39. Dmitriy Katz-Rogozhnikov, Algorithmic issues in queueing systems and combinatorial counting problems, 2008.

40. Apostolos Fertis, A robust optimization appraoch to stastical estimation problems, 2009.

41. Xuan Vinh Doan, Optimization under moment, robust, and data-driven models of uncertainty, 2009.

42. Dan Iancu, Multi-stage adjustable robust optimization, with applications in inventory and revenue management, 2010 (first prize in student paper competition in Optimization Section of INFORMS, 2009).

43. Alex Rikun, Applications of robust optimization to queueing and inventory systems, 2011.

44. Nikos Trichakis, Fairness in operations: from theory to practice, 2011 (winner of the second prize of George Dantzig Best thesis award, 2011).

45. Xu Sun, Advances in power systems: robustness, adaptability and fairness, 2011.

46. Adrian Becker, Decomposition methods for large scale stochastic and robust optimization problems, 2011.

47. Shubham Gupta, A tractable optimization framework for air traffic flow management addressing fairness, collaboration and stochasticity. 2012.

48. Allison Chang, Integer optimization methods for machine learning, 2012.

49. Michael Frankovitch, Air traffic flow management at airports: A unified optimization approach, 2012.

50. Chaitanya Bandi, Tractable stochastic analysis in high dimensions: a robust optimization approach, 2013 (best paper award among ORC students in 2012, finalist in the Nicholson competition in 2012).

51. Allison O'Hair, Personalized diabetes management, 2013 (winner of the William Pierskalla award in 2013 for best paper in Health care).

52. Matthew Fontana, Optimal routes for electric vehicles facing uncertainty, congestion and energy constraints, 2013.

53. Vishal Gupta, Data-driven models for uncertainty and behavior (best paper award among ORC students in 2013, finalist in the Nicholson competition in 2013), 2014.

54. Nathan Kallus, From data to decisions through new interfaces between optimization and statistics (best paper award among ORC students in 2013, finalist in the Nicholson competition in 2013), 2015.

55. Angie King, Regression under a modern optimization lens, 2015.

56. John Silberholz, Analytics for Improved Cancer Screening and Treatment, (winner of the William Pierskalla award in 2013 for best paper in Health care), 2015.

57. Nataly Youssef, Stochastic Analysis via Robust Optimization, (best paper award among ORC students in 2012, finalist in the Nicholson competition in 2012), 2015.

58. Velibor Misic, Data, Models and Decisions in Large-Scale Stochastic Optimization Problems, 2016.

59. Iain Dunning, Advances in Robust and Adaptive Optimization: Algorithms, Software, and Insights, 2016. (best paper award among ORC students in 2016).

60. Nikita Korolko, A Robust Optimization Approach to Online Problems, 2017.

61. Alex Weinstein, From Data to Decisions in Healthcare: An Optimization Perspective, 2017.

62. Jerry Kung, An Analytics Approach to Problems in Health Care, 2017.

63. Frans de Ruiter, Primal and dual approaches to adjustable robust optimization, 2018 (1st prize in Optimization for 2017 best student paper).

64. Jack Dunn, Optimal Trees for Prediction and Prescription, 2018 (best paper award among ORC students in 2016).

65. Martin Copenhaver, Sparsity and robustness in modern statistical estimation, 2018 (best paper award among ORC students in 2015).

66. Daisy Ying Zhuo, New Algorithms in Machine Learning with Applications in Personalized Medicine, 2018.

67. Joel Tay, Integrated Robust and Adaptive Methods in the Heating Oil Industry, 2018.

68. Sebastien Martin, The Edge of Large-Scale Optimization in Transportation and Machine Learning, 2019 (best paper award among ORC students in 2018, George Dantzig dissertation award 2019, Transportation Thesis Prize, 2019).

69. Yee Sian Ng, Advances in Data-Driven Models for Transportation, 2019.

70. Colin Pawlowski, Machine Learning for Problems with Missing and Uncertain Data with Applications to Personalized Medicine, 2019.

71. Chris McCord, Data-Driven Dynamic Optimization with Auxiliary Covariates, 2019.

72. Nishanth Mundru, Predictive and Prescriptive Methods in Operations Research and Machine Learning: An Optimization Approach, 2019.

73. Julia Yan, From Data to Decisions in Urban Transit and Logistics, 2020.

74. Brad Sturt, Dynamic Optimization in the Age of Big Data, 2020 (2nd prize in Nicholson competition of INFORMS, 2017, best paper award among ORC students in 2019).

75. Jean Pauphilet, Algorithmic advancements in discrete optimization Applications to machine learning and healthcare operations, 2020 (1st Prize in Nicholson competition of INFORMS, 2020, best paper award among ORC students in 2020, 1st prize in student paper for INFORMS Computer Science Section, 2019, Honorable mention George Dantzig dissertation award 2020).

76. Yuchen Wang, Interpretable Machine Learning Methods with Applications to Health Care, 2020.

77. Agni Orfanoudaki, Novel Machine Learning Algorithms for Personalized Medicine and Insurance, 2021.

78. Arthur Delarue, Optimizing School Operations, 2021 (best paper award among ORC students in 2018).

79. Nihal Koduri, Essays on Decision Making Under Uncertainty, 2021.

80. Hari Bandi, Improving Efficiency and Fairness in Machine Learning: a Discrete Optimization Approach, 2021.

81. Matthew Sobiesk, Machine Learning Algorithms and Applications in Health Care, 2021.

82. Michael Li, Algorithms for Large-scale Data Analytics and Applications to the COVID-19 Pandemic, 2022 (Finalist Edelman competition, 2022).

83. Ivan Paskov, Stable Machine Learning, 2022.

84. Driss Lahlou Kitane, Sparsity and Machine Learning, Theory and Applications, 2022.

85. Berk Ozturk, Global and Robust Optimization for Engineering Design, 2022.

86. Ryan Cory-Wright, Integer and Matrix Optimization: A Nonlinear Approach, 2022 (1st Prize in Nicholson competition of INFORMS, 2020, best paper award among ORC students in 2020, 1st prize in student paper for INFORMS Computer Science Section, 2019).

87. Holy Wilberg, Data-driven Healthcare via Constraint Learning and Analytics, 2022.

88. Ted Papalexopoulos, Multi-Objective Optimization for Public Policy, 2022.

Current PhD students

89. Vasilis Digalakis, expected completion 2023.

90. Liangyuan Na, expected completion 2023.

91. Suleeporn Sujichantararat, expected completion 2023.

92. Leonard Boussioux, expected completion 2023.

93. Kimberly Villalobos Carballo, expected completion 2024.

94. Zhen Lin, expected completion 2024.

95. Cynthia Zeng, expected completion 2024.

96. Adam Cheol Woo Kim, expected completion 2024.

97. Nicholas Johnson, expected completion 2025.

98. Baptiste Rossi, expected completion 2025.

99. Yu Ma, expected completion 2025.

100. Thodoris Koukouvinos, expected completion 2025.

101. Aggelos Koulouras, expected completion 2025.

102. Eli Pivo, expected completion 2025.

103. Wes Gurnee, expected completion 2026.

104. Alex Paskov, expected completion 2026.

105. George Margaritis, expected completion 2026.

106. Pericles Petrides, expected completion 2026.

107. Benjamin Boucher, expected completion 2026.

108. Lisa Everest, expected completion 2027.

109. Vassilina Stoumpou, expected completion 2027.

110. Matthew Peroni, expected completion 2027.

111. Maura Suzanne Hegarty, expected completion 2027.

112. Jiayi Gu, expected completion 2027.

Completed Postdoctoral students

1. Eugene Perevalov, 1999-2001.
2. Omid Nohadani, 2006-2009.
3. Vineet Goyal, 2008-2010.
4. Christopher Maes, 2009-2011,
5. Ebrahim Nasrabadi, 2010-2013.
6. Rahul Mazumder, 2012-2013.
7. Angelos Georghiou, 2012-2013.
8. Phebe Vayanos, 2012-2015.
9. Hoda Bidkhori, 2012-2015.
10. Nathan Kallus, 2015-2016.
11. John Silberholrz, 2015-2017.
12. Bart van Parys, 2016-2018.
13. Shimrit Shtern, 2015-2018.
14. Bartolomeo Stellato, 2018-2020.
15. Michael Li, 2022-2023.

Completed Master Students

1. Phillip Chervi, A computational approach to probabilistic routing problems, 1989.
2. Meng-Huai Chen, Optimal cash allocation in bank branches, 1991.
3. Michael Ricard, Algorithms for the 0-1 integer programming problem, 1991.
4. Ioannis Paschalidis, Bounds for multiclass queueing networks, 1992.

5. Angela Chiu, Stochastic inventory and distribution problems, 1993.
6. Elaine Chew, Multiperiod portfolio optimization: Feynmann diagrams and approximate dynamic programming, 1998.
7. Ed Wike, Supply chain management: an approximate dynamic programming approach, 1998.
8. Constantine Tsiligakis, Portfolio construction through mixed integer programming, 1999.
9. Mark Coumeri, Pricing in a competitive environment: a learning approach, 2000.
10. Zhang Yi, A discrete optimization approach to classification, Singapore-MIT-Alliance, 2001.
11. Constantine Caramanis, Bounds on linear partial differential equations via semidefinite optimization, 2001.
12. Cheong Foong Soon, Hedging Strategy and Effect of Transaction Costs for American Options in an Incomplete Market, Singapore-MIT-Alliance, 2002.
13. Premal Shah, Optimal bounds for American options, 2006.
14. Su Hua, A robust optimization approach to optimization of queueing networks, 2006.
15. Yun Lu, A robust optimization approach to network equilibrium, 2007.
16. Yanbo Wang, Robust optimization applications, 2008.
17. Clay Noyes, Optimizing the operations of the emergency department at the Beth Israel Hospital via simulation, 2008.
18. Si Chen, Robust option pricing - an epsilon arbitrage approach, 2009.
19. Kimberly Shenk, Patterns of heart attacks, 2010.
20. Jingting Zhou, Computational experiments for local search algorithms for binary and mixed integer optimization, 2010.
21. Van Vinh Nguyen, Fairness and optimality in trading, 2010.

