Stanford

Stephen Boyd

Samsung Professor in the School of Engineering

Electrical Engineering

CONTACT INFORMATION

- **Faculty Administrator**

  Shea Goodner

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Bio

BIO

Stephen P. Boyd is the Samsung Professor of Engineering, and Professor of Electrical Engineering in the Information Systems Laboratory at Stanford University, and a member of the Institute for Computational and Mathematical Engineering. His current research focus is on convex optimization applications in control, signal processing, machine learning, and finance.

Professor Boyd received an AB degree in Mathematics, summa cum laude, from Harvard University in 1980, and a PhD in EECS from U. C. Berkeley in 1985. In 1985 he joined Stanford's Electrical Engineering Department. He has held visiting Professor positions at Katholieke University (Leuven), McGill University (Montreal), Ecole Polytechnique Federale (Lausanne), Tsinghua University (Beijing), Universite Paul Sabatier (Toulouse), Royal Institute of Technology (Stockholm), Kyoto University, Harbin Institute of Technology, NYU, MIT, UC Berkeley, CUHK-Shenzhen, and IMT Lucca. He holds honorary doctorates from Royal Institute of Technology (KTH), Stockholm, and Catholic University of Louvain (UCL).

Professor Boyd is the author of many research articles and four books: Introduction to Applied Linear Algebra: Vectors, Matrices, and Least-Squares (with Lieven Vandenberghe, 2018), Convex Optimization (with Lieven Vandenberghe, 2004), Linear Matrix Inequalities in System and Control Theory (with El Ghaoui, Feron, and Balakrishnan, 1994), and Linear Controller Design: Limits of Performance (with Craig Barratt, 1991). His group has produced many open source tools, including CVX (with Michael Grant), CVXPY (with Steven Diamond) and Convex.jl (with Madeleine Udell and others), widely used parser-solvers for convex optimization.

He has received many awards and honors for his research in control systems engineering and optimization, including an ONR Young Investigator Award, a Presidential Young Investigator Award, and the AACC Donald P. Eckman Award. In 2013, he received the IEEE Control Systems Award, given for outstanding contributions to control systems engineering, science, or technology. In 2012, Michael Grant and he were given the Mathematical Optimization Society's Beale-Orchard-Hays Award, for excellence in computational mathematical programming. In 2023, he was given the AACC Richard E. Bellman Control Heritage Award, the highest recognition of professional achievement for U.S. control systems engineers and scientists. In 2025, he was awarded the IFAC Nathaniel B. Nichols Medal.

He is a Fellow of the IEEE, SIAM, INFORMS, IFAC, and ACA, a Distinguished Lecturer of the IEEE Control Systems Society, a member of the US National Academy of Engineering, a foreign member of the Chinese Academy of Engineering, and a foreign member of the National Academy of Engineering of Korea. He has been invited to deliver more than 100 plenary and keynote lectures at major conferences in control, optimization, signal processing, and machine learning.

He has developed and taught many undergraduate and graduate courses, including Signals & Systems, Linear Dynamical Systems, Convex Optimization, and a recent undergraduate course on Matrix Methods. His graduate convex optimization course attracts around 300 students from more than 20 departments. In 1991 he received an ASSU Graduate Teaching Award, and in 1994 he received the Perrin Award for Outstanding Undergraduate Teaching in the School of Engineering. In 2003, he received the AACC Ragazzini Education award, for contributions to control education. In 2016 he received the Walter J. Gores award, the highest award for teaching at Stanford University. In 2017 he received the IEEE James H. Mulligan, Jr. Education Medal, for a career of outstanding contributions to education in the fields of interest of IEEE, with citation "For inspirational education of students and researchers in the theory and application of optimization."

