CURRICULUM VITAE

Robert M. Freund
M.I.T.
Sloan School of Management
Management Science Area

Birthplace: New York City
Citizenship: United States

I. Education:

Ph.D., with Distinction, Operations Research, Stanford University, 1980
M.S., Operations Research, Stanford University, 1979
B.A., Mathematics, Princeton University, 1975

Program for Senior Executives, MIT, 1990

II. Title of Doctoral Thesis

"Variable Dimension Complexes, with Applications," B. Curtis Eaves, thesis advisor

III. Principal Fields of Research Interests:

Mathematical optimization, including linear optimization, nonlinear optimization, first-order methods, interior-point methods, complexity theory, and related mathematical systems

IV. Other S.S.M. Faculty in Same Field:

Thomas Magnanti, Institute Professor
James B. Orlin, Professor
Dimitris Bertsimas, Professor
Cynthia Barnhart, Professor
Georgia Perakis, Professor
David Gamarnik, Professor
Andy Sun, Associate Professor
Rahul Mazumder, Associate Professor
Alexandre Jacquillat, Associate Professor
Chara Podimata, Assistant Professor
Swati Gupta, Assistant Professor
Haihao Lu, Assistant Professor
Rama Ramakrishnan, Professor of the Practice
Roy Welsch, Professor
Arnold Barnett, Professor

V. Non–M.I.T. Experience:

Employer	Position	Dates

Pontificia Universidad Católica	Visiting Professor	January-December 2013
National University of Singapore	Visiting Scientist, Mathematics Dept.	July 2008-June 2010
Harvard Business School	Visiting Professor	1998-1999
Delft University of Technology	Visiting Scientist	Spring, 1999
Mathematical Sciences Research Institute, Berkeley	Visiting Scientist	Fall, 1998
Cornell University	Visiting Scientist	Fall, 1991
ICF, Incorporated	Senior Associate	9/1980 - 6/1983
BDM Corporation	Analyst	6/1975 - 8/1976

VI. History of M.I.T. Appointments:

Professor, 7/1994
Associate Professor, 7/1987
Assistant Professor, 9/1983

VII. School and Institute Committees and Responsibilities:

Ad Hoc Committee on Climate-Related Industry Engagements, 2024-25
Faculty Director, Sloan MBA Program, 2022-25
MIT MLK Visiting Scholars Faculty Advisory Committee, 2022-2025
Graduate Officer, MIT Operations Research Center, 2023-24
Search Committee, MIT Senior Vice President for Research, 2023-24
Sloan OR/Statistics Group Head, 2014-2019, 2023-25
Sloan Digital Education Task Force, 2019-2020
Sloan Blended Program Committee, 2019-2021
MIT Sloan Latin America Office Steering Committee, 2019-
MIT Institute Committee on Race and Diversity, 2016-2019 (Co-Chair, 2018-2019)
Faculty Selection Board Member of the MISTI Global Seed Fund General Fund, 2016-17
Sloan School Committee on the Sloan Fellows Program, 2015-2016
Sloan Working Group on Faculty Profiles, 2014-15
Sloan Task Force on Gender Diversity, 2014-15
Sloan Staff Appreciation Awards Committee, 2014-15
Member, Harold Edgarton Faculty Achievement Award Selection Committee, 2014-15
Deputy Dean for Faculty, MIT Sloan School of Management, 2008-2011
MIT Institute Committee on the Tenure Process, 2009-10
Chair, Sloan Committee on Executive MBA Program, 2007-8
Co-Director, MIT Program in Computation for Design and Optimization, 2004-2008
Steering Committee, MIT Program in Computation for Design and Optimization, 2004-8
Sloan Master's Program Committee, 1984-1997 and 2000-2005
Sloan International Initiatives Committee, 1995-1998 and 2001-2002
Sloan MBA Redesign Committee, 2002-3
MIT Institute Committee on Curricula, 1999-2000
MIT Institute Committee on Campus Race Relations, 1999-2002
Sloan Operations Research Group Head, 1999-2005
Master's Program Coordinator, Operations Research Center, 1999-2001

MIT Strategic Review Committee of the Operations Research Center, 1999-2000
Director, M.I.T. Operations Research Center, 1997-1998
Co-Director, M.I.T. Operations Research Center, 1994-1998
Sloan Undergraduate Program Committee, 1997-1998

MIT Institute Committee on Operations Research, 1995-98
MIT-Singapore Program in High Performance Computation for Engineered Systems, 1998-2004
School of Engineering Extended Council on Engineering Systems Division, 1997-1998
Operations Research Center Staff, 1983-
Operations Research Center Doctoral Program Coordinator, 1990-1992

VIII. Industrial/Consulting Activities:

Tactician Corporation, 2007, 2015-6
Smartleaf, Inc., 2006-2007
NeoSaej, Inc., 2007-2013
Smart Transportation Systems, Inc., 2012-

IX. Awards:

Air Force Office of Scientific Research Research Grant (with SRS Cuong Nguyen), $534K, 2022-2025
MIT Sloan 2020 Samuel M. Seegal Prize (for educational inspiration)
Air Force Office of Scientific Research Research Grant (with Professors Jaime Peraire), $800K, 2019-2022
INFORMS Fellow 2018
MISTI/Belgium Award for research in theoretical optimization, $21,000, 2015-16
MISTI/Chile Award for research in optimization, $28,000, 2013-14
Air Force Office of Scientific Research Research Grant (with Professors Jaime Peraire), $803K, 2015-2018
Air Force Office of Scientific Research Research Grant (with Professors Jaime Peraire), $757K, 2011-2014
Air Force Office of Scientific Research Research Grant (with Professors Pablo Parrilo and Jaime Peraire), $757K, 2008-2011
Longuet-Higgins Prize in Computer Vision and Pattern Recognition, 2007
(jointly awarded with Edgar Osuna, and Federico Girosi)
Jamieson Prize for Excellence in Teaching, MIT Sloan School, 2007
Award for Excellence in Teaching, MIT Sloan School, 2006
Award for Excellence in Teaching, MIT Sloan School, 2001.
MIT Class of 1960 Innovation in Education Award, 2000,
and Class of 1960 Faculty Fellow, 7/2000-6/2002.
Teacher of the Year, Sloan School of Management, 1999-2000.
Teacher of the Year, Sloan School of Management, 1996-1997.
Theresa Seley Professor in Management Science, 1997.
National Science Foundation Travel Grant Award, 1997.
New Research Funding Award, MIT Sloan School of Management, 1996.

Award for Excellence in Management Education, MIT Sloan School, 1995.
Nanyang Technological University Senior Professor (Term Chair), July 1990.
Graduate Student Teaching Award for the Sloan School, 1990-1991.
Graduate Student Teaching Award for the Sloan School, 1988-1989.
Recipient of A.T.&T. New Research Fund Award, March 1988.
Elisha Gray II Career Development Chair, September 1986.
Received Ph.D. with Distinction, 1980.

X. Professional Activities:

Committee to Review *Mathematics of Operations Reseasrch*, 2024-
Committee chair, SIAM Optimization Prize for Young Researchers, 2022
Associate Editor, *Mathematical Programming (Series A),* 1999-
Chair, INFORMS Optimization Section, 2001-2002.
Associate Editor, *Mathematical Programming (Series B)*, 1994-99
OR/MS Today Oversight Committee*,* 1997-99
Co-Editor, *Mathematical Programming (Series A)*, 1994-1999
Associate Editor, *Operations Research Letters,* 1991-1994.
Committee on the INFORMS Prize, 1991- 1995.
Chairman, Committee on the INFORMS Prize, 1993-1994.

ORSA Committee on the Nicholson Student Paper Competition, 1991-1992.
Associate Editor, *Management Science,* 1986-1993.
Reviewer for *Mathematical Reviews,* 1985-1992.

Institute for Operations Research and Management Science, Member, 1984 - present
Mathematical Programming Society, Member, 1984 - present
Society of Industrial and Applied Mathematicians, Member, 1986 - present

XI. Subjects Taught:

15.053, 15.058	Introduction to Management Science	Fall 1983 Spring 1984 Fall 1986 Fall 1989 Fall 1992
15.081J, 6.251J	Introduction to Mathematical Programming	Fall 1983 Fall 1984 Fall 1987
15.060	Data, Models, and Decisions	Fall 1993 Fall 1994 Fall 1995 Fall 1996 Fall 1999 Fall 2000

		Fall 2002 Fall 2004 Fall 2005 Fall 2007 Summer 2011 Summer 2012 Fall 2012 Fall 2014 Summer 2016
15.730	Data, Models, and Decisiions for EMBA	Spring 2012
15.062	Decision Models for Management (DSS III)	Spring 1985 Spring 1986 Spring 1987 Spring 1989 Spring 1991
15.063	Management Decision Support Models (Sloan Fellows Program)	Summer 1990 Summer 1991 Summer 1992
15.059	Mathematical Programming Models and Applications (was 15.963)	Fall 1985 Fall 1986 Fall 1987
15.084J, 6.252J	Nonlinear Optimization	Spring 1987 Spring 1990 Spring 1993 Spring 1994 Spring 1996 Spring 1998 Spring 2004 Spring 2012
	Titled "Advanced Optimization" at Universidad Pontificia Católica	Spring 2013 Spring 2014 Spring 2016
15.089	Workshop in Operations Management and Operations Research	Fall 1984 Spring 1985 Spring 1988
Program for Senior Executives		Fall 1992 Spring 1993 Spring 1994

		Fall 1994
15.099	Readings in Optimization	Fall 1997 Spring 1998 Fall 2003
15.097	Optimization Modeling for Managers	Spring 2000
15.094	Systems Optimization: Models and Computation	Spring 2000 Spring 2001 Spring 2002 Spring 2003 Spring 2004
15.071	Decision Technologies for Managers	Spring 2001 Spring 2002
15.071	The Analytics Edge	Spring 2016 Spring 2017 Spring 2018 Spring 2019 Spring 2021 Spring 2022 Spring 2023 Spring 2024
6.336J/16.910J	Introduction to Simulation and Optimization (four guest lectures)	Fall 1999

XII. Student Supervision:

Doctoral Students

Ph.D.	Dissertation Advisor for Kok Choon Tan Title: Newton's Method for Parametric Centering Problems	June 1990
Ph.D.	Dissertation Advisor for Manuel Nunez Title: Condition Numbers and Properties of Central Trajectories in Convex Programming	August 1997
Ph.D.	Dissertation Advisor for Marina Epelman Title: Complexity, Condition Numbers, and Conic Linear Systems	June 1999
Ph.D.	Dissertation Advisor for Fernando Ordóñez Title: On the Explanatory Value of Condition Numbers for Convex Optimization:	August 2002