22. Thai Dung Nguyen, Application of robust and inverse optimization in transportation, 2010.

23. Liwei He, Polynomial policies in supply chain networks, 2010.

24. Emily Frost, Dynamic planning for underwater unmanned vehicles, 2013.

25. Stephen Relyea, An Analytics Approach to Designing Clinical Trials for Cancer", 2013 (winner of the William Pierskalla award in 2013 for best paper in Health care).

26. David Culver, Addressing the Fog of War in Reconnaissance Operations: A Robust Optimization Approach, 2013.

27. Cristina Epstein, An Analytics Approach to Hypertension Treatment, 2014.

28. Jonathan Paynter, Optimized Border Interdiction, 2014.

29. Nicholas Jerningan, Robust Multi-modal, Multi-period, Multi-commodity Transportation: Models and Algorithms, 2014.

30. Kevin Rossillion, Optimized Air Asset Scheduling Within a Joint Air Operations Center, 2015.

31. Zachary Sanders, Multi-target tracking via mixed integer optimization, 2016.

32. Samer Haidar, Supply chain network strategy for consumer medical device introduction, 2016.

33. Galit Lukin, Prescriptive Methods for Adaptive Learning, 2020.

34. Justin Graham, School Choice: A Discrete Optimization Approach, 2020.

X. Publications

Books

1. *Introduction to Linear Optimization*, (with J. Tsitsiklis), Dynamic Ideas and Athena Scientific, Belmont, Massachusetts, 1997.

2. *Data, Models and Decisions: The Fundamentals of Management Science*, (with R. Freund), Dynamic Ideas, Belmont, Massachusetts, 2004.

3. *Optimization over Integers*, (with R. Weismantel), Dynamic Ideas, Belmont, Massachusetts, 2005.

4. *The Analytics Edge*, (with A. O'Hair and W. Pulleyblank), Dynamic Ideas, Belmont, Massachusetts, 2016.

5. *Machine Learning under a Modern Optimization Lens*, (with J. Dunn), Dynamic Ideas, Belmont, Massachusetts, 2019.

6. *Robust and Adaptive Optimization*, (with D. den Hertog), Dynamic Ideas, Belmont, Massachusetts, 2022.

7. *Queueing Theory: Classical and Modern Methods*, (with D. Gamarnik), Dynamic Ideas, Belmont, Massachusetts, 2022.

Journal articles

1. "On the exact steady state solution of the $E_k/C_2/s$ queue" (with X. Papaconstantinou), *European Journal of Operations Research*, 37(2), 272-287, 1988.

2. "On the steady-state solution of the $M/C_2(a,b)/s$ queueing system" (with X. Papaconstantinou), *Transportation Science*, 125-138, 1988.

3. "An exact FCFS waiting-time analysis for a general class of $G/G/s$ queueing systems", *Queueing Systems Theory and Applications*, 3, 305-320, 1988.

4. "On probabilistic traveling salesman facility location problems", *Transportation Science*, 3, 184-191, 1989.

5. "Worst case examples for the spacefilling curve heuristic for the Euclidean traveling salesman problem", (with M. Grigni), *Operations Research Letters*, 8, 241-244, 1989.

6. "Relations between the pre-arrival and post-departures state probabilities and the FCFS waiting-time distribution for the $E_k/G/s$ queue" (with X. Papaconstantinou), *Naval Research Logistics Quarterly*, 37, 135-149, 1990.

7. "An analytic approach to a general class of $G/G/s$ queueing systems", *Operations Research*, 38, 1, 139-155, 1990.

8. "The probabilistic minimum spanning tree problem", *Networks*, 20, 245-275, 1990.

9. "A priori optimization", (with P. Jaillet and A. Odoni), *Operations Research*, 38, 6, 1019-1033, 1990.

10. "An asymptotic determination of the minimum spanning tree and minimum matching constants in geometrical probability", (with G. van Ryzin), *Operations Research Letters*, 9, 223-231, 1990.

11. "Probabilistic analysis of the Held and Karp lower bound for the Euclidean traveling salesman problem", (with M. Goemans), *Mathematics of Operations Research*, 1, 72-89, 1991.

12. "Transient and busy period analysis of the $GI/G/1$ queue as a Hilbert factorization problem", (with J. Keilson, D. Nakazato, H. Zhang), *Journal of Applied Probability*, 28, 873-885, 1991.

13. "A stochastic and dynamic vehicle routing problem in the Euclidean plane", (with G. van Ryzin), *Operations Research*, 39, 4, 601-615, 1991.

14. "The minimum spanning tree constant in geometrical probability and under the independent model; a unified approach", (with F. Avram), *Annals of Applied Probability*, vol. 2, 1, 113-130, 1992.

15. "A vehicle routing problem with stochastic demand", *Operations Research*, 40, 574-585, 1992.

16. "Transient and busy period analysis for the $GI/G/1$ queue; The method of stages", (with D. Nakazato), *Queueing Systems and Applications*, 10, 153-184, 1992.

17. "Deducing queueing from transactional data: the queue inference engine, revisited, (with L. Servi), *Operations Research*, 40, S217-S228, 1992.

18. "Simulated annealing", (with J. Tsitsiklis), *Statistical Science*, Vol.8, No. 1, 10-15, 1993.

19. "Stochastic and dynamic vehicle routing in the Euclidean Plane: the multiple-server, capacitated vehicle case", (with G. van Ryzin), *Operations Research* , 41, 60-76, 1993.

20. "Survivable networks, LP relaxations and the parsimonious property", (with M. Goemans), *Mathematical Programming*, 60, 145-166, 1993.

21. "Further results on the probabilistic traveling salesman problem", (with L. Howell), *European Journal of Operations Research*, Vol. 65, 1, 68-95, 1993.

22. "On central limit theorems in geometrical probability", (with F. Avram), *Annals of Applied Probability*, vol. 3, 4, 1033-1046, 1993.

23. "Stochastic and dynamic vehicle routing with general arrival and demand distributions", (with G. van Ryzin), *Advances in Applied Probability*, 25, 4, 947-978, 1993.

24. "A technique for speeding up the solution of the Lagrangean dual", (with J. Orlin), *Mathematical Programming*, vol. 63, 1, 23-46, 1994.

25. "The multi-airport ground-holding problem in air traffic control" (with A. Odoni and P. Vranas), *Operations Research*, 42, 2, 249-261, 1994.

26. "Optimization of multiclass queueing networks: polyhedral and nonlinear characterizations of achievable performance", (with I. Paschalidis and J. Tsitsiklis), *Annals of Applied Probability*, 4, 1, 43-75, 1994.

27. "Dynamic ground-holding policies for a network of airports", (with A. Odoni and P. Vranas), *Transportation Science*, 28, 4, 275-291, 1994.

28. "The distributional Little's law and its applications", (with D. Nakazato), *Operations Research*, 43, 2, 298-310, 1995.

29. "Optimization of multiclass queueing networks: a linear control approach", (with F. Avram and M. Ricard), *Stochastic networks; proceedings of the IMA*, (F. Kelly and R. Williams, editors), 199-234, 1995.

30. "Branching bandits and Klimov's problem: achievable region and side constraints", (with I. Paschalidis and J. Tsitsiklis), *IEEE Automatic Control*, 40, 12, 2063-2075, 1995.

31. "Locating discretionary service facilities II: maximizing market size, minimizing inconvenience", (with O. Berman and R. Larson), *Operations Research*, 43, 4, 623-632, 1995.

32. "Computational approaches to stochastic vehicle routing problems", (with P. Chervi and M. Peterson), *Transportation Science*, 29, 4, 342-352, 1995.

33. "Decomposition algorithms for analyzing transient phenomena in multi-class queueing networks in air transportation", (with A. Odoni and M. Peterson), *Operations Research*, 43, 6, 995-1011, 1995.

34. "The achievable region method in the optimal control of queueing systems; formulations, bounds and policies," *Queueing Systems and Applications*, 21, 3-4, 337-389, 1995.

35. "Models and algorithms for transient queueing congestion at a hub airport", (with A. Odoni and M. Peterson), *Management Science*, 41, 1279-1295, 1995.

36. "A new generation of vehicle routing research", (with D. Simchi-Levi), *Operations Research*, 286-304, 1996.

37. "Conservation laws, extended polymatroids and multi-armed bandit problems; a unified polyhedral approach", (with Jose Niño-Mora), *Mathematics of Operations Research*, 21, 2, 257-306, 1996.

38. "A unified method to analyze overtake free systems", (with G. Mourtzinou), *Advances in Applied Probability*, 28, 588-625, 1996.

39. "Stability conditions for multiclass fluid networks", (with D. Gamarnik and J. Tsitsiklis), *IEEE Automatic Control*, 41, 1618-1631, 1996.

40. "Multiclass queueing systems in heavy traffic: an asymptotic approach based on distributional and conservation laws", (with G. Mourtzinou), *Operations Research*, 45, 3, 470-487, 1997.

41. "On the worst case complexity of potential reduction algorithms for linear programming", (with X. Luo), *Mathematical Programming.* 77, 321-333, 1997.

42. "Transient distributional laws and their applications", (with G. Mourtzinou), *Queueing Systems and their Applications*, 25, 115-155, 1997.

43. "The parsimonious property of cut covering problems and its applications", (with C. Teo), *Operations Research Letters*, 21, 123-132, 1997.

44. "From valid inequalities to heuristics: a unified view of primal-dual approximation algorithms in covering problems", (with C. Teo), *Operations Research*, 46, 4, 503-514, 1998.

45. "The air traffic flow management problem with enroute capacities", (with S. Stock-Paterson), *Operations Research*, 46, 3, 406-422, 1998.

46. "A new algorithm for state-contrained separated continuous linear programs" (with X. Luo), *SIAM Journal on Control and Optimization*, 37, 1, 177-210, 1998.

47. "Rounding algorithms for covering problems", (with R. Vohra), *Mathematical Programming*, 80, 63-89, 1998.

48. "On the large deviation behavior in acyclic networks of G/G/1 queues", (with I. Paschalidis and J. Tsitsiklis), *Annals of Applied Probability*, 8, 4, 1027-1069, 1998.

49. "Asymptotic buffer overflow probabilities in multiclass multiplexers", (with J. Paschalidis and J. Tsitsiklis), *IEEE Automatic Control*, 43, 3, 315-335, 1998.