ACADEMIC APPOINTMENTS

- Professor, Electrical Engineering
- Member, Bio-X
- Faculty Affiliate, Institute for Human-Centered Artificial Intelligence (HAI)
- Affiliate, Precourt Institute for Energy
- Member, Institute for Computational and Mathematical Engineering (ICME)

ADMINISTRATIVE APPOINTMENTS

- Chair, Department of Electrical Engineering, (2018- present)

HONORS AND AWARDS

- Fellow, Asian Control Association (2025)
- Nathaniel B. Nichols Medal, IFAC (2025)
- Beal-Orchard-Hays Prize, Mathematical Optimization Society (2024)
- Richard E. Bellman Control Heritage Award, American Automatic Control Council (2023)
- Fellow, International Federation of Automatic Control (2022)
- Foreign member, National Academy of Engineering of Korea (2020)
- Athanasios Papoulis Society Award, European Association for Signal Processing (EURASIP) (2019)
- Foreign member, Chinese Academy of Engineeering (2017)
- Honorary PhD, University Catholique de Louvain (2017)
- James H. Mulligan, Jr. Education Medal, IEEE (2017)
- Fellow, INFORMS (2016)
- Walter J. Gores teaching award, Stanford (2016)
- Fellow, SIAM (2015)
- Member, National Academy of Engineering (2014)
- Saul Gass Award, INFORMS (2014)
- Control Systems Award, IEEE (2013)
- Beal-Orchard-Hays Prize, Mathematical Optimization Society (2012)

- Honorary PhD, Royal Institute of Technology (KTH), Stockholm (2006)
- Section lecture, International Congress of Mathematicians (2006)
- John R. Ragazzini Award, Automatic Control Council (2003)
- Fellow, IEEE Control Systems Society (1999)
- Hugo Schuck Award, IEEE Control Systems Society (1999)
- Perrin Award for Undergraduate Teaching, Stanford University (1994)
- Distinguished Lecturer, IEEE Control System Society (1993)
- Donald P. Eckman Award, IEEE Control Systems Society (1992)
- Graduate Teaching Award, ASSU (1991)
- Presidential Young Investigator Award, National Science Foundation (1986)

PROGRAM AFFILIATIONS

- Stanford SystemX Alliance

PROFESSIONAL EDUCATION

- PhD, UC Berkeley , EECS (1985)
- BA, Harvard University , Mathematics (1980)

LINKS

- Research web page: https://web.stanford.edu/~boyd
- Google scholar: https://scholar.google.com/citations?user=GExyiRkAAAAJ&hl=en
- Papers: https://web.stanford.edu/~boyd/papers.html
- Books: https://web.stanford.edu/~boyd/books.html

Teaching

COURSES

2025-26

- Convex Optimization I: CME 364A, EE 364A (Win)
- Introduction to Matrix Methods: ENGR 108 (Aut)

2024-25

- Convex Optimization I: CME 364A, EE 364A (Win)

2023-24

- Convex Optimization I: CME 364A, EE 364A (Win)
- Introduction to Machine Learning: CME 107, EE 104 (Spr)

2022-23

- Convex Optimization I: CME 364A, EE 364A (Win)

Publications

PUBLICATIONS

- **Code generation for solving and differentiating through convex optimization problems** *OPTIMIZATION AND ENGINEERING*
  Schaller, M., Boyd, S.