Theoretical Issues and Computational Experience

Ph.D. Dissertation Advisor for Alexandre Belloni — June 2006
Title: Studies Integrating Geometry, Probability, and Optimization under Convexity

Ph.D. Dissertation Advisor for Paul Grigas — August 2016
Title: Methods for Convex Optimization and Statistical Learning

Ph.D. Dissertation Advisor for Haihao (Sean) Lu — June 2019
Title: Large-Scale Optimization Methods for Data-Science Applications

Ph.D. Dissertation Advisor for Lauren Berk — June 2020
Title: New Optimization Approaches to Matrix Factorization Problems with Connections To Natural Language Processing

Ph.D. Dissertation Advisor for Jourdain Lamperski — August 2020
Title: Structural and Algorithmic Aspects of Linear Inequality Systems

Ph.D. Dissertation Advisor for Renbo Zhao — June 2023
Title: New Theory and Algorithms for Convex Optimization with Non-Standard Structures

Ph.D. Dissertation Advisor for Shuvo Das Gupta — June 2024
Title: Advances in Computer-Assisted Design and Analysis of First-Order Optimization Methods and Related Problems

Ph.D. Dissertation Advisor for Zikai Xiong — June 2025
Title: New Theory and New Practical Methods for Solving Large-Scale Linear and Conic Optimization

Doctoral Student Committee Member (Reader)

Reader for thesis of Janice Hammond — August 1984
Title: Solving Asymmetric Variational Inequality Problems and Systems of Equations with Generalized Nonlinear Programming Algorithms

Reader for thesis of Randy Hiller — August 1986

Title: Stochastic Programming Approximation Methods with Applications to Multi-Stage Production Planning

Reader for thesis of Yuping Qiu May 1987
Title: Sensitivity Analysis for Variational Inequalities

Reader for thesis of Georgia Perakis September 1992
Title: Geometric, Interior Point, and Classical Methods for Solving Finite Dimensional Variational Inequality Problems

Reader for thesis of Peter Klaasen May 1994
Title: Stochastic Programming Models for Interest-Rate Risk Management

Reader for thesis of Zhihong Chi Februrary 1995
Title: Airline Yield Management in a Dynamic Network Environment

Reader for thesis of Tracy Myers June 1995
Title: Reasoning with Incomplete Probabilistic Knowledge: The RIP Algorithm for de Finitti's Fundamental Theorem of Probability

Reader for thesis of Hitendra Wadhwa December 1995
Title: Models for Pricing and Inventory Management of Seasonal Products

Reader for thesis of Michael Miller June 1996
Title: Optimal Allocation of Resources to Clinical Trials

Reader for thesis of Lawrence McGovern June 2000
Title: Computational Analysis of Real-Time Convex Optimization for Control Systems

Reader for thesis of Ivan Oliveira February 2002
Title: A "HUM" Conjugate Gradient Algorithm for Constrained Nonlinear Optimal Control: Terminal and Regulator Problems

Reader for thesis of Romy Shioda June 2003
Title: Integer Optimization for Statistical Applications

Reader for thesis of Peng Sun — June 2003
Title: Dynamic Programming approach for Direct Marketing and Off-Policy Sample Trajectory Based Problems

Reader for thesis of Michelle Aghassi — June 2006
Title: Robust Optimization and Game Theory

Reader for thesis of David Brown — June 2006
Title: Risk and Robust Optimization

Reader for thesis of Xu (Andy) Sun — August 2011
Title: Advances in Electric Power Systems: Robustness, Adaptability, and Fairness

Reader for thesis of Joel Saa-Seone — July 2014
Title: Under construction

Reader for thesis of Julia Yan — June 2020
Title: Under construction

Reader for thesis of Brad Stuurt — June 2020
Title: Under construction

Masters Students

M.S. Thesis Advisor for Patrick Kei Boguinard — May 1984
Title: Boston Edison Coal Conversion Project: An Inventory Model

Thesis Advisor for Hisao Aoyama — May 1985
Title: Applications of Catastrophe Theory in Management

Thesis Advisor for David Dubbin — May 1985
Title: Making Productions Decisions Using Mathematical Optimization Techniques

Thesis Advisor for Robert Good — May 1986
Title: Capital Markets in the Arabian Gulf

Thesis Advisor for Frank Finelli — May 1986
Title: Electricity Shortage Planning: A Regional Perspective

Thesis Co-Advisor for Chitrupa Fernando — August 1986
Title: Integrated Energy Systems: A Mathematical

Programming Framework for Energy Policy Analysis

Thesis Reader for Richard Ocken — May 1987
Title: A Mathematical Programming Technique for Scheduling Courses at the Sloan School

Thesis Advisor for Peter Gantchev — May 1987
Title: Applications of Mathematical Programming to the Multinationals' Intrafirm Financing and Remittance Problem

Thesis Advisor for Neda Emami — September 1987
Title: Analysis of Duality Construction of Variable Dimension Fixed Point Algorithms

Thesis Advisor for Luis Vieira — May 1990
Title: Computational Tests of Interior Point Algorithms for Linear Programming

Thesis Advisor for Abdulla Al-Othman — May 1991
Title: A Phase I Phase II Algorithm for Solving Linear Programmes Based on the Reduction of Only One Potential Function Algorithms for Linear Programming

Thesis Advisor for Catherine Strakhov — May 1991
Title: A Mathematical Modeling Technique for Improving Fast Food Labor Scheduling

Thesis Advisor for Hitendra Wadhwa — January 1992
Title: Implementation and Empirical Study of a Combined Phase I - Phase II Potential Reduction Algorithm for Linear Programming

Thesis Advisor for Marc Pfeffer — January 1994
Title: Large-Scale Nonlinear Optimization for Portfolio Problems

Thesis Advisor for Barry Kostiner — September 1994
Title: Spatial Market Equilibrium for Resisitive Electric Networks

Thesis Advisor for Abdulwah Al-Othman — July 1995
Title: Analysis of Vaidya's Volumetric Center Cutting Plane Algorithm

Thesis Advisor for Navneet Singh — February 1996
Title: Efficiency and Performance of Some Algorithms in Mathematical Programming

Thesis Advisor for Vinayak Shanbhag — December 1997
Title: Optimal Control Systems in Response to Diverse Electricity Pricing Structures

Thesis Advisor for Xu Sheng — January 2001
Title: Solution Methodologies for the Smallest Enclosing Circles Problem

Thesis Advisor for Chng Choon Peng — January 2001
Title: An Infeasible Interior-Point Method For Structural Optimization Based on Finite Element Models

Thesis Advisor for Jiajie Liang — September 2006
Title: Enhancements and Computationial Evaluation of the Hit-and-Run Random Walk on Polyhedra

Thesis Advisor for Jeremy Chen — September 2007
Title: Computational Issues and Related Mathematics of an Exponential Annealing Homotopy for Conic Optimization

Thesis Advisor for Sai-Hei Yeung — June 2008
Title: Analysis of the Projective Re-Normalization Method on Semidefinite Programming Feasibility Problems

Thesis Advisor for Gregory Young — June 2018
Title: Client Segmentation under Real-World Constraints

Thesis Advisor for Jun Siong Ang — June 2019
Title: Evaluation of the Smoothing Activation Function in Neural Networks for Business Applications

XIII. Publications:

Books

Data, Models, and Decisions: The Fundamentals of Management Science, with Dimitris Bertsimas, Southwestern College Publishing, 2000, republished by Dynamic Ideas LLC, 2004.

Refereed Journal Articles

[1] "A Constructive Proof of Tucker's Combinatorial Lemma", with M.J. Todd, *Journal of Combinatorial Theory* (30) , pp. 321 -325 , 1981.

[2] "Optimal Scaling of Balls and Polyhedra", with B.C. Eaves , *Mathematical Programming* (23) , pp. 138-147 , 1982.

[3] "Variable Dimension Complexes, Part I: Basic Theory", *Mathematics of Operations Research* (9) , pp. 479-497, 1984.

[4] "Variable Dimension Complexes, Part II: A Unified Approach to Some Combinatorial Lemmas in Topology", *Mathematics of Operations Research* (9), pp. 498-509, 1984.

[5] "On the Complexity of Four Polyhedral Set Containment Problems", with James B. Orlin, *Mathematical Programming* (33) , pp.133-145, 1985.

[6] "Postoptimal Analysis of a Linear Program under Simultaneous Changes in Matrix Coefficients", *Mathematical Programming Study 24*, pp. 1-13, 1985.

[7] "Combinatorial Theorems on the Simplotope that Generalize Results on the Simplex and Cube", *Mathematics of Operations Research* (11) , pp. 169-179 , 1986.

[8] "Dual Gauge Programs, with Applications to Quadratic Programming and the Minimum Norm Problem", *Mathematical Programming* (38), pp.47–68, 1987.

[9] "An Analog of Karmarkar's Algorithm for Inequality Constrained Linear Programs, with a "New" Class of Projective Transformations for Centering a Polytope," *Operations Research Letters* (7), pp. 9–14, 1988.

[10] "Combinatorial Analogs of Brouwer's Fixed Point Theorem on a Bounded Polyhedron," *Journal of Combinatorial Theory, Series B* (47), pp. 192-219, 1989.

[11] "Optimal Investment in Product Flexible Manufacturing Capacity",with C. Fine, *Management Science* (36), pp. 449-466, 1990.

[12] "Polynomial-Time Algorithms for Linear Programming based only on Primal Scaling and Projected Gradients of a Potential Function," *Mathematical Programming* (51), pp. 203-222 , 1991.

[13] "Theoretical Efficiency of a Shifted Barrier Function Algorithm for Linear Programming", *Linear Algebra and its Applications* (152), pp. 19-41 , 1991.

[14] "A Method for the Parametric Center Problem, with a Strictly Monotone Polynomial-Time Algorithm for Linear Programming", with K. C. Tan, *Mathematics of Operations Research* (16), pp. 775 - 801, 1991.

[15] "Projective Transformation for Interior-Point Algorithms, and a Superlinearly Convergent Algorithm for the W-Center Problem," *Mathematical Programming* 58, pp. 385-414, 1993.

[16] "A Potential Function Reduction Algorithm for Solving a Linear Program Directly from an Infeasible "Warm Start"", *Mathematical Programming (*52) , pp. 441-466, 1991.