50. "Optimal control of execution costs", (with A. Lo), *Journal of Financial Markets*, 1, 1-50, 1998.

51. "Semidefinite relaxations, multivariate normal distributions, and order statistics", (with Y. Ye), Handbook of Combinatorial Optimization (Vol. 3), D.-Z. Du and P.M. Pardalos (Eds.) pp. 1-19, Kluwer Academic Publishers, 1998.

52. "On dependent randomized rounding algorithms", (with C. Teo and R. Vohra), *Operations Research Letters*, 24, 3, 105-114, 1999.

53. "Decomposition results for general polling systems and their applications", (with G. Mourtzinou), *Queueing Systems and their Applications*, 31, 295-316, 1999.

54. "Bounds and policies for loss networks", (with T. Chryssikou), *Operations Research*, 47, 379-394, 1999.

55. "Optimization of multiclass queueing networks with changeover times via the achievable region approach: Part I, the single-station case", (with J. Niño-Mora), *Mathematics of Operations Research*, 24, 2, 306-329, 1999.

56. "Optimization of multiclass queueing networks with changeover times via the achievable region approach: Part II, the multi-station case", (with J. Niño-Mora), *Mathematics of Operations Research*, 24, 2, 331-361, 1999.

57. "Analysis of LP relaxations for multiway and multicut problems", (with C. Teo and R. Vohra), *Networks*, 102-113, 1999.

58. "Portfolio construction through mixed integer programming", (with C. Darnell and R. Soucy), *Interfaces*, 29, 49-66, 1999.

59. "Estimation of time-varying parameters in statistical models: an optimization approach", (with D. Gamarnik and J. Tsitsiklis), *Machine Learning*, 35, 225-245, 1999.

60. "Large deviation analysis of the generalized processor sharing policy", (with J. Paschalidis and J. Tsitsiklis), *Queueing Systems and their Applications*, 32, 319-349, 1999.

61. "Asymptotically optimal algorithms for job shop scheduling and packet routing", (with D. Gamarnik), *Journal of Algorithms*, 33, 296-318, 1999.

62. "Optimal control of execution costs for portfolios", (with P. Hummel and A. Lo), *Computing in Science and Engineering*, 40-53, 1999.

63. "Restless bandits, linear programming relaxations and a primal-dual heuristic", (with J. Niño-Mora), *Operations Research*, 48, 80-90, 2000.

64. "A new algebraic geometry algorithm for integer programming", (with G. Perakis and S. Tayur), *Management Science*, 46, 999-1008, 2000.

65. "When is time continuous", (with L. Kogan and A. Lo), *Journal of Financial Economics*, 55, 173-204, 2000.

66. "The traffic flow management rerouting problem in air traffic control: a dynamic network flow approach", (with S. Stock-Paterson), *Transportation Science*, 34, 239-255, 2000.

67. "Moment problems and semidefinite programming", (with J. Sethuraman), in Semidefinite programming H. Wolkovitz, ed., 469–509, 2000.

68. "Probabilistic service level guarantees in make-to-stock manufacturing system", (with I. Paschalidis), *Operations Research*, 49, 1, 119-133, 2001.

69. "Pricing derivative securities in incomplete markets: an ϵ-arbitrage approach", (with L. Kogan and A. Lo), *Operations Research*, 49, 3, 372-397, 2001.

70. "Improved randomized approximation algorithms for lot sizing problems", (with C. Teo), *Operations Research*, 49, 4, 599-608, 2001.

71. "Performance bounds for multiclass queueing networks via piecewise linear Liapunov functions", (with D. Gamarnik and J. Tsitsiklis), *Annals of Applied Probability*, 11, 4, 1384-1428, 2001.

72. "On the relation between option and stock prices: a convex optimization approach", (with I. Popescu), *Operations Research*, 50, 2, 358–374, 2002.

73. "From fluid relaxations to practical algorithms for job shop scheduling: the makespan objective", (with J. Sethuraman), *Mathematical Programming*, 92, 1, 61–102, 2002.

74. "An Approximate Dynamic Programming Approach to Multi-dimensional Knapsack Problems", (with R. Demir), *Management Science*, 4, 550–565, 2002.

75. "From fluid relaxations to practical algorithms for job shop scheduling: the holding cost objective", (with D. Gamarnik and J. Sethuraman), *Operations Research*, 51, 5, 798–813, 2003.

76. "Restaurant Revenue Management", (with R. Shioda), *Operations Research*, 51, 3, 472–486, 2003.

77. "Robust Discrete optimization and Network Flows", (with M. Sim), *Mathematical Programming Series B*, 98:49-71, 2003.

78. "Shortfall as a risk measure: properties and optimization", (with G. Lauprete and A. Samarov), *Journal of Economic Dynamics and Control*, 28, 7, 1227-1480, 2004.

79. "The Price of Robustness", (with M. Sim), *Operations Research*, 52, 1, 35–53, 2004.

80. "Revenue Management in a Dynamic Network Environment", (with I. Popescu), *Transportation Science*. 37, 257–277, 2003.

81. "Solving convex optimization problems by random walks", (with S. Vempala), *Journal of the ACM*, 51, 540–556, 2004.

82. "Robust Linear Optimization under General Norms", (with D. Pachamanova and M. Sim), *Operations Research Letters*, 32, 510–516, 2004.

83. "Probabilistic Combinatorial Optimization: Moments, Semidefinite Programming and Asymptotic Bounds", (with K. Natarajan and C. Teo), *SIAM Journal of Optimization*, 15, 185–209, 2005.

84. "Simulation-Based Booking Limits for Airline Revenue Management", (with S. de Boer), *Operations Research*, 53, 1, 90–106, 2005.

85. "Optimal inequalities in probability theory: A convex optimization approach", (with I. Popescu), *SIAM Journal of Optimization*, 15, 780–804, 2005.

86. "Dynamic pricing and inventory control for multiple products ", (with S. de Boer), *Journal of Revenue Management*, 17, 303–319, 2005.

87. "Dynamic Pricing; A Learning Approach", (with G. Perakis), *Models for Congestion Charging/Network Pricing*, 2005.

88. "A Robust Optimization Approach to Inventory Theory", (with A. Thiele), *Operations Research*, 54, 150–168, 2006.

89. "Robust Game Theory", (with M. Aghassi), *Mathematical Programming*, 107, 231–173, 2006.

90. "Persistence in Discrete Optimization under Data Uncertainty", (with K. Natarajan and C. Teo), *Mathematical Programming*, 2006.

91. "Tractable Approximations to Robust Conic Optimization Problems", (with M. Sim), *Mathematical Programming*, 107, 5–36, 2006.

92. "Solving Asymmetric Variational Inequalities via Convex Optimization", (with M. Aghassi and G. Perakis), *Operations Research Letters*, 481–490, 2006.

93. "Tight bounds on expected order statistics", (with K. Natarajan and C. Teo), *Probability in Engineering and Information Systems*, 20, 4, 667-686, 2006.

94. "Bounds on Linear PDEs via Semidefinite Optimization", (with C. Caramanis), *Mathematical Programming*, 108, 135–158, 2006.

95. "Robust and data-driven optimization: modern decision-making under uncertainty", (with A. Thiele), Tutorials on Operations Research, INFORMS, Chapter 4, 195-122, 2006.

96. "Classification and Regression via Integer Optimization", (with R. Shioda), *Operations Research*, 55, 252–271, 2007.

97. "A learning Approach for Interactive Marketing to A Customer Segment", (with A. Mersereau), *Operations Research*, 55, 6, 1120–1135, 2007.

98. "Constrained Stochastic LQC: A Tractable Approach", (with D. Brown), *IEEE Journal of Automatic Control*, 52, 10, 1826–1841, 2007.

99. "Performance bounds on queueing systems: an SDP approach", (with K. Natarajan), *Queueing Systems and Applications*, 56,1, 27–40, 2007.

100. "Robust Optimization in Electromagnetic Scattering Problems", (with O. Nohadani and K. M. Teo), *Journal Applied Physics*, 101, 7, 074507, 2007.

101. "Robust Multiperiod Portfolio Management in the Presence of Transaction Costs", (with D. Pachamanova), *Computers and Operations Research*, 35, 1, 3–17, 2008.

102. "Multivariate exponential integral approximations: a moment approach", (with X. Vinh Doan and J. Lasserre), *Operations Research Letters*, 36, 2, 205–210, 2008.

103. "Robust chirped mirrors", (with J. Birge, O. Nohadani and F. Kartner), *Applied Optics*, 47, 2630–2636, 2008.

104. "Algorithmic prediction of health care costs", (with M. Bjarnadottir, M. Kane, C. Kryder, R. Pandey, S. Vempala and G. Wang), *Operations Research*, 1382–1392, 2008.

105. "Constructing uncertainty sets for robust linear optimization", (with D. Brown), *Operations Research*, 57, 6, 1483-1495, 2009.

106. "An Algorithm For Cardinality Constrained Quadratic Optimization Problems", (with R. Shioda), *Computational Optimization and Applications*, 42, 1–22, 2009.

107. "Optimal bidding in online auctions", (with J. Hawkins and G. Perakis), *Pricing and Revenue Management*, 8, 21–41, 2009.

108. "Depression and Increased Health Care Cost", (with C.Welch, D. Czerwinski, and B. Ghimire), *Psychosomatics*, 50, 392-401, 2009.

109. Robust Optimization for Unconstrained Simulation-Based Problems", (with O. Nohadani and K. M. Teo), *Operations Research*, 1, 161–178, 2010.

110. "Nonconvex Robust Optimization for Problems with Constraints" , (with O. Nohadani and K. M. Teo), *INFORMS Journal of Computing*, 1, 44–58, 2010.

111. "On the Power of Robust Solutions in Two-Stage Stochastic and Adaptive Optimization Problems", (with V. Goyal), *Mathematics of Operations Research*, 35, 284–305, 2010.

112. Optimality of Affiffine Policies in Multi-stage Robust Optimization", (with D. Iancu and P. Parrilo), *Mathematics of Operations Research*, 35, 363–394, 2010.

113. "A Soft Robust Model for Optimization under Ambiguity", (with. A. Ben-Tal and D. Brown), *Operations Research*, 58, 1220–1234, 2010.