[17] "Prior Reduced Fill-In in Solving Equations in Interior-Point Algorithms", with John Birge and Robert Vanderbei, *Operations Research Letters (11)*, pp. 195-198, 1992.

[18] "A Potential Reduction Algorithm with user-specified Phase I - Phase II Balance, for Solving a Linear Program from an Infeasible Warm Start," *SIAM Journal of Optimization* (5) 2, 247-268, 1995.

[19] "Barrier Functions and Interior-Point Algorithms for Linear Programming with Zero, One-, or Two-Sided Bounds on the Variables," with Michael J. Todd, *Mathematics of Operations Research* (20) 2, 415-440, 1995.

[20] "Following a "Balanced" Trajectory from an Infeasible Point to an Optimal Linear Programming Solution with a Polynomial-time Algorithm," *Mathematics of Operations Research* 21 (4) 839-859, 1996.

[21] "An Infeasible-Start Algorithm for Linear Programming whose Complexity Depends on the Distance from the Starting Point to the Optimal Solution," *Annals of Operations Research* 62, pp. 29-58, 1996.

[22] "Condition Measures and Properties of the Central Trajectory of a Linear Program," with Manuel A. Nunez, *Mathematical Programming* 83 (1), pp. 1-28, 1998.

[23] "Some Characterizations and Properties of the 'Distance to Ill-Posedness' and the Condition Measure of a Conic Linear Systems," with Jorge. R. Vera, *Mathematical Programming* 86, pp. 225-260, 1999.

[24] "Condition Based Complexity of Convex Optimization in Conic Linear Form via the Ellipsoid Algorithm," with Jorge R. Vera, *SIAM Journal on Optimization* 10 (1), 155-176, 2000.

[25] "Interior Point Methods: Current Status and Future Directions," with Shinji Mizuno, in *High Performance Optimization,* H. Frenk et al. (eds.), Kluwer Academic Publishers, pp. 441-466, 2000.

[26] "Condition Number Complexity of an Elementary Algorithm for Computing a Reliable Solution of a Conic Linear System," with Marina Epelman, *Mathematical Programming* 88 (3), pp. 451-485, 2000.

[27] "Condition-Measure Bounds on the Behavior of the Central Trajectory of a Semi-Definite Program, with Manuel Nunez, *SIAM Journal on Optimization* 11 (3), pp. 818-836, 2001.

[28] "A new condition measure, pre-conditioners, and relations between different measures of conditioning for conic linear systems," with Marina Epelman, *SIAM Journal on Optimization* 12 (3), pp. 627-655, 2002.

[29] "On the Primal-Dual Geometry of Level Sets in Linear and Conic Optimization," *SIAM Journal on Optimization* 13 (4), pp. 1004-1013, 2003.

[30] "Solution Methodologies for the Smallest Enclosing Circle Problem", with Sheng Xu and Jie Sun, *Computational Optimization and Applications* 25, pp. 283-292, 2003.

[31] "Computational Experience and the Explanatory Value of Condition Numbers for Linear Optimization," with Fernando Ordóñez, *SIAM Journal on Optimization* 14 (2), pp. 307-333, 2004.

[32] "On the Complexity of Computing Estimates of Condition Measures of a Conic Linear System," with Jorge Vera, *Mathematics of Operations Research* 28 (4), pp. 625-648, 2003.

[33] "Complexity of Convex Optimization using Geometry-Based Measures and a Reference Point", *Mathematical Programming* (99), pp. 197-221, 2004.

[34] "Computation of Minimum Volume Covering Ellipsoids", with Peng Sun, *Operations Research* 52 (5), pp. 690-706, 2004.

[35] "On an Extension of Condition Number Theory to Non-conic Convex Optimization", with Fernando Ordóñez, *Mathematics of Operations Research* 30 (1), pp. 173-194, 2005.

[36] "On Two Measures of Problem Instance Complexity and their Correlation with the Performance of SeDuMi on Second-Order Cone Problems," with Zhi Cai, *Computational Optimization and Applications* (34) 3, pp. 299-320, 2006.

[37] "On the Behavior of the Homogeneous Self-Dual Model for Conic Convex Optimization," *Mathematical Programming* (106), pp. 527-545, 2006.

[38] "On the Symmetry Function of a Convex Set," with Alexandre Belloni, *Mathematical Programming* (111), pp. 57-93 , 2008.

[39] "Behavioral Measures and their Correlation with IPM Iteration Counts on Semi-Definite Programming Problems," with Fernando Ordóñez and Kim Chuan Toh, *Mathematical Programming* 109 (vol. 2-3), pp. 445-475, 2007.

[40] "Projective Re-Normalization for Improving the Behavior of a Homogeneous Conic Linear System," with Alexandre Belloni, *Mathematical Programming* 118, pp. 279-299, 2009.

[41] "A Geometric Analysis of Renegar's Condition Number, and its Interplay with Conic Curvature," with Alexandre Belloni, *Mathematical Programming* 119 (1), pp. 95-107, 2009.

[42] "Optimizing Product Line Designs: Efficient Methods and Comparisons," with Alexandre Belloni, Matthew Selove, and Duncan Simester, *Management Science* (54) 9, pp. 1544-1552, 2008.

[43] "On the Second-Order Feasibility Cone: Primal-Dual Representation and Efficient Projection," with Alexandre Belloni, *SIAM Journal on Optimization* 19 (3), pp. 1073-1092, 2008.

[44] "An Efficient Re-Scaled Perceptron Algorithm for Conic Systems," with Alexandre Belloni and Santosh Vempala, *Mathematics of Operations Research* 34 (3), pp. 621-641, 2009.

[45] "Equivalence of Convex Problem Geometry and Computational Complexity in the Separation Oracle Model," with Jorge Vera, *Mathematics of Operations Research* 34 (4), pp. 869-879, 2009.

[46] "Band Gap Optimization of Two-Dimensional Photonic Crystals Using Semi-definite Programming and Subspace Methods, with H. Men, N.C. Nguyen, P. Parrilo, and J. Peraire, *Journal of Computational Physics* 229 (10), pp. 3706–3725, 2010.

[47] "Design of Photonic Crystals with Multiple and Combined Band Gaps," with H. Men, N.C. Nguyen, K.M. Lim, P. Parrilo, and J. Peraire, *Physical Review E* 83 (4), 2011.

[48] "An Accelerated First-Order Method for Solving Unconstrained SOS Polynomial Optimization Problems", with Dimitris Bertsimas and Xu Andy Sun, *Optimization Methods and Software 28* (3), pp. 424-441, 2013.

[49] "A Binary Optimization Method for Linear Metamaterial Design Optimization," with J. Saa-Seoane, N.-C. Nguyen, H. Men, and J. Peraire, *Journal of Applied Physics A 109* (4), pp. 1023-1030, 2012.

[50] "Fabrication-Adaptive Optimization, with an Application to Photonic Crystal Design," with Han Men, Jaime Peraire, N.Cuong Nguyen, and Joel Saa-Seoane, *Operations Research* 62 (2), pp. 418-434, 2014.

[51] "Robust topology optimization of three-dimensional photonic-crystal band-gap structures," with H. Men, K. Y. K. Lee, J. Peraire, and S. G. Johnson, *Optics Express* 22 (19), pp. 22632-22648, September 2014.

[52] "New Analysis and Results for the Frank-Wolfe Method," (formerly titled "New Analysis and Results for the Conditional Gradient Method") with Paul Grigas, *Mathematical Programming* 155 (1), pp. 199-230, January 2016.

[53] "Functional regression for state prediction using linear PDE models and observations," with N. C. Nguyen, H. Men, and J. Peraire, *SIAM Journal on Scientific Computing* 38 (2), pp. B247–B271, 2016.

[54] "A New Perspective on Boosting in Linear Regression via Subgradient Optimization and Relatives," with Paul Grigas and Rahul Mazumder, *Annals of Statistics* 45(6), pp. 2328–2364, 2017.

- Chosen as one of four best accepted papers at *Annals of Statistics* in the previous two years

[55] "An Extended Frank-Wolfe Method with "In-Face" Directions, and its Application to Low-Rank Matrix Completion," with Paul Grigas and Rahul Mazumder, *SIAM Journal on Optimization* 27(1), pp. 319-346, 2017.

[56] "New Computational Guarantees for Solving Convex Optimization Problems with First Order Methods, via a Function Growth Condition Measure," with Haihao Lu, *Mathematical Programming* 170, pp. 445-477, 2018.

[57] "Relatively Smooth Convex Optimization by First-Order Methods, and Applications," with Haihao Lu and Yurii Nesterov, *SIAM Journal on Optimization* (2018), vol. 28 (1), pp. 333-354.

[58] "Accelerated Residual Methods for the Iterative Solution of Systems of Equations," with N. C. Nguyen, P. Fernandez, and J. Peraire, *SIAM Journal on Scientific Computing* (2018), vol. 40 (5), pp. A3157-A3179.

[59] "Generalized Stochastic Frank-Wolfe Algorithm with Stochastic 'Substitute' Gradient for Structured Convex Optimization," with Haihao Lu, *Mathematical Programming* vol. 187, pp. 317–349 (2021)

[60] "An 'Oblivious' Ellipsoid Algorithm for Solving a System of (In)Feasible Linear Inequalities", with Jourdain Lamperski and Michael Todd, *Mathematics of Operations Research* vol. 49 (1), pp. 204-231 (2024)

[61] "Analysis of the Frank-Wolfe Method for Convex Composite Optimization involving a Logarithmically-Homogeneous Barrier" (previously titled "Analysis of the Frank-Wolfe Method for Logarithmically-Homogeneous Barriers, with an Extension", with Renbo Zhao, *Mathematical Programming A,* Vol. 199, No. 1 – 2, pp. 123 – 163, 2023.

[62] "Using Taylor-approximated gradients to improve the Frank-Wolfe method for Empirical Risk Minimization", with Zikai Xiong, *SIAM Journal on Optimization,* Vol. 34, No. 3, pp. 2503—2534 (2024).

[63] "Nonlinear conjugate gradient methods: worst-case convergence rates via computer-assisted analyses", with Shuvomoy Das Gupta, Xu Andy Sun, and Adrien Taylor, *Mathematical Programming* Vol. 213, pages 1–49, 2025.

[64] "Computational Guarantees for Restarted PDHG for LP based on "Limiting Error Ratios" and LP Sharpness", with Zikai Xiong, to appear in *Mathematical Programming.*

Papers submitted for Publication or in Preparation

[65] "The Role of Level-Set Geometry on the Performance of PDHG for Conic Linear Optimization", with Zikai Xiong, June 2024, under revision.