114. "Robust and Data-Driven Approaches to Call Centers", (with X. Vinh Doan), *European Journal of Operations Research*, 207, 2, 1072-1085, 2010.

115. "Robust optimization via simulated annealing", (with O. Nohadani), *Journal of Global Optimization*, 48, 2, 323-334, 2010.

116. "Models for Minimax Stochastic Linear Optimization Problems with Risk Aversion", (with X. Vinh Doan, K. Natarajan, C. P. Teo), *Mathematics of Operations Research*, 35, 580–602, 2010.

117. "Finite adaptability in linear optimization", (with C. Caramanis), *IEEE Transactions in Automatic Control*, 55,12, 2751–2766, 2010.

118. "The air traffiffic flow management problem: an integer optimization approach", (with G. Lulli and A. Odoni), *Operations Research*, 59, 1, 211–227, 2011.

119. "Performance analyis of queueing networks via robust optimization", (with D. Gamarnik and A. Rikun), *Operations Research*, 59, 2, 455–466, 2011.

120. "The Price of Fairness", (with V. Farias, N. Trichakis), *Operations Research*, 59, 1, 17–31, 2011.

121. "A Geometric Characterization of the Power of Finite Adaptability in Multi-stage Stochastic and Adaptive Optimization", (with V. Goyal and A. Sun), *Mathematics of Operations Research*, 36, 24–54, 2011.

122. "On the Power and Limitations of Affiffine Policies in Two-Stage Adaptive Optimization", (with V. Goyal), *Mathematical Programming*, 1–41, 2011.

123. "Theory and applications of robust optimization", (with D. Brown and C. Caramanis), *SIAM Review*. 53, 464-501, 2011.

124. "A hierarchy of policies for adaptive optimization", (with D. Iancu and P. Parrilo), in *IEEE Automatic Control*, 56, 12, 2809-2824, 2011.

125. Optimal Selection of Airport Runway Configurations, (with M. Frankovitch and A. Odoni), *Operations Research*, 6, 1407-1420, 2011.

126. "Equitable and Effifficient Coordination in Air traffiffic Flow Management", (with C. Barnhart, C. Caramanis, D. Fearing), *Transportation Science*, 46, 2, 262–280, 2012.

127. "A Characterization of the Effifficiency-Fairness Tradeoff", (with V. Farias and N. Trichakis), *Management Science*, 58, 12, 2234-2250, 2012.

128. "Inverse Optimization: A New Perspective on the Black-Litterman Model", (with V. Gupta and I. Paschalidis), *Operations Research*, 60, 6, 1389–1403, 2012.

129. "Tractable Stochastic Analysis via Robust Optimization", (with C. Bandi), *Mathematical Programming, Series B*, 134, 2370, 2012.

130. "Adaptive Robust Optimization for the Security Constrained Unit Commitment Problem", (with E. Litvinov, A. Sun, J. Zhao, and T. Zheng), *IEEE Transactions on Power Systems*, 99, 1–12. 2012.

131. "A local search algorithm for binary optimization", (with D. Iancu, D. Katz), *INFORMS Journal of Computing*, 25, 2, 208-221, 2013.

132. "Flexibility, Fairness and Effifficiency in Kidney Transplantation", (with V. Farias and N. Trichakis), *Operations Research*, 61, 1, 7387, 2013.

133. " Hybrid Approach to Beam Angle Optimization in Intensity-Modulated Radiation Therapy", (with V. Cacchiani, D. Craft, O. Nohadani), *Computers and Operations Research*, 40, 9, 2187-2197, 2013.

134. "An accelerated first order method for solving unconstrained polynomial optimization problems", (with R. Freund, A. Sun), *Optimization Methods and Software*, 28, 3, 424-441, 2013.

135. "Revealing Rival Marginal Offer Prices Via Inverse Optimization", (with A. Conejo and C. Ruiz), *IEEE Transactions on Power Systems*, 28, 3, 3056-3064, 2013.

136. "Learning Preferences Under Noise and Loss Aversion: An Optimization Approach", (with A. O'Hair), *Operations Research*, 61, 5, 1190-1199, 2013.

137. "Robust and Adaptive Network Flows", (with E. Nasrabadi and S. Stiller), *Operations Research*, 61: 1218-1242, 2013.

138. "Measuring quality in diabetes care: an expert-based statistical approach", (with D. Czerwinski and M. Kane), SpringerPlus, 2:226, 2013.

139. "On the Approximability of Adjustable Robust Convex Optimization under Uncertainty", (with V. Goyal), *Mathematical Methods of Operations Research*, 77, 323-343, 2013.

140. "Dynamic Resource Allocation: A Flexible and Tractable Modeling Framework", (with S. Gupta and G. Lulli), *European Journal of Operations Research*, 236, 1, 14–26, 2014.

141. "Optimal Design for Multi-Item Auctions: A Robust Optimization Approach", (with C. Bandi), *Mathematics of Operations Research*, 39, 4, 1012–1038, 2014.

142. "Least Quantile Regression via Modern Optimization", (with R. Mazumder), *Annals of Statistics*, 42, 6, 2494–2525, 2014.

143. "Semi-Supervised Approach to Predictive Analysis Using Temporal Data", (with K. Shenk and N. Markuzon), *Military Operations Research*, 19, 1, 37-50, 2014.

144. "Robust Option Pricing", (with C. Bandi), *European Journal of Operations Research*, 239, 3, 842-853, 2014.

145. "Scheduling, Revenue Management, and Fairness in an Academic-Hospital Division: An Optimization Approach", (with R. Baum and N. Kallus), *Academic Radiology*, 21, 10, 1322–1330, 2014.

146. "A Tight Characterization of the Performance of Static Solutions for Two-Stage Adjustable Robust Optimization", (with V. Goyal and B. Lu), *Mathematical Programming*, 150, 2, 281-319, 2015.

147. "Robust fluid processing networks", (with E. Nasrabadi and I. Paschalidis), *IEEE Automatic Control*, 60, 3, 715-728, 2015.

148. "On the Performance of Affine Policies for Two-stage Adaptive Optimization: a Geometric Perspective", (with H. Bidkhori), *Mathematical Programming*, 153, 2, 577–594, 2015.

149. "Data-Driven Estimation in Equilibrium", (with V. Gupta and I. Paschalidis), *Mathematical Programming*, 153, 2, 595–633, 2015.

150. "Robust Queueing Theory", (with C. Bandi and N. Youssef), *Operations Research*, 63, 3, 676 - 700, 2015.

151. "Design of Near Optimal Decision Rules in Multistage Adaptive Mixed-Integer Optimization", (with A. Georghiou), *Operations Research*, 63, 3, 610-627, 2015.

152. "The Power of Optimization Over Randomization in Designing Experiments Involving Small Samples", (with M. Johnson and N. Kallus), *Operations Research*, 63, 4, 868–876, 2015.

153. "Optimizing over coherent risk measures and non-convexities: a robust mixed integer optimization approach", (with A. Takeda), *Computational Optimization and Applications*, 62, 613–639, 2015.

154. "Tenure Analytics: Models for Predicting Research Impact", (with E. Brynjolfsson, S. Reichman and J. Silberholz), *Operations Research*, 63 (6), 1246–1261, 2015.

155. "Air Traffic Flow Management Incorporating Fairness and Airline Collaboration: An Optimization Approach", (with S. Gupta), *Transportation Science*, 50, 1, 57-76, 2016.

156. "Unified Optimization of Traffic Flows through Airports", (with M. Frankovich), *Transportation Science*, 50, 1, 77-93, 2016.

157. "Reformulations versus cutting planes for robust optimization: A computational study", (with I. Dunning and M. Lubin), *Computational Management Science*, 13, 2, 195-217, 2016.

158. "An algorithmic approach to Linear Regression", (with A. King), *Operations Research*, 64, 1, 2–16, 2016.

159. "Best Subset Selection via a Modern Optimization Lens", (with A. King and R. Mazumder), *Annals of Statistics*, 44, 2, 813-852, 2016.

160. "An Analytics Approach to Designing Clinical Trials for Cancer", (with A. O'Hair, J. Silberholz, S. Relyea), *Management Science*, 62, 5, 1511-1531, 2016.

161. "Duality in Two-stage Adaptive Linear Optimization: Faster Computation and Stronger Bounds", (with F. de Ruiter), *INFORMS Journal of Computing*, 28 , 3, 500-511, 2016.

162. "On the power of randomization in network interdiction", (with E. Nasrabadi and J. Orlin), *Operations Research Letters*, 44, 114-120, 2016.

163. "Multistage Robust Mixed Integer Optimization with Adaptive Partitions", (with I. Dunning), *Operations Research*, 64 (4), 980–998, 2016.

164. "Decomposable Markov decision processes: a fluid optimization approach", (with V. Mišić), *Operations Research*, 64, 6, 1537–1555, 2016.

165. "Inventory Management in the Era of Big Data", (with N. Kallus and A. Hussain), *Production and Operations Management*, 25, 12, 2006–2009, 2016.

166. "Robust product line design", (with V. Mišić), *Operations Research*, 65, 1, 19–37, 2016.

167. "Optimal healthcare decision making under multiple mathematical models: Application in prostate cancer screening", (with J. Silberholz and T. Trikalinos), *Health Care Management Science*, 21, 1, 105-118, 2018.

168. "Logistic Regression: From Art to Science", (with A. King), *Statistical Science*, 32, 3, 367–384, 2017.

169. "Personalized Diabetes Management using Electronic Medical Records", (with N. Kallus, A. Weinstein and Y. Zhuo), *Diabetes Care*, 40 (2), 210-217, 2017.

170. "Optimal Classification Trees", (with J. Dunn), *Machine Learning*, 106(7), 1039-1082, 2017.

171. "Accept or Decline? An Analytics-Based Decision Tool for Kidney Offer Evaluation", (with J. Kung,N. Trichakis, P. Vagefi and D. Wojciechowski), *Transplantation*, 101(12), 2898-2904, 2017.

172. "A comparison of Monte Carlo tree search and rolling horizon optimization for large-scale dynamic resource allocation problems" , (with D. Griffith, V. Gupta, M. Kochenderfer, V. Misic), *European Journal of Operations Research*, 2017.

173. "Data-Driven Robust Optimization", (with V. Gupta and N. Kallus), *Mathematical Programming*, 167 (2), 235–292, 2018.

174. "Binary Decision Rules for Multistage Adaptive Mixed-Integer Optimization", (with A. Georghiou), *Mathematical Programming*, 167(2), 395-433, 2018.

175. "Characterization of the equivalence of robustification and regularization in linear, median, and matrix regression", (with M. Copenhaver), *European Journal of Operations Research*, 270, 931–942, 2018.

176. "Certifiably Optimal Low Rank Factor Analysis", (with M. Copenhaver and R. Mazumder), *Journal of Machine Learning Research*, 18, 1-53, 2017.

177. "Robust Sample Average Approximation", (with V. Gupta and N. Kallus), *Mathematical Programming*, 171,1-2, 217–282, 2018.

178. "Adaptive Distributionally Robust Optimization", (with M. Sim and M. Zhang), *Management Science*, 65, 2, 604-618, 2019.

179. "Robust Transient Analysis of Feedforward Networks", (with C. Bandi and N. Youssef), *Queueing Systems*, 89, 34, 351–413, 2018.

180. "Multi-Target Tracking via Mixed Integer Optimization", (with Z. Saunders, and S. Shtern), *IEEE Automatic Control*, 63, 11, 3627-3642, 2018.

181. "An Applied Informatics Decision Support Tool for Mortality Predictions in Cancer Patients", (with J. Dunn, C. Pawlowski, J. Silberholz, A. Weinstein, Y. Zhuo, E.Chen and A. Elfiky), *JCO Clinical Cancer Informatics*, 2, 1–11, 2018.

182. "From Predictive Methods to Missing Data Imputation: An Optimization Approach", (with C. Pawlowski, Y. Zhuo), *Journal of Machine Learning Research*, 18, 196, 1–39, 2018.

183. "A comparison of Monte Carlo tree search and rolling horizon optimization for large scale dynamic resource allocation problems", (with D. Griffith, V. Gupta, M. Kochenderfer, V. Mišić, R. Moss), *European Journal of Operations Research*, 263, 2, 664-678, 2018.

184. "Prescriptive Analytics for Human Resource Planning in the Professional Services Industry", (with L. Berk, A. Weinstein, J .Yan), *European Journal of Operations Research*, 272, 2, 636-641, 2018.

185. "From physical properties of transportation flows to demand predictions: An optimization approach" (with J. Yan), *Transportation Science*, 52, 4, 1002-1011, 2018.

186. Surgical Risk is Not Linear: Derivation and Validation of a Novel, User-Friendly, and Machine-Learning-based Predictive, OpTimal-Trees-in-Emergency-Surgery, Risk (POTTER) Calculator. (with J. Dunn, G. Velmahos, H. Kaafarani). Annals of Surgery, 268, 4, 574-583, 2018.

187. "The Edge of Optimization at the Largest Scale of Online Vehicle Routing", (with P. Jaillet and S. Martin), *Operations Research*, 67, 1, 143-162, 2019.

188. "The airlift planning problem" (with A. Chang, V. Misic, N. Mundru), *Transportation Science*, 53, 3, 773-795, 2019.

189. "Robust Classification", (with J. Dunn, C. Pawlowski, Y. Zhuo), *INFORMS Journal on Optimization*, 1, 1, 2-34. 2019.

190. "Robust Maximum Likelihood Estimation", (with O. Nohadani), *INFORMS Journal of Computing*, 31, 3, 445-458, 2019.

191. "Traffic estimation in the age of big data" (with A. Delarue, P. Jaillet and S. Martin), *Operations Research*, 67, 2, 498-515, 2019.

192. "Optimal Prescriptive Trees", (with J. Dunn and N. Mundru), *INFORMS Journal on Optimization*, 1, 2, 164-183, 2019.

193. "Covariate-Adaptive Optimization in Online Clinical Trials", (with N. Korolko, A. Weinstein), *Operations Research*, 67, 4, 1150-1161, 2019.

194. "Identifying Exceptional Responders in Randomized Trials: An Optimization Approach", (with N. Korolko and A. Weinstein), *INFORMS Journal on Optimization*, 1, 3, 187-199, 2019.

195. "Relative Robust and Adaptive Optimization", (with I. Dunning), *INFORMS Journal of Computing*, appeared online, 2019.

196. "Development and validation of an Optimized Prediction of Mortality (OPOM) for candidates awaiting liver transplantation"', (with J. Kung, N. Trichakis, Y. Wang, R. Hirose, and P.A. Vagefi), *American Journal of Transplantation*, 19, 4, 1109-1118, 2019.

197. "Learning a Mixture of Gaussians via Mixed Integer Optimization", (with H. Bandi and R. Mazumder), *INFORMS Journal on Optimization*, 1, 3, 221-240, 2019.

198. "Data Driven assortment optimization", (with V. Mišić), *Management Science*, 1, 1-35, 2019.

199. "Certifiably Optimal Sparse Principal Component Analysis", (with L. Berk), *Mathematical Programming Computation*, 11, 3, 381-420, 2019.

200. "The K-Server Problem via a Modern Optimization Lens", (with P. Jaillet and N. Korolko), *European Journal of Operations Research*, 276, 65–78, 2019.

201. "Comparison of Machine Learning Optimal Classification Trees With the Pediatric Emergency Care Applied Research Network Head Trauma Decision Rules", (with J. Dunn, D. Steele, T. Trikalinos, Y. Wang), *JAMA Pediatrics*, 173, 7, 648-656, 2019.

202. "Clinical Benefit, Toxicity and Cost of Metastatic Breast Cancer Therapies: Systematic Review and Meta-analysis", (with J. Silberholz and L. Vahdat), *Breast Cancer Research and Treatment*, 176, 535–543, 2019.

203. "Prediction of Cervical Spine Injury in Young Pediatric Patients: An Optimal Trees Artificial Intelligence Approach", (with P. Masiakos, K. Mylonas and H. Wiberg), *Journal of Pediatric Surgery*, 54, 11, 2353–2357, 2019.

204. "Robust and Stochastic Formulations for Ambulance Deployment and Dispatch" (with Yee Sian Ng), *European Journal of Operations Research*, 279, 2, 557–571, 2019.

205. "Sparse regression: Scalable algorithms and empirical performance", (with J. Pauphilet and B. Van Parys), *Statistical Science*, 35 (4), 555-578, 2020.

206. "Computation of exact bootstrap confidence intervals: complexity and deterministic algorithms", (with B. Sturt), *Operations Research*, 68, 3, 949–964. 2020.

207. "Bus routing optimization helps Boston Public Schools design better policies". (with A. Delarue, W. Eger, J. Hanlon, and S. Martin), INFORMS Journal on Applied Analytics, 50,1, 37–49, 2020.

208. "From Predictive to Prescriptive Analytics", (with N. Kallus), *Management Science*, 66 (3), 1025-1044, 2020.

209. "Balancing efficiency and fairness in liver transplant access: tradeoff curves for the assessment of organ distribution policies", (with T. Papalexopoulos, N. Trichakis, Y. Wang, R. Hirose, P. A. Vagefi), *Transplantation*, 104, 5, 981-987, 2020.

210. "On Polyhedral and Second-Order Cone Decompositions of Semidefinite Optimization Problems", (with R. Cory-Wright), *Operations Research Letters*, 48, 78–85, 2020.

211. "Sparse Hierarchical Regression with Polynomials", (with B. van Parys), *Machine Learning*, 109, 973–997, 2020.

212. "Scalable Holistic Linear Regression", (with M. Li), *Operations Research Letters*, 48, 3, 203-208, 2020.

213. "Novel Target Discovery of Existing Therapies: Path to Personalized Cancer Therapy",' (with D. Zhuo), *INFORMS Journal on Optimization*, 2, 1, 1–19, 2020.

214. "Sparse high dimensional regression: Exact scalable algorithms and phase transitions", (with B. van Parys), *Annals of Statistics*, 48, 1, 300-323, 2020.

215. "Stochastic Optimization in Supply Chain Networks: Averaging Robust Solutions", (with N. Youssef), *Optimization Letters*, 14, 839-855, 2020.

216. "Machine Learning and Natural Language Processing Methods to Identify Ischemic Stroke, Acuity and Location from Radiology Reports", (with C. Ong, A. Orfanoudaki, R. Zhang, F. Caprasse, M. Ma, D. Fard, O. Balogun, M. Miller, M. Minnig, H. Saglam, B. Prescott, D. Gree and S. Smirnakis), *PLOS one*, 15, 6, e0234908, 2020.

217. "Development and Validation of a Novel, Non-Linear Stroke Risk Assessment Tool", (with C. Cadisch, E. Chesley, A. Orfanoudaki, M. Alberts, B. Stein and A. Nouh), *PLOS one*, 15, 5, e0232414, 2020.

218. "Certifiably Optimal Sparse Inverse Covariance Estimation", (with J. Lamperski and J. Pauphilet), *Mathematical Programming*, 184, 1, 491-530, 2020.

219. "Novel Mixed Integer Optimization Sparse Regression Approach in Chemometrics", (with D. Lahlou Kitane, N. Azami and F.R. Doucet), *Analytica Chimica Acta*, 1137, 115-124, 2020.

220. "Joint Frequency-Setting and Pricing Optimization on Multi-Modal Transit Networks at Scale", (with Yee Sian Ng and J. Yan), *Transportation Science*, 54, 3, 839-853, 2020.

221. "Machine Learning in Oncology: Methods, Applications, and Challenges", (with H. Wiberg), *JCO Clinical Cancer Informatics*, 4, 885-894, 2020.

222. "Stable Regression: On the Power of Optimization over Randomization in Training Regression Problems", (with I. Paskov), *Journal of Machine Learning Research*, 21, 230, 125, 2020.

223. "Fast Exact Matrix Completion: A Unifying Optimization Framework", (with M. Li), *Journal of Machine Learning Research*, 21, 231, 2020.

224. "Personalized treatment of coronary artery disease patients using electronic medical records: a machine learning approach", (with A. Orfanoudaki and R. Weiner), *Health Management Science*, 23, 482506, 2020.