Papers in Refereed Conference Proceedings

[] "Training Support Vector Machines: an Application to Face Detection," with Edgar Osuna and Federico Girosi, in *IEEE Computer Society Conference on Computer Vision and Pattern Recognition,* Puerto Rico, June, 1997.

[] "An Improved Training Algorithm for Support Vector Machines," with Edgar Osuna and Federico Girosi, in *Proceedings of IEEE NNSP'97,* Amelia Island, Florida, September, 1997.

[] "An Efficient Re-Scaled Perceptron Algorithm for Conic Systems," with Alexandre Belloni and Santosh Vempala, *Proceedings of the 2007 Conference on Learning Theory.*

[] "A Binary Optimization Method for Linear Metamaterial Design Optimization," with J. Saa-Seoane, N.-C. Nguyen, H. Men, and J. Peraire, to appear in *3rd International Conference on Metamaterials, Photonic Crystals and Plasmonics,* 2012.

[] "A First-Order View of Boosting Methods: Computational Complexity and Connections to Regularization" with Paul Grigas and Rahul Mazumder, International Workshop on Advances in Regularization, Optimization, Kernel Methods and Support Vector Machines: Theory and Applications, Leuven, Belgium July 2013.

[] "Designing Phononic Crystals with Conic Convex Optimization" with Han Men, N.-C. Nguyen, Joel Saa-Seoane, and Jaime Peraire, ASME2013 International Mechanical Engineering Congress and Exposition, pp. V014T15A047, San Diego, November 2013.

[] "Accelerating Greedy Coordinate Descent Methods," International Conference on Machine Learning (ICML), Stockholm, Sweden, July 2018.

[] "Stochastic Frank-Wolfe for Constrained Finite-Sum Minimization" with Geoffrey Négiar, Gideon Dresdner, Alicia Yi-Ting Tsai, Laurent El Ghaoui, Francesco Locatello, and Fabian Pedregosa, International Conference on Machine Learning (ICML), June 2020.

Edited Volumes and Invited papers in Conference Proceedings

[] Guest Editor, special volume of *Annals of Operations Research* on Interior Point Methods in Mathematical Programming, 1996.

[] "Economic Analysis of Product Flexible Manufacturing System Investment Decisions,"with C. Fine, *Proceedings of the Second ORSA/TIMS Conference on Flexible Manufacturing Systems*, 1986 , (invited, not refereed), Kathryn Stecke and Rajan Suri, eds., Elsevier, Amsterdam , 1986.

[] "Interior Point Methods: Current Status and Future Directions," with Shinji Mizuno, *Optima* 51, pp. 1-9, 1996.

Others

[] "Applications of a Generalization of a Set Intersection Theorem of von Neumann", Working Paper # 1528-84, Sloan School of Management, M.I.T., 1984.

[] "On Kuhn's Strong Cubical Lemma", Working Paper #1557-84 , Sloan School of Management, M.I.T., 1984.

[] "Identifying the Set of Always-Active Constraints in a System of Linear Inequalities by a Single Linear Program", with R. Roundy and M.J. Todd, Sloan School Working Paper # 1674-85, 1985.

[] "Hidden Minimum Norm Problems in Quadratic Programming", Sloan School Working Paper # 1768-86, 1986.

[] "Optimal Investment in Flexible Manufacturing Capacity, Part II: Computing Solutions", with C. Fine, Sloan School Working Paper #1803-86, July 1986.

[] "Projective Transformations for Interior Point Methods, Part I: Basic Theory and Linear Programming", O.R. Working Paper 179-88, June 1988.

[] "Projective Transformations for Interior Point Methods, Part II: Analysis of An Algorithm for finding the Weighted Center of a Polyhedral System", O.R. Working Paper 180-88, June 1988.

[] "Implementation and Empirical Study of a Combined Phase I - Phase II Potential Reduction Algorithm for Linear Programming," with Hitendra Wadhwa, Sloan School Working Paper #3411-92-MSA, March 1992.

[] "Complexity of an Algorithm for Finding an Approximate Solution of a Semi-Definite Program, with no Regularity Condition," O.R. Center Working Paper 302-94, December, 1994.

[] "Reasoning with Incomplete Knowledge Using de Finetti's Fundamental Theorem of Probability: Background and Computational Issues", with Tracy Myers and Gordon Kaufman, Sloan Working Paper # 97-3990, 1997.

[] "Condition Number Complexity of an Elementary Algorithm for Resolving a Conic Linear System," with Marina Epelman, Sloan Working Paper # 97-3942, 1997.

[] "Bandwidth optimization of single-polarization single-mode photonic crystal fibers," with Han Men, Jaime Peraire, and N.Cuong Nguyen, 2013.

[] "AdaBoost and Forward Stagewise Regression are First-Order Convex Optimization Methods," with Paul Grigas and Rahul Mazumder, MIT Operations Research Center working paper OR 397-14, 2014.

[] "Condition Number Analysis of Logistic Regression, and its Implications for Standard First-Order Solution Methods," with Paul Grigas and Rahul Mazumder, arXiv:1810.08727, 2018.

[] "On the Relation Between LP Sharpness and Limiting Error Ratio and Complexity Implications for Restarted PDHG", with Zikai Xiong, arXiv: https://arxiv.org/abs/2312.13773 , 2023.

XIV. Invited Lectures:

4	September	1979	"Flexible Solutions of Systems of Linear Inequalities", International Mathematical Programming Symposium, Montreal, with B. Curtis Eaves.
16	February	1980	"Inscribing and Circumscribing Convex Polyhedra", Bell Laboratories, Holmdel, N.J.
17	May	1980	"A Unified View of Variable-Dimension Fixed-Point Algorithms", ORSA/TIMS Spring Meeting, Washington , D.C.
27	October	1982	"Combinatorial Theorems on the Simplotope that Generalize Results on the Simplex and Cube", Stanford University.
14	May	1984	"Combinatorial Theorems on the Simplotope that Generalize Results on the Simplex and Cube", ORSA/TIMS Spring Meeting, San Francisco.
17	June	1984	"The Optimal Timing of Coal Resource Depletion", TIMS International Meeting, Copenhagen.
26	November	1984	"The Sensitivity of a Linear Program to Changes in Constraint Matrix Coefficients", ORSA/TIMS Fall Meeting, Dallas.
11	April	1985	"Combinatorial Analogs of Brouwer's Theorem on a Bounded Polyhedron", University of Chicago.
18	April	1985	"The New Excitement in Linear Programming", Boston TIMS Regional Chapter.
29	April	1985	"Combinatorial Analogs of Brouwer's Theorem on a Bounded Polyhedron", ORSA/TIMS Spring Meeting, Boston.
5	August	1985	"Combinatorial Analogs of Brouwer's Fixed-Point Theorem on a Bounded Polyhedron", International Mathematical Programming Symposium, M.I.T., Cambridge, Mass.
4	November	1985	"Dual Gauge Programs, with Applications", ORSA/TIMS Fall Meeting, Atlanta.
6	December	1985	"Dual Gauge Programs, with Applications", Princeton University, Princeton, N.J.
14	April	1986	"The Optimal Mix of a Flexible and Nonflexible Capacity", Spring ORSA/TIMS Meeting, Los Angeles.
14	July	1986	"Optimal Investment in Flexible Manufacturing System Capacity", Stanford University.

2	October	1986	"Optimal Investment in Flexible Manufacturing System Capacity", Yale University.
29	October	1986	"Hidden Minimum Norm Problem in Quadratic Programming", Fall ORSA/TIMS Meeting, Miami.
11	November	1986	"Optimal Investment in Flexible Manufacturing System Capacity", Columbia University.
6	March	1987	"Optimal Investment in Flexible Manufacturing System Capacity", Bell Telephone Laboratories.
13	March	1987	"Dual Gauge Programs, with Applications", Cornell University.
5	May	1987	"A Unified Model and Algorithm for Set Location Problems", ORSA/TIMS Spring Meeting, New Orleans.
3	February	1988	"Analogs and Extension of Karmarkar's Projective Transformation Algorithm for Linear Programming", University of Michigan, Ann Arbor, Michigan.
19	April	1988	"The New Excitement in Linear Programming," CTS/ORC Symposium on Recent Developments in Mathematical Programming, M.I.T., Cambridge, MA.
27	April	1988	"Projective Transformations for Interior Point Algorithms," Spring ORSA/TIMS Meeting, Washington, D.C.
29	June	1988	"Projective Transformations for Interior Point Algorithms," AMS-IMS-SIAM Research Conference: Mathematical Developments arising from Linear Programming Algorithms, Bowdoin College, Brunswick, Maine.
15	August	1988	"Polynomial-Time Algorithms for Linear Programming based only on Scaling and Projected Gradients," Fudan University, Shanghai, China.
22	August	1988	"Polynomial-Time Algorithms for Linear Programming based only on Scaling and Projected Gradients," Qing-Hua University, Beijing, China.
26	August	1988	"Polynomial-Time Algorithms for Linear Programming based only on Scaling and Projected Gradients," Tokyo Institute of Technology, Tokyo, Japan.
29	August	1988	"Polynomial-Time Algorithms for Linear Programming based only on Scaling and Projected Gradients," International

			Symposium on Mathematical Programming, Chuo University, Tokyo, Japan.
31	August	1988	"Solving Spherical Location Problems through Quadratically Constrained Quadratic Programming," International Symposium on Mathematical Programming, Chuo University, Tokyo, Japan.
3	September	1988	"Polynomial-Time Algorithms for Linear Programming based only on Scaling and Projected Gradients," Institute for Statistics and Mathematics, Tokyo, Japan.
5	September	1988	"Polynomial-Time Algorithms for Linear Programming based only on Scaling and Projected Gradients," University of Tsukuba, Tsukuba, Japan.
25	October	1988	"Polynomial-Time Algorithms for Linear Programming based only on Scaling and Projected Gradients," Fall ORSA/TIMS Meeting, Denver, CO.
8	November	1988	"Projective Transformations for Linear Programming," Yale University.
4	April	1989	"Theoretical Efficiency of a Shifted Barrier Function Algorithm for Linear Programming," SIAM Conference on Optimization, Boston, MA.
9	May	1989	"Theoretical Efficiency of a Shifted Barrier Function Algorithm for Linear Programming," Spring ORSA/TIMS Meeting, Vancouver, British Columbia.
18	May	1989	"Intuitive Approach to Karmarkar's Algorithm and Recent Developments in LP," M.I.T. Operations Research Center, Cambridge, MA.
11	July	1989	"Intuitive Approach to Karmarkar's Algorithm and Recent Developments in LP," Stanford University, Stanford, CA.
30	August	1989	"Algorithms for Solving a Linear Program from an Infeasible 'Warm Start'," AT&T Bell Laboratories, Murray Hill, NJ.
31	August	1989	"Intuitive Approach to Karmarkar's Algorithm and Recent Developments in LP," Bell Telephone Laboratories, Holmdel, NJ.
17	October	1989	"An Algorithm for the Parametric Center Problem," Fall ORSA/TIMS Meeting, New York, NY.