225. "COVID-19 Mortality Risk Assessment: An International Multi-Center Study", (with G. Lukin, L. Mingardi, O. Nohadani, A. Orfanoudaki, B. Stellato, H. Wiberg, J.M. Cisneros-Herreros, S. Gonzalez Garcia, C. Caldern, The Hellenic COVID-19 Study Group, K. Robinson, M. Schneider, B. Stein, L. Beccara, R. Canino, M. Dal Bello, F. Pezzetti and A. Pan), *PLOS One*, 15(12): e0243262, 2020.

226. "Sparse convex regression" (with N. Mundru), *Informs Journal of Computing*, 33, 1, 262-279, 2021.

227. "The Voice of Optimization", (with B. Stellato), *Machine Learning*, 110, 2, 249-277, 2021.

228. "Data-Driven Transit Network Design at Scale", (with Yee Sian Ng and J. Yan), *Operations Research*, 69, 1118-1133, 2021.

229. "From predictions to prescriptions: A data-driven response to COVID-19", (with L. Boussioux, R. Cory-Wright, A. Delarue, V. Digalakis, A. Jacquillat, D. Lahlou Kitane, G. Lukin, M. Li, L. Mingardi, O. Nohadani, A. Orfanoudaki, T. Papalexopoulos, I. Paskov, J, Pauphilet, O. Skali Lami, B. Stellato, H. Tazi Bouardi, K. Villalobos Carballo, H. Wiberg and C. Zeng), *Health Care Management Science*, 24, 253272, 2021.

230. "Personalized Prescription of ACEI/ARBs for Hypertensive COVID-19 Patients, (with A. Borenstein, L. Mingardi, O. Nohadani, A. Orfanoudaki, B. Stellato, H. Wiberg), *Health Care Management Science*, 24, 339355, 2021.

231. "Optimizing Influenza Vaccine Composition: A Machine Learning Approach", (with H. Bandi), *Naval Research Logistics*, 68, 7, 857-870, 2021.

232. "Interpretable Clustering: An Optimization Approach", (with A.Orfanoudaki and H.Wiberg), *Machine Learning*, 110 (1), 89-138, 2021.

233. "Imputation of Clinical Covariates in Time Series", (with A.Orfanoudaki and C. Pawlowski), *Machine Learning*, 110 (1), 185-248, 2021.

234. "Adverse Outcomes Prediction for Congenital Heart Surgery: A Machine Learning Approach", (with D, Zhuo, Daisy, J. Dunn, J. Levine, E. Zuccarelli, N. Smyrnakis, Z. Tobota, Zdzislaw, B. Maruszewski, J. Fragata and G. Sarris), *World Journal for Pediatric and Congenital Heart Surgery*, 12, 4, 453-460. 2021.

235. "A Unified Approach to Mixed-Integer Optimization: Nonlinear Formulations and Scalable Algorithms", (with R. Cory-Wright and J. Pauphilet), *SIAM J. Optimization*, 31, 3, 2340-2367, 2021.

236. "Machine Learning for Real-Time Heart Disease Prediction", (with L. Mingardi and B. Stelato), *IEEE Journal of Biomedical and Health Informatics*, 25, 9, 3627 - 3637, 2021.

237. "A simple and fast spectroscopy-based technique for Covid-19 diagnosis", with (D. Lahlou Kitane, S. Loukman, N. Marchoudi, A. Fernandez, J. Badir, JL. Gala, N.Azami, O. Lakbita, O. Moudam, R. Benhida, J. Fekkak), *Scientific Reports*, 11, 1, 1–11, 2021.

238. "Probabilistic guarantees in Robust Optimization', (with D. den Hertog, J. Pauphilet), *SIAM J. Optimization*, 31, 4, 2893-2920, 2021.

239. "Near Optimal Nonlinear Regression Trees", (with J. Dunn and Y. Wang), *Operations Research Letters*, 49, 2, 201-206, 2021.

240. "Computation of Convex Hull Prices in Electricity Markets with Non-Convexities using Dantzig-Wolfe Decomposition", (with P. Andrianesis, M. Caramanis, and W. Hogan), *IEEE Transactions on Power Systems*, 37, 4, 2578-2589, 2021.

241. "Sparse classification: a scalable discrete optimization perspective", (with J. Pauphilet and B. van Parys), *Machine Learning*, 110, 11, 3177-3209, 2021.

242. "Toward an Optimized Staging System for Pancreatic Ductal Adenocarcinoma: A Clinically Interpretable, Artificial IntelligenceBased Model", (with G. A. Margonis, Y. Huang, N. Andreatos, H. Wiberg, Y. Ma, C. Mcintyre, A. Pulvirenti, D. Wagner, JL van Dam, F. Gavazzi, S. Buettner, K. Imai, G. Stasinos, J. He, C. Kamphues, K. Beyer, H. Seeliger, M. J. Weiss, M. Kreis, J. L Cameron, A. C Wei, P. Kornprat, H.Baba, B. Groot Koerkamp, Al. Zerbi, M. D'Angelica, C. L. Wolfgang), *JCO Clinical Cancer Informatics*, 5, 1220-1231, 2021.

243. "A pre-registered short-term forecasting study of COVID-19 in Germany and Poland during the second wave", (with Johannes Bracher, Daniel Wolffram, Jannik Deuschel, K Grgen, JL Ketterer, Alexander Ullrich, Sam Abbott, MV Barbarossa, Sangeeta Bhatia, Marcin Bodych, NI Bosse, Jan Pablo Burgard, L Castro, Geoffrey Fairchild, Jan Fuhrmann, Sebastian Funk, Krzysztof Gogolewski, Quanquan Gu, Stefan Heyder, Thomas Hotz, Yuri Kheifetz, Holger Kirsten, Tyll Krueger, Ekaterina Krymova, ML Li, JH Meinke, Isaac James Michaud, Karol

Niedzielewski, T Oaski, Franciszek Rakowski, Markus Scholz, Saksham Soni, Ajitesh Srivastava, Jakub Zieliski, Difan Zou, Tilmann Gneiting, Melanie Schienle), *Nature communications*, 12, 1, 1-16, 2021.

244. "Frequency Estimation in Data Streams: Learning the Optimal Hashing Scheme", (with V. Digalakis), *IEEE Transactions on Knowledge and Data Engineering*, appeared online, 2021.

245. "Prediction of Neutropenic Events in Chemotherapy Patients: A Machine Learning Approach", (with Holly Wiberg, Peter Yu, Pat Montanaro, Jeff Mather, Suzi Birz, Michelle Schneider), JCO Clinical Cancer Informatics, 5, 904-911, 2021.

246. "Trauma outcome predictor: An artificial intelligence interactive smartphone tool to predict outcomes in trauma patients", (with Lydia R Maurer, Hamza Tazi Bouardi, Majed El Hechi, Mohamad El Moheb, Katerina Giannoutsou, Daisy Zhuo, Jack Dunn, George C Velmahos, Haytham MA Kaafarani), *Journal of Trauma and Acute Care Surgery*, 91,1, 93-99, 2021.

247. "Validation of the Artificial Intelligence-Based Predictive Optimal Trees in Emergency Surgery Risk (POTTER) Calculator in Emergency General Surgery and Emergency Laparotomy Patients", (with Majed W El Hechi, Lydia R Maurer, Jordan Levine, Daisy Zhuo, Mohamad El Moheb, George C Velmahos, Jack Dunn, Haytham MA Kaafarani), 232, 6, 912-919, e1, 2021.

248. "Selecting Children with Vesicoureteral Reflux Who are Most Likely to Benefit from Antibiotic Prophylaxis: Application of Machine Learning to RIVUR", (with Michael Li, Carlos Estrada, Caleb Nelson, Hsin-Hsiao Scott Wang), *The Journal of Urology*, 205, 4, 1170-1179, 2021.

249. "Personalized prescription of ACEI/ARBs for hypertensive COVID-19 patients", (with Alison Borenstein, Luca Mingardi, Omid Nohadani, Agni Orfanoudaki, Bartolomeo Stellato, Holly Wiberg, Pankaj Sarin, Dirk J Varelmann, Vicente Estrada, Carlos Macaya, Ivn J Nez Gil), it Health Care Management Science, 1-17, 2021.

250. "Benchmarking in Congenital Heart Surgery using Machine Learning-derived Optimal Classification Trees", (with D. Zhuo, J. Levine, J. Dunn, Z. Tobota, Zdzislaw, B. Maruszewski,

J. Fragata and G. Sarris), *World Journal for Pediatric and Congenital Heart Surgery*, 13, 1, 23-35, 2022.

251. "Mixed-Projection Conic Optimization: A New Paradigm for Modeling Low-Rank Constraints", (with R. Cory-Wright and J. Pauphilet), *Operations Research*, 70, 6, 3321-3344, 2022.

252. "Solving Large-Scale Sparse PCA to Certifiable (Near) Optimality", (with R. Cory-Wright and J. Pauphilet), *Journal of Machine Learning Research*, 23, 13.1-13.35, 2022.

253. "Optimal Survival Trees", (with J. Dunn, E. Gibson and A. Orfanoudaki), *Machine Learning*, 111, 29513023, 2022.

254. "Machine learning models for mitral valve replacement: A comparative analysis with the Society of Thoracic Surgeons risk score", (with A. Orfanoudaki, A. Giannoutsou, S. Hashim, R. C. Hagberg), *Journal of Cardiac Surgery*, 37, 1, 18-28, 2022.

255. "Data-Driven Optimization: A Reproducing Kernel Hilbert Space Approach", (with N. Koduri), *Operations Research*, 70,1, 454-471, 2022.

256. "Toward Global Food Security: Transforming OCP Through Analytics", (with Adrian Becker, Kassem Benabderrazik, Nada Chtinna, Nada El Majdoub, El Miloudi Mahboubi, Driss Lahlou Kitane, Steve Kokkotos, Georgia Mourtzinou, Ilyas Rakhis), *INFORMS Journal on Applied Analytics*, 52, 1, 90107, 2022.

257. "Two-stage sample robust optimization", (with S. Shtern and B. Sturt), *Operations Research*, 70, 1, 624-640, 2022.

258. "Optimization-based Scenario Reduction for Data-Driven Two-stage Stochastic Optimization", (with N. Mundru), *Operations Research*, appeared online 2022.

259. "Using Artificial Intelligence to find the optimal margin width in hepatectomy for colorectal cancer liver metastases", (with Georgios Antonios Margonis, Suleeporn Sujichantararat, Thomas Boerner, Yu Ma, Jane Wang, Carsten Kamphues5, Kazunari Sasaki, Seehanah Tang,

Johan Gagniere, Aurelien Dupr, Inger Marie Les, Doris Wagner, Gorgios Stasinos, Andrea Beer, Richard Burkhart, Daisuke Morioka, Katsunori Imai, Victoria Ardiles, Juan Manuel O'Connor, Timothy M. Pawlik, George Poultsides, Hendrik Seeliger, Katharina Beyer, Klaus Kaczirek, Peter Kornprat, Federico N Aucejo6 Eduardo de Santibaes, William R. Jarnagin, Hideo Baba, Itaru Endo, Per Eystein Lnning, Martin E Kreis, Matthew J Weiss,, Christopher L. Wolfgang, Michael DAngelica), *Jama Surgery*, 157, 8, e221819, 2022.

260. "World-Class Interpretable Poker", (with A. Paskov), *Machine Learning*, 111, 30633083, 2022.

261. "Online Mixed-Integer Optimization in Milliseconds", (with B. Stellato), *INFORMS Journal of Computing*, appeared online, 2022.

262. "Forecasting COVID-19 and Analyzing the Effect of Government Interventions", (with M. Li, H. Tazi, O. Skali, T. Trikalinos and N. Trichakis), *Operations Research*, appeared online, 2022.

263. "POTTER-ICU: An artificial intelligence smartphone-accessible tool to predict the need for intensive care after emergency surgery, (with A. Gebran, A. Vapsi, L. Maurer; M. El Moheb, L. Naar; S.. Thakur, R. Sinyard; D. Daye, G. Velmahos and H. Kaafarani), *Surgery*, 172, 1, 470-475, 2022.

264. "A Data-Driven Approach for Multi-Stage Linear Optimization", (with S. Shtern and B. Sturt), *Management Science*, appeared online, 2022.

265. "Ethics-by-design: efficient, fair and inclusive resource allocation using machine learning", (with T. Papalexopoulos, G. Cohen, R. Goff, D. Stewart, N. Trichakis), *Journal of Law and the Biosciences*, 9,1, lsac012, 2022.

266. "The Backbone Method for Ultra-High Dimensional Sparse Machine Learning", (with V. Digalakis Jr.), *Machine Learning*, 111, 2161-2212, 2022.

267. "Holistic Prescriptive Analytics for Continuous and Constrained Optimization Problems", (with O. Skali Lami), *INFORMS Journal on Optimization*, appeared online, 2022.

268. "Hurricane Forecasting: A Novel Multimodal Machine Learning Framework" (with L. Boussioux, T. Guenais, and C. Zeng), *Weather and Forecasting*, 37, 6, 817-831, 2022.

269. "Sparse PCA, a Geometric Approach", (with D. Lahlou Kitane), to appear in*Journal of Machine Learning Research*, 2022.

270. "Stochastic Cutting Planes for Data-Driven Optimization", (with M. Li), *INFORMS J. Computation*, appeared online, 2022.

271. "Policy Analytics in Public School Operations", (with A. Delarue), to appear in *Operations Research*, 2022.

272. "Integrated multimodal artificial intelligence framework for healthcare applications", (with Luis R. Soenksen, Yu Ma, Cynthia Zeng, Leonard D.J. Boussioux, Kimberly Villalobos Carballo, Liangyuan Na, Holly M. Wiberg, Michael L. Li, Ignacio Fuentes), *Nature Digital Medicine*, 5, 1, 1-10, 2022.

273. "Robust Convex Optimization: A New Perspective That Unifies And Extends", (with D. den Hertog, J. Pauphilet, T. Zhen), *Mathematical Programming*, 1-42, 2022.

274. "Improving quality in cardiothoracic surgery: Exploiting the untapped potential of machine learning", (with Agni Orfanoudaki, Joseph A Dearani, David M Shahian, Vinay Badhwar, Felix Fernandez, Robert Habib, Michael E Bowdish), *The Annals of Thoracic Surgery*, 114, 6, 1995-2000, 2022.

275. "Predicting Inpatient Flow at a Major Hospital Using Interpretable Analytics", (with J. Pauphilet, J. Stevens and M.Tandon), *MSOM*, 24, 6, 2809-2824, 2022.

276. "National and subnational short-term forecasting of COVID-19 in Germany and Poland during early 2021", (with Johannes Bracher, Daniel Wolffram, Jannik Deuschel, Konstantin Grgen, Jakob L Ketterer, Alexander Ullrich, Sam Abbott, Maria V Barbarossa, Sangeeta Bhatia, Marcin Bodych, Nikos I Bosse, Jan Pablo Burgard, Lauren Castro, Geoffrey Fairchild, Jochen Fiedler, Jan Fuhrmann, Sebastian Funk, Anna Gambin, Krzysztof Gogolewski, Stefan Heyder,

Thomas Hotz, Yuri Kheifetz, Holger Kirsten, Tyll Krueger, Ekaterina Krymova, Neele Leithuser, Michael L Li, Jan H Meinke, Baej Miasojedow, Isaac J Michaud, Jan Mohring, Pierre Nouvellet, Jedrzej M Nowosielski, Tomasz Ozanski, Maciej Radwan, Franciszek Rakowski, Markus Scholz, Saksham Soni, Ajitesh Srivastava, Tilmann Gneiting, Melanie Schienle), *Communications Medicine*, 2,1,1–17, 2022.

277. "Bootstrap Robust Prescriptive Analytics", (with B. van Parys), *Mathematical Programming*, 195, 1, 39–78, 2022.

278. "The Power and Limits of Decision Making with Confounded Data: The Case of Pricing", (with N. Kallus), *INFORMS Journal on Optimization*, appeared online, 2022.

279. "Ensemble machine learning for personalized antihypertensive treatment", (with A. Borenstein, A. Dauvin, A. Orfanoudaki), *Naval Research Logistics*, 69, 5, 669-688, 2022.

280. "Data-driven Interpretable Policy Construction for Personalized Mobile Health", (with Predrag Klasnja, Susan Murphy, Liangyuan Na), *2022 IEEE International Conference on Digital Health (ICDH)*, 13-22, 2022.

281. "Sparse Nonlinear Dynamics via Mixed-Integer Optimization", (with W. Gurnee), to appear in *SIAM Journal of Nonlinear Dynamics*, 2022.

282. "Machine Learning Reimagined: The Promise of Interpretability to Combat Bias", (with Lydia R Maurer, Haytham MA Kaafarani), *Annals of Surgery*, 275, 6, e738-e739, 2022.

283. "Validation of the artificial intelligencebased trauma outcomes predictor (TOP) in patients 65 years and older", (with M. El Hechi, A. Gebran, H. Tazi Bouardi, L. R. Maurer, M.El Moheb, D. Zhuo, J. Dunn, G. Velmahos, H. Kaafarani), *Surgery*, 171, 6, 1687-1694, 2022.

284. "Evaluation of individual and ensemble probabilistic forecasts of COVID-19 mortality in the United States", (with Estee Y Cramer, Evan L Ray, et al.), *Proceedings of the National Academy of Sciences*, 119, 15, e2113561119, 2022.

285. "Course Scheduling Under Sudden Scarcity: Applications to Pandemic Planning", (with C.Barnhart, A. Delarue, J.Yan), *Manufacturing & Service Operations Management*, 24,2, 727-745, 2022.

286. "Sparse Regression over Clusters: SparClur", (with J. Dunn, L. Kapelevich, R. Zhang), *Optimization Letters*, 16, 2, 433-448, 2022.

287. "Where to locate COVID-19 mass vaccination facilities?", (with V. Digalakis, A. Jacquillat, M. Li and A. Previero), *Naval Research Logistics Quarterly*, 69, 2, 179-200, 2022.

288. "A scalable algorithm for sparse and robust portfolios", (with R. Cory-Wright), *INFORMS Journal of Computing* , 34, 3, 14891511, 2022.

289. "Stable Classification", (with J. Dunn and I. Paskov), *Journal of Machine Learning Research*, 23, 296, 1-53, 2022.

290. "Validation of the Al-based Predictive Optimal Trees in Emergency Surgery Risk (POTTER) Calculator in Patients 65 Years and Older", (with Lydia R Maurer, Prahan Chetlur, Daisy Zhuo, Majed El Hechi, George C Velmahos, Jack Dunn, Haytham Kaafarani), *Annals of Surgery*, 277, 1, e8-e15, 2023.

291. "Dynamic Optimization with Side Information", (with C. McCord and B. Sturt), *European Journal of Operations Research*, 304, 2, 634-651, 2023.

Papers submitted for publication

292. "Channel Coding via Robust Optimization, Part 1: The Case of a Single Channel", (with C. Bandi) submitted to *IEEE Transactions on Information Theory*, 2015.

293. "Channel Coding via Robust Optimization, Part 2: The Multiple Channel Case", (with C. Bandi) submitted to *IEEE Transactions on Information Theory*, 2015.

294. "Data-driven learning in dynamic pricing using adaptive optimization", (with P. Vayanos), submitted to *Mathematical Programming*, 2015.

295. "The price of flexibility", (with I. Dunning and H. Bidkhori), submitted to *Operations Research*, 2015.

296. "Scalable Robust and Adaptive Inventory Routing", (with S. Gupta, J. Tay), submitted to *Transportation Science*, 2016.

297. "Optimal Selection of Health Care Providers", (with J. Kung), submitted to MS&OM, 2017.

298. "Multiperiod and Online Optimization for Fleet Defense: Centralized and Distributed Approaches", (with P. Jaillet and N. Korolko), submitted to *Naval Research Logistics*, 2017.

299. "From Predictions to Prescriptions in Multistage Optimization Problems", (with C. McCord), submitted to *Mathematical Programming*, 2017.

300. "The Trimmed Lasso: Sparsity and Robustness", (with M. Copenhaver, R. Mazumder), submitted to *IEEE Information Theory*, 2017.

301. "Optimal classification and regression trees with hyperplanes are as powerful as classification and regression neural networks", (with R. Mazumder and M. Sobiesk), submitted to *Journal of Machine Learning Research*, 2018.

302. "Prescriptive Analytics for Observational Data", (with C. McCord), submitted to *Management Science*, 2019.