19	January	1990	"Theoretical Efficiency of Solving a Linear Program from an Infeasible Warm Start," International Symposium on Interior Point Methods for Linear Programming: Theory and Practice, Scheveningen, The Netherlands.
23	January	1990	"Theoretical Efficiency of Solving a Linear Program from an Infeasible Warm Start," Center for Operations Research and Econometrics, University of Louvain La Neuve, Belgium.
25	January	1990	"The New Excitement in Linear Programming," KLM Airlines, Amstelveen, The Netherlands.
7	February	1990	"Theoretical Efficiency of Solving a Linear Program from an Infeasible Warm Start," Second Asilomar Workshop on Progress in Mathematical Programming, Monterey, CA.
13	April	1990	Newton's Method for Parametric Center Problems," Cornell University, Ithaca, NY.
8	May	1990	"Theoretical Efficiency of Solving a Linear Program from an Infeasible Warm Start," Spring ORSA/TIMS Meeting, Las Vegas, Nevada.
1-6	June	1990	"Recent Research in Interior-Point Algorithms," lecture series, Swedish Royal Technical Institute, Stockholm, Sweden.
19	July	1990	"Theoretical Efficiency of Solving a Linear Program from an Infeasible Warm Start," SIAM Annual Meeting, Chicago, IL.
20	July	1990	"An Algorithm for the Parametric Center Problem," SIAM Annual Meeting, Chicago, IL.
31	October	1990	"An Algorithm for the Parametric Center Problem," Fall ORSA/TIMS Meeting, Philadelphia, PA.
4	December	1990	"Intuitive Approach to Karmarkar's Algorithm and Recent Developments in LP," Princeton University, Princeton, NJ.
14-18	January	1991	"Recent Research in Interior-Point Algorithms," lecture series, Nanyang Technical Institute, Singapore.
19	January	1991	"Intuitive Approach to Karmarkar's Algorithm and Recent Developments in LP," National University of Singapore, Singapore
23	March	1991	"Computational Complexity of Tracing the Path of Centers of a Linear Inequality System as the data for the system is

			Parametrically Deformed," Workshop on Complexity Issues for Numerical Optimization, Cornell University, Ithaca, NY.
25-26	March	1991	"Recent Research in Interior-Point Algorithms," lecture series, University of Florida, Gainesville, FL.
14	May	1991	"Interior Point Methods for Linear Programming: A Status Report," Tutorial at Spring ORSA/TIMS Meeting, Nashville, TN.
8	August	1991	"Algorithms for Solving a Linear Program from an Infeasible Warm Start based on the Intuitive Geometry of LP," Mathematical Programming Symposium, Free University, Amsterdam.
20	September	1991	"Solving a Linear Program from an Infeasible Warm Start: Conceptual Issues, Theory, and a New Interior Point Algorithm," Cornell University, Ithaca, NY.
5	November	1991	"Solving a Linear Program from an Infeasible Warm Start: Conceptual Issues, Theory, and a New Interior Point Algorithm," ORSA/TIMS Fall Meeting, Anaheim, CA.
11-15	November	1991	"Experiences in the Practice of Operations Research," lecture series presented at Nanyang Technological University, Singapore.
12	November	1991	"Solving a Linear Program from an Infeasible Warm Start: Conceptual Issues, Theory, and a New Interior Point Algorithm," National University of Singapore, Singapore.
13	November	1991	"Interior Point Methods for Linear Programming: A Status Report," M.I.T. Club of Singapore, Singapore.
22	November	1991	"Interior Point Methods for Linear Programming: A Status Report," Operations Research Society of Singapore, Singapore.
25	November	1991	"Solving a Linear Program from an Infeasible Warm Start: Conceptual Issues, Theory, and a New Interior Point Algorithm," Tokyo Institute of Technology, Tokyo, Japan.
28	January	1992	"Solving a Linear Program from an Infeasible Warm Start: Conceptual Issues, Theory, and a New Interior Point Algorithm," Northwestern University, Evanston, Illinois.
30	January	1992	"Solving a Linear Program from an Infeasible Warm Start: Conceptual Issues, Theory, and a New Interior Point Algorithm," University of Iowa, Iowa City, Iowa.

10	May	1992	"Following a Trajectory from an infeasible point to an Optimal Linear Programming Solution," SIAM Conference on Optimization, Chicago, Illinois.
2	November	1992	"Following a Trajectory from an infeasible point to an Optimal Linear Programming Solution," Fall ORSA/TIMS National Meeting, San Francisco.
2	November	1992	"Interior-point algorithms with zero, one, or two-sided bounds," Fall ORSA/TIMS National Meeting, San Francisco.
11	January	1993	"A Classroom Scheduling Model for the School of Accountancy and Business at NTU," Nanyang Technological University, Singapore.
12	January	1993	"Strategic use of Management Science in the Air Transportation Industry," Nanyang Technological University, Singapore.
15	January	1993	"An Infeasible-start Algorithm for Linear Programming whose Complexity depends on the distance from the Starting Point to the Optimal Solution," National University of Singapore, Singapore.
18	January	1993	"An Infeasible-start Algorithm for Linear Programming whose Complexity depends on the distance from the Starting Point to the Optimal Solution," Tokyo Institute of Technology, Tokyo, Japan.
15	February	1993	"An Infeasible-start Algorithm for Linear Programming whose Complexity depends on the distance from the Starting Point to the Optimal Solution," Conference on Large-Scale Optimization, University of Florida, Gainesville, Florida.
20	April	1993	"An Infeasible-start Algorithm for Linear Programming whose Complexity depends on the distance from the Starting Point to the Optimal Solution," Princeton University, Princeton, N.J.
17	May	1993	"An Infeasible-start Algorithm for Linear Programming whose Complexity depends on the distance from the Starting Point to the Optimal Solution," ORSA/TIMS Meeting, Chicago, Illinois.
1	November	1993	"An Infeasible-start Algorithm for Linear Programming whose Complexity depends on the distance from the Starting Point to the Optimal Solution," ORSA/TIMS Meeting, Phoenix, Arizona.

6 December	1993	"Strong Duality and Interior-Point Methods for Optimization over Positive Semi-Definite Matrices," University of Waterloo, Waterloo, Ontario, CANADA.
7 April	1994	"Complexity Issues in Solving Semi-Definite Programs," IBM T.J. Watson Research Center, Yorktown Heights, New York.
24 April	1994	"Complexity Issues in Solving Semi-Definite Programs," ORSA/Tims Meeting, Boston, Mass.
8 July	1994	"Complexity Issues in Solving Semi-Definite Programs," Institute of Statistical Mathematics, Tokyo, Japan.
11- 15 July	1994	Lecture Series on Curriculum Developement and Pedagogy for OR/MS Courses for Managers, Nanyang Technological University, Singapore.
13 July	1994	"Complexity Issues in Solving Semi-Definite Programs," National University of Singapore, Singapore.
7 August	1994	"On the Complexity of Solving Semi-Definite Programs," International Mathematical ProgrammingSymposium, Ann Arbor, Michigan.
26 October	1994	"On the Complexity of Solving Semi-Definite Programs without a Regularity Condition," ORSA/TIMS National Meeting, Detroit, Michigan.
24 January	1995	"Well-Posedness and the Efficiency of Algorithms for Solving Linear Inequalities," Center for Operations Research and Econometrics, Universite Catholique, Louvain-la-Neuve, Belgium.
27 January	1995	"On the Complexity of Solving Semi-Definite Programs without a Regularity Condition," Center for Operations Research and Econometrics, Universite Catholique, Louvain-la-Neuve, Belgium.
2 February	1995	"Well-Posedness and the Efficiency of Algorithms for Solving Linear Inequalities," Oberwolfach, Germany.
10 March	1995	"Well-Posedness and the Efficiency of Algorithms for Solving Linear Inequalities," Cornell University, Ithaca, New York.
24 March	1995	"Operations Research Modeling for Strategic Advantage," Greater Boston Executive Program, Sloan School of Management, MIT.

30	March	1995	"Well-Posedness and the Efficiency of Algorithms for Solving Linear Inequalities," RUTCOR, Rutgers University, New Brunswick, New Jersey.
23	April	1995	"Well-Posedness and the Efficiency of Algorithms for Solving Linear Inequalities," INFORMS National Meeting, Los Angeles.
24	July	1995	"Some Characterizations and Properties of the 'Distance to Ill-Posedness' in Conic Linear Systems," AMS-SIAM Summer Seminar in Applied Mathematics, Park City, Utah.
27	October	1995	"Well-Posedness and the Efficiency of Algorithms for Solving Linear Inequalities," INFORMS National Meeting, New Orleans.
13	February	1996	"The Condition Number of Convex Program, and its Implications for both Algorithmic Efficiency and Problem Complexity," Conference on Network Optimization, University of Florida, Gainesville.
21	May	1996	"Characterizations of the Condition Number of a Convex Program, and the Complexity of the Ellipsoid Algorithm and Dantzig's von Neumann Algorithm," SIAM Conference on Optimization, Victoria, British Columbia.
24	May	1996	"Condition Measures and Properties of the Central Trajectory of a Linear Program" Fields Institute Workshop on Interior-Pont and Homotopy Methods in Mathematical Programming, Simon Fraser University, Vancouver, British Columia.
10	June	1996	"The Condition Number of a Convex Program, and the Complexity of the Ellipsoid Algorithm and Dantzig's von Neumann Algorithm," AT&T Bell Laboratories, Murray Hill, New Jersey.
4	November	1996	"What Should MBAs Learn in the Management Science Course?" INFORMS National Meeting, Atlanta, Georgia.
5	November	1996	"The Condition Number and the Ellipsoid Algortithm for Convex Programming," INFORMS National Meeting, Atlanta, Georgia.
18	February	1997	"The Condition Number of Convex Program, and its Implications for Algorithm Complexity and Problem Efficiency," Columbia University, New York, NY.

20	February	1997	"The Condition Number of Convex Program, and its Implications for Algorithm Complexity and Problem Efficiency," Princeton University, Princeton, NJ.
5	March	1997	"The Condition Number of Convex Program, and its Implications for Algorithm Complexity and Problem Efficiency," Megill University, Montreal, Canada.
3	May	1997	"The Condition Number of Convex Program, and its Implications for Algorithm Complexity and Problem Efficiency," INFORMS National Meeting, San Diego, CA.
19	August	1997	"The Condition Number of Convex Program and the Efficiency of a Generalization of von Neumann's Elementary Algorithm," Delft University of Technology, Delft, The Netherlands.
20	August	1997	"Current and Future Directions in Interior Point Methods," HPOPT Conference, Rotterdam, The Netherlands.
26	August	1997	"Condition Number Complexity of an `Elementary' Algorithm for Resolving a Conic Linear System," International Symposium on Mathematical Programming, Lausanne, Switzerland.
6	October	1997	"The Condition Number of a Convex Program, and the Efficiency of the Ellipsoid Algorithm and of an Elementary Algorithm," Fifth International Conference on Parametric Optimization and Related Topics, Tokyo, Japan.
13	October	1997	"Current and Future Directions in Interior Point Methods," Fudan University, Shanghai, China.
16	October	1997	"Current and Future Directions in Interior Point Methods," Tsinghua University, Beijing, China.
26	October	1997	"Properties of the Barrier Trajectory of a Convex Optimization Problem Related to the Condition Number of the Problem", Dallas INFORMS National Meeting, Dallas, Texas.
24	March	1998	"Current and Future Directions in Interior Point Methods," Catholic University of Chile, Santiago, Chile.
26	April	1998	"Condition-based Complexity of Convex Optimization in Conic Form via the Ellipsoid Algorithm", INFORMS Meeting, Montreal, Canada.

27	April	1998	"Practical Estimation and Numerical Properties of the Condition Number of Conic Linear Systems", with Jorge Vera, INFORMS Meeting, Montreal, Canada.
26	April	1998	"Condition Number Complexity of Elementary Algorithms for Convex Feasibility Problems in Conic Linear Form", with Marina Epelman, INFORMS Meeting, Montreal, Canada.
17	July	1998	"Geometric Properties and Relationships among Different Condition Numbers and Pre-conditioners for Conic Linear Systems", SIAM National Meeting, Toronto, Canada.
25	October	1998	"Relationships and Properties of Condition Numbers for Convex Feasibility Problems", INFORMS National Meeting, Seattle.
26	October	1998	"Stability of the Central Trajectory of a Semi-Definite Program under Data Perturbations", INFORMS National Meeting, Seattle.
27	October	1998	"Inverse Optimization", INFORMS National Meeting, Seattle.
4	November	1998	"Analyzing the Complexity of Convex Optimization using Condition Numbers", Workshop on Complexity of Continuous and Algebraic Mathematics, Mathematical Sciences Research Institute, Berkeley, California.
8	January	1999	"Pre-conditioners and Relations between Different Condition Measures for SDP and Conic Linear Systems", DIMACS Workshop on Semi-Definite Programming and its Applications to Large Scale Discrete Optimization, Princeton, New Jersey.
1	March	1999	"Condition Numbers, Complexity of Algorithms, and Geometry in Convex Optimization", Conference on Approximation and Complexity in Numerical Optimization: Continuous and Discrete Problems, University of Florida, Gainesville.
	March-April	1999	Lectures on Case Studies in Management Science, Delft University of Technology, Delft, The Netherlands.
	March-April	1999	Lectures on Self-Concordance Functions and Barrier Methods in Convex Optimization, Delft University of Technology, Delft, The Netherlands.
16	March	1999	"Complexity of Algorithms and Condition Measures for Linear and Convex Optimization", Center for Operations Research and Econometrics, Universite Catholique, Louvain-la-Neuve, Belgium.

13	April	1999	“Complexity of Algorithms and Condition Measures for Linear and Convex Optimization”, Erasmus University, Rotterdam, the Netherlands.
23	April	1999	“Lowner-John Ellipsoids for Convex Sets”, Fifth HPMMO Meeting, Delft, the Netherlands.
26	April	1999	“Complexity of Algorithms and Condition Measures for Linear and Convex Optimization”, Tilburg University, Tilburg, the Netherlands.
27	April	1999	“Complexity of Algorithms and Condition Measures for Linear and Convex Optimization”, Eindhoven University of Technology, the Netherlands.
3	May	1999	“Comparisons of Condition Numbers and Pre-conditioners for convex feasibility problems in conic form”, INFORMS National Meeting, Cincinnati.
10	May	1999	“Pre-conditioners and Relations Between Different Condition Measures for Conic Linear Systems”, SIAM Conference on Optimization, Atlanta.
11	May	1999	“Complexity of Computing Condition Numbers for Conic Convex Optimization”, SIAM Conference on Optimization, Atlanta.
12	January	2000	“Geometry and the Complexity of the Convex Feasibility Problem”, Oberwolfach, Germany
21	January	2000	“Complexity of Algorithms and Condition Measures for Linear and Convex Optimization”, National University of Singapore, Singapore.
7	May	2000	“Geometry and the Complexity of the Convex Feasibility Problem”, INFORMS National Meeting, Salt Lake City, Utah.
17	July	2000	“Geometry and the Complexity of the Convex Feasibility Problem”, International Conference on Foundations of Computational Mathematics Symposium in honor of Steve Smale's 70th Birthday, Hong Kong.
8	August	2000	“Geometry and the Complexity of the Convex Feasibility Problem”, International Mathematical Programming Symposium, Atlanta.

17 January	2001	"Computational Testing of the Predictive Value of Condition Numbers for Linear Programming", with Fernando Ordonez, SMA HPCES Symposium, Singapore.
17 January	2001	"Computing Minimum Volume Ellipsoids: an Application from Data Mining", with Peng Sun, SMA HPCES Symposium, Singapore.
28 March	2001	"A Web-Application of Interior-Point Methods; plus Complexity Results for Convex Optimization based on Problem Geometry", University of Michigan, Ann Arbor, Michigan.
2 August	2001	"On the Complexity of Computing an Epsilon-Optimal Solution of a Convex Optimization Problem, Based on Geometric Properties of the Problem," MOPTA01, McMaster University, Hamilton, Ontario, Canada.
3 August	2001	"Computing Minimum Volume Ellipsoids: an Application from Data Mining," MOPTA01, McMaster University, Hamilton, Ontario, Canada.
4 August	2001	"Are Condition Numbers Good Predictors of the Performance of Interior-Point Algorithms on Practical Problems?," MOPTA01, McMaster University, Hamilton, Ontario, Canada.
5 November	2001	"Complexity of Convex Optimization using Geometry-Based Measures and a Reference Point," INFORMS National Meeting, Miami, Florida.
5 November	2001	"Computing Minimum Volume Ellipsoids: an Application from Data Mining," INFORMS National Meeting, Miami, Florida.
6 November	2001	"Computational Testing of the Predictive Value of Condition Numbers for Linear Programming," INFORMS National Meeting, Miami, Florida.
13 January	2002	"Complexity of Convex Optimization using Geometry-Based Measures and a Reference Point," Oberwolfach, Germany.
25 March	2002	"Two Topics on the Complexity of Convex Optimization, one Computational and one Theoretical," Fields Institute for Research in Mathematical Sciences, Toronto, Canada.
20 May	2002	"Complexity of Convex Optimization using Geometry-Based Measures and a Reference Point," SIAM Conference on Optimization, Toronto, Canada.

21	May	2002	"IPM Practical Performance on LPs and the Explanatory Value of Complexity Measures," SIAM Conference on Optimization, Toronto, Canada.
1	August	2002	"Two Topics on the Complexity of Convex Optimization, one Computational and one Theoretical," MOPTA02, McMaster University, Hamilton, Canada.
5	August	2002	"Complexity of Convex Optimization using Geometry-Based Measures and a Reference Point," Foundations of Computational Mathematics Conference at the Institute for Mathematics and its Applications, University of Minnesotra, Minneapolis, Minnesota.
18	November	2002	"A Comparative Evaluation of the Complexity of Interior-Point Methods and the Ellipsoid Method for Conic and Non-Conic Convex Optimization", INFORMS Annual Meeting, San Jose, California.
17	January	2003	"Computational Experience and the Explanatory Value of Condition Measures for Linear Optimization", SMA Symposium, Singapore.
12	March	2003	"On an Extension of Condition Measure Theory to Non-Conic Convex Optimization", IMA Workshop on Semidefinite Programming and Robust Optimization, Minneapolis, Minnesota.
4	April	2003	"Computational Experience and the Explanatory Value of Condition Measures for Linear Optimization", Lehigh University, Bethlehen, PA.
29	July	2003	"Linear and Conic Feasibility, Complexity, and Pre-conditioners", International Symposium on Mathematical Programming, Copenhagen, Denmark.
18	August	2003	"On an Extension of Condition Measure Theory to Non-Conic Convex Optimization", International Symposium on Mathematical Programming, Copenhagen, Denmark.
19	August	2003	"Linear and Conic Feasibility, Complexity, and Pre-conditioners", International Symposium on Mathematical Programming, Copenhagen, Denmark.
20	October	2003	"Linear and Conic Feasibility, Complexity, and Pre-conditioners", INFORMS National Meeting, Atlanta, Georgia.

21	October	2003	"Product Designs and Market Penetration via Conjoint Analysis and Optimization Models", Sloan Innovation Period seminar, MIT Sloan School of Management.
12	November	2003	"Product Designs and Market Penetration via Conjoint Analysis and Optimization Models", Duke University Fuqua School of Business, Chapel Hill, North Carolina.
19	December	2003	"Convex Conic Optimization: Applications, Interior-Point Methods, and Computational Complexity," Institute of Mathematics, Hanoi, Vietnam.
19	January	2004	"Symmetry Points of Convex Sets: Properties, Duality, and Computational Complexity," SMA Annual Symposium, National University of Singapore, Singapore.
25	April	2004	"Pattern Classification and Machine Learning via Large-Scale Optimization Methods," INFORMS Conference on OR/MS Practice, Cambridge, Massachusetts.
14	May	2004	"Symmetry Functions and Symmetry Points of a Convex Set: Properties, Duality, and Computational Complexity," Workshop on Large Scale Nonlinear and Semidefinite Programming, University of Waterloo, Waterloo, Ontario.
2	August	2004	"Behavioral Measures and Computation of SDPLIB Problems", First International Conference on Continuous Optimization, Rensselaer Polytechnic Institute, Troy, NY.
2	August	2004	"On Two Measures of Problem Complexity and Their Explanatory Value for the Performance of SeDuMi on Second-Order Cone Problem", First International Conference on Continuous Optimization, Rensselaer Polytechnic Institute, Troy, NY.
6	January	2005	"Projective Pre-Conditioners for Improving the Behavior of a Homogeneous Conic Linear System," Oberwolfach, Germany.
15	May	2005	"Projective Pre-Conditioners for Improving the Behavior of a Homogeneous Conic Linear System," SIAM Conference on Optimization, Stockholm.
16	May	2005	"On the Behavior of the Homogeneous Self-Dual Model for Conic Convex Optimization," SIAM Conference on Optimization, Stockholm.