303. "The Price of Interpretability", (with P. Jaillet, A. Delarue, S. Martin), submitted to *Operations Research*, 2019.

304. "Tensor Completion with Noisy Side Information", (with C. Pawlowski), submitted to *Machine Learning*, 2020.

305. "The edge of optimization in large-scale vehicle routing for paratransit", (with J. Yan), submitted to *Transportation Science*, 2020.

306. "Optimal Predictive Clustering", (with M. Sobiesk and Y. Wang), submitted to *Machine Learning*, 2020.

307. "Imbalanced classification via robust optimization", (with Y. Wang), submitted to *Machine Learning*, 2020.

308. "Hospital-wide Patient Flow Optimization", (with J. Pauphilet), submitted to *Management Science*, 2020.

309. "Early Detection of Opioid Over-Procurement: A Machine Learning Approach", (with M. Fazel-Zarandi and P. Petridis), submitted to *MSOM*, 2020.

310. "Prescriptive Machine Learning for Public Policy: The Case of Immigration Enforcement", (with M. Fazel-Zarandi), submitted to *Operations Research*, 2020.

311. "A New Perspective on Low-Rank Optimization", (with R. Cory-Wright and J. Pauphilet), submitted to *Mathematical Programming*, 2021.

312. "Interpretable Matrix Completion: A Discrete Optimization Approach", (with M.Li), submitted to *Machine Learning*, 2020.

313. "Pareto Adjustable Robust Optimality via a Fourier-Motzkin Elimination Lens", (with S. C. M. ten Eikelder, D. den Hertog and N. Trichakis), submitted to *Operations Research*, 2020.

314. "Prediction with Missing Data", (with A. Delarue, J. Pauphillet), submitted to *Operations Research*, 2021.

315. "Slowly Varying Regression under Sparsity", (with V. Digalakis, M. Li and O. Skali Lami), submitted to *Operations Research*, 2021.

316. "Time Series that are Robust to Regime Changes", (with I. Paskov), submitted to *Journal of Machine Learning Research*, 2021.

317. "The Price of Diversity", (with H. Bandi), submitted to *Operations Research*, 2021.

318. "Robust Optimization with Side Data", (with N. Koduri), submitted to *Mathematical Programming*, 2021.

319. "Pricing algorithmic Insurance", (with A. Orfanoudaki), submitted to *Operations Research*, 2021.

320. "Interpretable Machine Learning for Policy Analysis: The Case of National Immigration Policy", (with M. Fazel-Zarandi), submitted to *MSOM*, 2021.

321. "Sparse Plus Low Rank Matrix Decomposition: A Discrete Optimization Approach", (with N. Johnson and R. Cory-Wright), submitted to *Journal of Machine learning Research*, 2021.

322. "Multistage Stochastic Optimization via Kernels", (with K. Villalobos Carballo), submitted to *Operations Research*, 2022.

323. "Holistic Deep Learning", (with L. Boussioux, K. Villalobos Carballo, M. Li, A. Paskov and I. Paskov), submitted to *Journal of Machine Learning Research*, 2021.

324. "Personalized Breast Cancer Screening", (with Y. Ma, O. Nohadani and O. Kyriazi), submitted to *Health Management Science*, 2022.

325. "Mixed-Integer Optimization with Constraint Learning", (with I. Birbil, D. den Hertog, A. Fajemisin, D. Maragno, H. Wiberg), submitted to *Operations Research*, 2021.

326. "A Robust Optimization Approach to Deep Learning", (with X. Boix, K. Villalobos Carballo and D. den Hertog), submitted to *Journal of Machine Learning Research*, 2021.

327. "Global Optimization via Optimal Decision Trees", (with B. Ozturk), submitted to *Global Optimmization*, 2022.

328. "THEMIS: A Framework for Cost-Benefit Analysis of COVID-19 Non-Pharmaceutical Interventions", (with M. Li and S. Soni), submitted to *MSOM*, 2022.

329. "A Prescriptive Approach to Mixed Integer Convex Optimization", (with C. Woo Kim), submitted to *INFORMS Journal of Computing*, 2022.

330. "Optimized Oversampling", (with T. Koukouvinos and A. Koulouras), submitted to *Machine Learning*, 2022.

331. "Predictive performance of multi-model ensemble forecasts of COVID-19 across European nations", (with Katharine Sherratt, Hugo Gruson, et. al.), 2022.

332. "An Exact and Interpretable Solution to Wordle", (with A. Paskov), submitted to *Operations Research*, 2022.

333. "Tabtext: a systematic approach to aggregate knowledge across tabular data structures", (with Kimberly Villalobos Carballo, Yu Ma, Liangyuan Na, Lonard Boussioux, Cynthia Zeng, Luis R Soenksen, Ignacio Fuentes), 2022.

334. "Accelerating vaccine innovation for emerging infectious diseases via parallel discovery", (with Joseph Barberio, Jacob Becraft, Zied Ben Chaouch, Tasuku Kitada, Michael Lingzhi Li, Andrew W Lo, Kevin Shi, Qingyang Xu), 2022.

335. "Decarbonizing OCP", (with R Cory-Wright, V Digalakis Jr), submitted to *Management Science and Operations Management*, 2022.

336. "Distributionally Robust Causal Inference with Observational Data", (with Kosuke Imai, Michael Lingzhi Li), submitted to *Journal of Machine Learning Research*, 2022.

Conference Proceedings (refereed)

337. "On the parsimonious property of connectivity problems", (with M. Goemans) , *Proceedings of the first annual ACM-SIAM symposium on discrete algorithms*, 388-396, 1990.

338. "A technique for speeding up the solution of the Lagrangean dual", (with J. Orlin), *Proceedings of the Second Conference on Integer Programming and Combinatorial Optimization*, (ed. E. Balas, G. Cornujelos, R. Kannan), 435-452, 1992.

339. "Conservation laws, extended polymatroids and multi-armed bandit problems; a unified polyhedral approach", (with Jose Niño-Mora), *Proceedings of the Third Conference on Integer Programming and Combinatorial Optimization*, 355-385, 1993.

340. "On a characterization of the minimum assignment and matching in the independent random model", (with F. Avram), *Proceedings of the Third Conference on Integer Programming and Combinatorial Optimization*, 161-171, 1993.

341. "Branching bandits and Klimov's problem: achievable region and side constraints", (with I. Paschalidis and J. Tsitsiklis), IEEE symposium on Automatic Control, 1994.

342. "From valid inequalities to heuristics: a unified view of primal-dual approximation algorithms in covering problems", (with C. Teo), *Sixth symposium on discrete algorithms*, San Fransisco, 102-112, 1994.

343. "Nonlinear formulations and improved randomized approximation algorithms for multicut problems", (with C. Teo and R. Vohra), *Proceedings of the Fourth Conference on Integer Programming and Combinatorial Optimization*, 1995.

344. "On dependent randomized rounding algorithms", (with C. Teo and R. Vohra), *Proceedings of the Fifth Conference on Integer Programming and Combinatorial Optimization*, 1996.

345. "Improved randomized approximation algorithms for lot sizing problems", (with C. Teo), *Proceedings of the Fifth Conference on Integer Programming and Combinatorial Optimization*, 1996.

346. "Solving convex optimization problems by random walks", (with S. Vempala), *Proceedings of the 34th Symposium on the Theory of Computing (STOC)*, 2002.

347. "Dynamic classification of online customers", (with A. Mersereau and N. Patel), *3rd SIAM conference in data mining*, 107–118, 2003.

348. "The Air Traffiffic Flow Management Problem: An Integer Optimization Approach", (with G. Lulli and A. Odoni), *IPCO*, 34-46, 2008.

349. "An integer optimization approach to associative classification", (with A. Chang and C. Rudin), *26th Annual Conference on Neural Information Processing Systems*, 3302-3310, 2012.

350. "Learning mixed-integer convex optimization strategies for robot planning and control", (with Abhishek Cauligi, Preston Culbertson, Bartolomeo Stellato, Mac Schwager, Marco Pavone), 59th IEEE Conference on Decision and Control (CDC), 1698-1705, 2020.

XI. Oral Presentations

Plenary/Distinguished Lectures:

1. Semi-plenary lecture in Mathematical Programming Conference, Berlin 2012, "Tractable stochastic analysis in high dimensions: a robust optimization approach".
2. Plenary lecture in European Control conference, Zurich 2013, "Tractable stochastic analysis in high dimensions: a robust optimization approach".
3. Plenary lecture in INFORMS conference, Minnesota 2013, "Healthcare Analytics."
4. Ray Fulkerson series of three lectures, Cornell University, 2014.
5. Philip Morse plenary lecture in INFORMS conference, San Fransisco, 2014. "Statistics and Machine Learning via a Modern Optimization Lens."
6. Distinguished lecture, IEOR department, Georgia Institute of Technology, 2015. "Statistics and Machine Learning via a Modern Optimization Lens."
7. Plenary lecture, Conference on optimization, Northwestern University, Chicago, 2015. "From Predictive to Prescriptive Analytics."
8. Plenary lecture, 17th British-French-Geramn Conference in optimization, London, 2015. "Statistics and Machine Learning via a Modern Optimization Lens."
9. Hotelling series of Lectures, University of North Carolina, March, 2016.
10. Plenary lecture, Canadian OR Society, Banff, June 2016.
11. Plenary distinguished IFORS lecturer, Poznan, Poland, July 2016.
12. Plenary lecture for INFORMS health care conference, Rotterdam, July 2017.

Invited talks at Cornell University, Stanford University, Princeton University, MIT, Yale University, University of Michigan, Northwestern University, Northeastern University, Boston University, Duke University, University of Maryland, University of Minnesota, University of Southern California, Columbia University, University of Berlin, New York University, McMaster University, CNRS, University of Montreal, UC Berkeley, Georgia Institute of Technology, GTE Laboratories, Royal Institute of Technology (Sweden), Boston University, Aussois (France), Oberwolfach (Germany), the Mathematical Programming Symposium, the Institute of Mathematics and its applications (IMA), ETH Zurich, Eurandom (Netherlands), Lunthern, Wharton School, University of Athens, University of Massachusetts, Amherst, National University of Singapore, Tsingua University, Beizing University. Talks at various conferences.