17	May	2005	"On the Causes of Variability in IPM Iterations on Semi-Definite Programming Problems," SIAM Conference on Optimization, Stockholm.
5	July	2005	"Randomized Methods for (Continuous) Deterministic Optimization and Associated Complexity Analysis," with Alexandre Belloni, semi-plenary talk, Foundations of Computational Mathematics, Santander, Spain.
26	October	2005	"Randomized Methods for (Continuous) Deterministic Optimization and Associated Complexity Analysis," with Alexandre Belloni, Stanford University Graduate School of Business, Stanford, CA.
17	January	2006	"Reducing the Solution Time for Convex Optimization Problems by Pre-conditioning Transformations," SMA Annual Symposium, Singapore.
13	February	2006	"Projective Pre-conditioners for Improving the Behavior of a Linear Inequality or Conic Inequality System," Applied Mathematics Colloquium, MIT Department of Mathematics.
21	March	2006	"Projective Pre-conditioners for Improving the Behavior of a Conic Inequality System," Cowles Foundation Conference on Optimization, Yale University, New Haven, CT.
15	June	2006	"Efficiency of a Re-scaled Perceptron Algorithm for Conic Systems," High Performance Optimization Techniques 2006, Delft, The Netherlands
1	August	2006	"Efficiency of a Re-scaled Perceptron Algorithm for Conic Systems," 19th International Symposium on Mathematical Programming, UFRJ Rio de Janeiro, Brazil
24	October	2006	"Behavioral Measures and their Correlation with IPM Iteration Counts on Semi-Definite Programming Problems," Northwestern University, Evanston, Illinois
13	November	2006	"On Efficient Randomized Methods for Convex Optimization," Banff International Research Station for Mathematical Innovation and Discovery, Banff, Canada
13	June	2007	"An Efficient Re-Scaled Perceptron Algorithm for Conic Systems," 2007 Conference on Learning Theory, San Diego.
13	August	2007	"Projective Re-Normalization for Improving the Practical Performance of Interior-Point Methods for Conic

			Optimization," Second International Conference on Continuous Optimization, Hamilton, Canada
14	August	2007	"Efficiency of a Re-scaled Perceptron Algorithm for Conic Systems," Second International Conference on Continuous Optimization, Hamilton, Canada
15	August	2007	"Behavioral Measures and their Correlation with IPM Iteration Counts on Semi-Definite Programming Problems," Second International Conference on Continuous Optimization, Hamilton, Canada
8	October	2007	"Randomized Methods for Solving Convex Problems: Some Theory and Some Computational Experience," University of Southern California
17	October	2007	"Randomized Methods for Solving Convex Problems: Some Theory and Some Computational Experience," Kellogg School of Business, Northwestern University
5	November	2007	"Designing and Delivering a Better Management Science Course for MBA Students," INFORMS Annual Meeting, Seattle
12	May	2008	"Improved Initialization of the Homogeneous Self-Dual Embedding Model for Solving Conic Convex Optimization," SIAM Conference on Optimization, Boston
12	June	2008	"Designing and Delivering a Better Management Science Course for MBA Students," Lingnan University, Guangzhou, China
25	June	2008	"Equivalence of Computational Complexity and Geometric Properties of Convex Feasibility Problem in the Separation Oracle Model," Foundations of Computational Mathematics 2008 Workshop, Hong Kong.
16	July	2009	"Band Gap Optimization of Two-Dimensional Photonic Crystals Using Semi-Definite Programming," 10th U.S. National Congress for Computational Mechanics, Columbus, Ohio.
24	August	2009	"Equivalence of Computational Complexity and Geometric Properties of Convex Feasibility Problem in the Separation Oracle Model," International Symposium on Mathematical Programming, Chicago.
11	October	2009	"On the Primal-Dual Geometry of Level Sets in Linear and Conic Optimization," INFORMS National Meeting, San Diego.

16	November	2009	"Primal-Dual Geometry of Level Sets and their Explanatory Value in Understanding Interior-Point Computation in Conic Convex Optimization," ETH Institute for Operations Research, Zurich, Switzerland.
18	November	2009	"Behavioral Measures and their Correlation with IPM Iteration Counts on Semi-Definite Programming Problems," Judge School of Business, University of Cambridge, Cambridge, UK.
22	March	2010	"Teaching Sustainability/Energy/Environment Themes in Quantitative Methods Curricula," Tsinghua University, Beijing, China
25	March	2010	"Teaching Sustainability/Energy/Environment Themes in Quantitative Methods Curricula," Fudan University, Shanghai, China
26	March	2010	"Designing and Delivering a Better Management Science Course for MBA Students," Yunnan University, Kunming, China
8	June	2010	"Primal-Dual Geometry of Level Sets and their Explanatory Value in Understanding Interior-Point Computation in Conic Convex Optimization," Fields Institute Research in Mathematical Sciences, Toronto, Canada.
28	July	2010	"Design of Photonic Crystals with Multiple and Combined Band Gaps," International Conference on Continuous Optimization, Santiago, Chile.
18	April	2011	"Design of Photonic Crystals with Multiple and Combined Band Gaps, plus Fabrication-Robust Design," AFOSR Optimization and Discrete Mathematics Program Review, AFOSR, Arlington, VA.
16	May	2011	"Bandgap Optimization of Photonic Crystals Via Semidefinite Programming and Subspace Methods," SIAM Conference on Optimization, Darmstadt, Germany.
26	September	2011	"Bandgap Optimization of Photonic Crystals Via Semidefinite Programming and Subspace Methods," Fields Institute Workshop on Optimization, Toronto, Canada.
28	March	2012	"Implementation-Robust Design: Modeling, Theory, and Application to Photonic Crystal Design with Multiple and Complete Bandgaps," Catolica University, Santiago, Chile.

30	March	2012	"Probability, Internet Search, and the Success of Google," Catolica University, Santiago, Chile.
19	April	2012	"Recent Research on Design Optimization of Wave Propagation in Metamaterials: Fabrication-Robust Design, and Binary Optimization with Reduced Basis," AFOSR, April 2012.
20	August	2012	"Implementation-Robust Design: Modeling, Theory, and Application to Photonic Crystal Design with Bandgaps," ISMP Berlin.
20	August	2012	"Proximal Subgradient and Dual Averaging for Sequential Decision-making and Non-smooth Optimization," ISMP Berlin.
16	October	2012	"Illustrations of Business Analytics and the 21st Century Industrial Revolution," Sabanci University Public Lecture, Turkey
17	October	2012	"Implementation-Robust Design: Modeling, Theory, and Application to Photonic Crystal Design with Bandgaps," Sabanci University, Turkey
18	October	2012	"Implementation-Robust Design: Modeling, Theory, and Application to Photonic Crystal Design with Bandgaps," Koc University, Turkey.
9	January	2013	"Fabrication-Adaptive Optimization, with an Application to Photonic Crystal Design," Georgia Institute of Technology, Atalanta, Georgia.
18	April	2013	"Fabrication-Adaptive Optimization, with an Application to Photonic Crystal Design," AFOSR Optimization and Discrete Mathematics Program Review, Arlington, VA.
26	April	2013	"An Optimizer's View of Statistical Boosting Algorithms," ICHOI, Chilean Institute of Operations Research, Santiago.
1	May	2013	"The Frank-Wolfe Algorithm: New Results, and Connections to Statistical Boosting," Workshop on Optimization and Big Data, University of Edinburgh, Scotland.
24	June	2013	"Fabrication-Adaptive Optimization, with an Application to Photonic Crystal Design," Universidad Adolfo Ibanez, Santiago, Chile.
9	July	2013	"Incremental Forward Stagewise Regression: Computational Complexity and Connections to LASSO," ROKS Workshop, Leuven, Belgium.

31	July	2013	"The first-order view of boosting methods: Computational complexity and connections to regularization," ICCOPT 2013, Lisbon, Portugal.
31	July	2013	"New results and analysis for the Frank-Wolfe method," ICCOPT 2013, Lisbon, Portugal.
15	October	2013	"Boosting Methods: Implicit Combinatorial Optimization via First-Order Convex Optimization," ADGO Workshop, Playa Blanca, Chile.
29	October	2013	"Challenges Facing OR Professionals in the next 10 Years: Business Analytics / Big Data / Internet OR", X OPTIMA / VI RED-M 2013, Concepcion, Chile
10	December	2013	"Remarks on Frank-Wolfe and Structural Friends," NIPS Workshop on Greedy Algorithms, Frank-Wolfe and Friends, invited speaker, NIPS 2013, Lake Tahoe, Nevada.
10	December	2013	"New Results and Analysis for the Conditional Gradient Method," NIPS Workshop 2013, Lake Tahoe, Nevada.
26	March	2014	"A First-Order View of Some Boosting Methods: Computational Guarantees and Connections to Regularization," Cornell University, Ithaca, NY.
21	May	2014	"Frank-Wolfe-like Methods for Large-scale Convex Optimization," SIOPT Meeting, San Diego, CA.
21	May	2014	"First-Order Methods Yield New Analysis and Results for Boosting Methods in Statistics/Machine Learning," SIAM Conference on Optimization, San Diego, CA.
21	May	2014	"Robust Approaches for Stochastic Intertemporal Production Planning, SIAM Conference on Optimization, San Diego, CA.
29	August	2014	"Mike Todd: Moving Optimization Forward," Mike Todd Retirement Celebration and Symposium, Cornell University, August 2014.
9	November	2014	"An Extended Frank-Wolfe Method, with Applications to Low-Rank Matrix Completion," INFORMS Annual Meeting, San Francisco.
14	January	2015	"Lectures on Greedy-type Algorithms in Convex Optimization," Machine Learning Summer School, University of Texas, Austin.

18	May	2015	"An Extended Frank-Wolfe Method, with Applications to Low-Rank Matrix Completion," New England Machine Learning Day, Microsoft Research, poster session.
11	June	2015	"Extending Renegar's Efficient First-Order Methods for Conic Optimization," Optimization Conference in honor of Tamas Terlaky, HEC, Montreal.
14	July	2015	"Extending Renegar's Recent Work: A Different/Improved Analysis of Basic First-Order Methods in Convex Optimization," ISMP, Pittsburg.
11	September	2015	"An Extended Frank-Wolfe Method, and its Application to Low-Rank Matrix Completion," MIT Stochastics and Statistics Seminar, MIT.
1	November	2015	"An Extended Frank-Wolfe Method with "In-Face" Directions, and its Application to Low-Rank Matrix Completion," INFORMS National Meeting, Philadelphia.
2	November	2015	"New Computational Guarantees for Solving Convex Optimization Problems with First Order Methods, via a Function Growth Condition Measure," INFORMS National Meeting, Philadelphia.
2	November	2015	"A New Perspective on Boosting in Linear Regression via Subgradient Optimization and Relatives," INFORMS National Meeting, Philadelphia.
10	December	2015	"An Extended Frank-Wolfe Method with "In-Face" Directions, and its Application to Low-Rank Matrix Completion," University of British Columbia, Vancouver BC.
13	December	2015	"A New Perspective on Boosting in Linear Regression via Subgradient Optimization and Relatives," CMS Meeting, London.
21	April	2016	"A New Perspective on Boosting in Linear Regression via Subgradient Optimization and Relatives," Princeton University, Princeton, NJ
11	August	2016	"New Computational Guarantees for Solving Convex Optimization Problems with First Order Methods, via a Function Growth Condition Measure," ICCOPT 2016, Tokyo.
9	September	2016	"New Computational Guarantees for Solving Convex Optimization Problems with First Order Methods, via a

			Function Growth Condition Measure," COCA Workshop, The Technion, Haifa, Israel.
29	November	2016	"New Results for Sparse Methods for Logistic Regression and Related Classification Problems," Cornell University, Ithaca, NY.
11	December	2016	"An Extended Frank-Wolfe Method with "In-Face" Directions, and its Application to Low-Rank Matrix Completion," IEEE Conference on Decision and Control, Las Vegas, Nevada.
24	May	2017	"New Results for Sparse Methods for Logistic Regression and Related Classification Problems," SIAM Conference on Optimization, Vancouver, BC.
25	May	2017	"Relatively Smooth Convex Optimization by First-Order Methods, and Applications," SIAM Conference on Optimization, Vancouver, BC.
18	July	2017	"Condition Number Analysis of Logistic Regression, and its Implications for First-Order Solution Methods," ISI Marrakech, Morocco.
8	September	2017	"Condition Number Analysis of Logistic Regression, and its Implications for First-Order Solution Methods," University of Illinois, Urbana-Champaign.
24	October	2017	"Condition Number Analysis of Logistic Regression, and its Implications for First-Order Solution Methods," INFORMS Annual Meeting, Houston, Texas.
23	March	2018	"Condition Number Analysis of Logistic Regression, and its Implications for Standard First-Order Solution Methods," INFORMS Optimization Conference, Denver, CO.
29	March	2018	"Condition Number Analysis of Logistic Regression, and its Implications for Standard First-Order Solution Methods," Pennsylvania State University, State College, PA.
5	July	2018	"Accelerating Greedy Coordinate Descent Methods," ISMP, Bordeaux, France.
23	August	2018	"Accelerated First-Order Methods for Exascale Simulation and Learning", AFOSR, Arlington, VA.
6	November	2018	"Generalized Stochastic Frank-Wolfe Algorithm with Stochastic 'Substitute' Gradient for Structured Convex Optimization," INFORMS Annual Meeting, Phoenix, AZ.

9 May	2019	"Condition Number Analysis of Logistic Regression, and its Implications for Standard First-Order Solution Methods," Tepper School of Business, Carnegie Mellon University, Pittsburgh, PA.
4 August	2019	"An 'Oblivious' Ellipsoid Algorithm for Solving a System of (In)Feasible Linear Inequalities", ICCOPT, Berlin.
22 August	2019	"Accelerated First-Order Methods for Exascale Simulation and Learning," with Cuong Nguyen and Jaime Peraire, AFOSR Program Review, Arlington, VA.
3 October	2019	"Condition Number Analysis of Logistic Regression, and its Implications for Standard First-Order Solution Methods," Pontificia Universidad Catolica, Santiago, Chile
4 October	2019	"Ethics and Fairness in Machine Learning Models and Data-Driven Decision Making", MIT Club of Chile, Santiago, Chile
4 October	2019	"An 'Oblivious' Ellipsoid Algorithm for Solving a System of (In)Feasible Linear Inequalities", Universidad de Chile, Santiago, Chile
5 October	2019	Advanced Prediction Methods, and Social Network Analytics, invited lecture series for the MIT and Universidad de Chile joint Certificate Program in Data Analytics, Santiago, Chile
13 November	2019	"Condition Number Analysis of Logistic Regression, and its Implications for Standard First-Order Solution Methods," Fuqua School of Business, Duke University, Durham, NC.
9 June	2020	"From Stochastic Frank-Wolfe to the Ellipsoid Method: Recent Progress on Practical Optimization in Machine Learning (the Frank-Wolfe Method) and Theoretical Optimization (the Ellipsoid Method)", Online Webinar on Mathematical Foundations of Data Science
20 August	2020	"Accelerated First-Order Methods for Exascale Simulation and Learning," with Cuong Nguyen and Jaime Peraire, AFOSR Program Review, delivered online due to COVID-19
23 July	2021	"Analysis of the Frank-Wolfe Method for Convex Composite Optimization involving a Logarithmically-Homogeneous Barrier", SIAM Conference on Optimization, delivered online due to COVID-19

9	November	2021	"New Theory and Improved Computational Performance of the Frank-Wolfe Method for Data Science Applications", University of Chicago Booth School of Business, Chicago
9	December	2021	"New Theory and Improved Computational Performance of the Frank-Wolfe Method for Data Science Applications", Distinguished ADSE Seminar Series, Department of Department of Advanced Design and Systems Engineering (ADSE), City University of Hong Kong
25	July	2022	"Using Taylor-approximated Gradients to improve the Frank-Wolfe method for Empirical Risk Minimization," ICCOPT, Lehigh University, Bethlehem, PA
9	August	2022	"Using Taylor-approximated Gradients to improve the Frank-Wolfe method for Empirical Risk Minimization," Workshop on Modern Nonsmooth Optimization, University of Washington, Seattle
6	December	2022	"Some Recent Research in First-Order Methods for Linear Programming", Workshop on Optimization in the Big Data Era, Institute for Mathematical Sciences, National University of Singapore
30	August	2023	"Improving the Geometry of (Conic) Linear Optimization Problems for the Primal-Dual Hybrid Gradient Method (PDHG)", 2023 AFOSR Mathematical Optimization Annual Program Review, Arlington, VA
6	October	2023	"Improving the Geometry of (Conic) Linear Optimization Problems for the Primal-Dual Hybrid Gradient Method (PDHG)", Princeton University, Princeton, NJ
17	October	2023	"Improving the Geometry of (Conic) Linear Optimization Problems for the Primal-Dual Hybrid Gradient Method (PDHG)", INFORMS Annual Meeting, Phoenix, AZ
2	November	2023	"Algorithms for Business Analytics: Recommender Systems, Fairness, and Efficiency" MIT Club of Chile, Santiago, Chile
3-4	November	2023	"Introduction to Practical Predictive and Prescriptive Analytics", Universidad de Chile Master's Program in Data Science and Business Analytics, Santiago, Chile
8-9	November	2023	"Predictive Business Analytics", Universidad del Pacifico, Certificate Program in Data Science and Business Analytics, Lima, Peru

16	February	2024	“Models in Business Analytics: How Recommender Systems Work”, MIT Sloan AdMIT Weeekend mock classroom lecture, MIT
22	February	2024	“Level-Set Geometry and the Performance of Restarted-PDHG for Conic LP”, OPT4AI Seminar, Georgia Institute of Technology, Atlanta
23	March	2024	“Level-Set Geometry and the Performance of Restarted-PDHG for Conic LP”, INORMS Optimization Conference, Rice University, Houston
11	April	2024	“Level-Set Geometry and the Performance of Restarted-PDHG for Conic LP”, the Spencer C. Schantz Lecture at Lehigh University, Bethlehem, PA
23	July	2024	“The Role of Level-Set Geometry on the Performance of PDHG for Conic Linear Optimization”, International Symposium on Mathematical Programming, Montreal
29	July	2024	“The Role of Level-Set Geometry on the Performance of PDHG for Conic Linear Optimization”, Stanford University, Stanford, CA
27	August	2024	“The Role of Level-Set Geometry on the Performance of PDHG for Conic Linear Optimization”, Universite Catholique de Louvain, Louvain la Neuve, Belgium
9	September	2024	“The Role of Level-Set Geometry on the Performance of PDHG for Conic Linear Optimization”, 2024 AFOSR Mathematical Optimization Annual Program Review, Arlington, VA
17	October	2024	“The Role of Level-Set Geometry on the Performance of PDHG for Conic Linear Optimization”, University of Pennsylvania Optimization Seminar, Philadelphia, PA
2	November	2024	“The Role of Level-Set Geometry on the Performance of PDHG for Conic Linear Optimization”, Columbia University, New York, NY
21-22	November	2024	“Predictive Business Analytics”, Universidad del Pacifico, Certificate Program in Data Science and Business Analytics, Lima, Peru
10	December	2024	“The Role of Level-Set Geometry on the Performance of PDHG for Conic Linear Optimization”, Optimization Workshop:

			Theory, Computation, and Applications, Universidad de los Andes, Bogota, Colombia
13-14	December	2024	“Introduction to Practical Predictive and Prescriptive Analytics”, Universidad de Chile Master’s Program in Business Analytics, Santiago, Chile
20	June	2025	“The Role of Level-Set Geometry on the Performance of PDHG for Conic Linear Optimization”, Shanghai Jiaotong University, Shanghai, China
18	September	2025	“The Role of Level-Set Geometry on the Performance of PDHG for Conic Linear Optimization”, 14th Cargese Workshop on Combinatorial Optimization, Institut d'Etudes Scientifiques de Cargèse, Corsica, France
15-16	October	2025	“Predictive Business Analytics”, Universidad del Pacifico, Certificate Program in Data Science and Business Analytics, Lima, Peru
5-6	December	2025	“Introduction to Practical Predictive and Prescriptive Analytics”, Universidad de Chile Master’s Program in Business Analytics, Santiago, Chile