2025

- **Aging-aware battery control via convex optimization** *OPTIMIZATION AND ENGINEERING*
  Nnorom Jr, O., Ogut, M., Boyd, S., Levis, P.
  2025
- **A Markowitz approach to managing a dynamic basket of moving-band statistical arbitrages** *JOURNAL OF ASSET MANAGEMENT*
  Johansson, K., Schmelzer, T., Boyd, S.
  2025
- **Tax-Aware Portfolio Construction Via Convex Optimization (vol 189, pg 364, 2021)** *JOURNAL OF OPTIMIZATION THEORY AND APPLICATIONS*
  Moehle, N., Kochenderfer, M. J., Boyd, S., Ang, A.
  2025; 204 (3)
- **FITTING MULTILEVEL FACTOR MODELS** *SIAM JOURNAL ON MATRIX ANALYSIS AND APPLICATIONS*
  Parshakova, T., Hastie, T., Boyd, S.
  2025; 46 (3): 1930-1963
- **Robust Pareto Transistor Sizing of GaN HEMTs for Millimeter-Wave Applications** *IEEE ACCESS*
  Martinez, R., Boyd, S., Chowdhury, S.
  2025; 13: 34105-34114
- **Approximate sequential optimization for informative path planning** *ROBOTICS AND AUTONOMOUS SYSTEMS*
  Ott, J., Kochenderfer, M. J., Boyd, S.
  2024; 182
- **Finding moving-band statistical arbitrages via convex-concave optimization** *OPTIMIZATION AND ENGINEERING*
  Johansson, K., Schmelzer, T., Boyd, S.
  2024
- **Efficient Shapley performance attribution for least-squares regression** *STATISTICS AND COMPUTING*
  Bell, L., Devanathan, N., Boyd, S.
  2024; 34 (5)
- **Specifying and Solving Robust Empirical Risk Minimization Problems Using CVXPY** *JOURNAL OF OPTIMIZATION THEORY AND APPLICATIONS*
  Luxenberg, E., Malik, D., Li, Y., Singh, A., Boyd, S.
  2024
- **Markowitz Portfolio Construction at Seventy** *JOURNAL OF PORTFOLIO MANAGEMENT*
  Boyd, S., Johansson, K., Kahn, R., Schiele, P., Schmelzer, T.
  2024; 50 (8): 117-160
- **Robust Bond Portfolio Construction via Convex-Concave Saddle Point Optimization** *JOURNAL OF OPTIMIZATION THEORY AND APPLICATIONS*
  Luxenberg, E., Schiele, P., Boyd, S.
  2024
- **Polyak Minorant Method for Convex Optimization** *JOURNAL OF OPTIMIZATION THEORY AND APPLICATIONS*
  Devanathan, N., Boyd, S.
  2024
- **Portfolio Optimization with Cumulative Prospect Theory Utility via Convex Optimization** *COMPUTATIONAL ECONOMICS*
  Luxenberg, E., Schiele, P., Boyd, S.
  2024
- **Compact Model Parameter Extraction via Derivative-Free Optimization** *IEEE ACCESS*
  Martinez, R., Iwamoto, M., Woo, K., Bian, Z., Tinti, R., Boyd, S., Chowdhury, S.
  2024; 12: 123224-123235

- **Multi-Issue Butterfly Architecture for Sparse Convex Quadratic Programming**
  Wang, M., McInerney, I., Stellato, B., Tu, F., Boyd, S., So, H., Cheng, K., IEEE COMPUTER SOC
  IEEE COMPUTER SOC.2024: 1574-1587
- **Time Dilated Bundt Cake Analysis of PV Output**
  Ogut, G., Meyers, B., Dufour, A., Boyd, S., IEEE
  IEEE.2024: 0877-0883
- **Fast Path Planning Through Large Collections of Safe Boxes** *IEEE TRANSACTIONS ON ROBOTICS*
  Marcucci, T., Nobel, P., Tedrake, R., Boyd, S.
  2024; 40: 3795-3811
- **Implementation of an oracle-structured bundle method for distributed optimization** *OPTIMIZATION AND ENGINEERING*
  Parshakova, T., Zhang, F., Boyd, S.
  2023
- **Value-gradient iteration with quadratic approximate value functions** *ANNUAL REVIEWS IN CONTROL*
  Yang, A., Boyd, S.
  2023; 56
- **Portfolio construction with Gaussian mixture returns and exponential utility via convex optimization** *OPTIMIZATION AND ENGINEERING*
  Luxenberg, E., Boyd, S.
  2023
- **Bounds on Efficiency Metrics in Photonics** *ACS PHOTONICS*
  Angeris, G., Diamandis, T., Vuckovic, J., Boyd, S. P.
  2023
- **Convex optimization over risk-neutral probabilities** *OPTIMIZATION AND ENGINEERING*
  Barratt, S., Tuck, J., Boyd, S.
  2023
- **PV Fleet Modeling via Smooth Periodic Gaussian Copula**
  Ogut, M. G., Meyers, B., Boyd, S. P., IEEE
  IEEE.2023
- **Tractable Evaluation of Stein's Unbiased Risk Estimate With Convex Regularizers** *IEEE TRANSACTIONS ON SIGNAL PROCESSING*
  Nobel, P., Candes, E., Boyd, S.
  2023; 71: 4330-4341
- **Signal Decomposition Using Masked Proximal Operators** *FOUNDATIONS AND TRENDS IN SIGNAL PROCESSING*
  Meyers, B. E., Boyd, S. P.
  2023; 17 (1): 1-78
- **RSQP: Problem-specific Architectural Customization for Accelerated Convex Quadratic Optimization**
  Wang, M., McInerney, I., Stellato, B., Boyd, S., So, H., ACM
  ASSOC COMPUTING MACHINERY.2023: 1026-1037
- **Confidence Bands for a Log-Concave Density** *JOURNAL OF COMPUTATIONAL AND GRAPHICAL STATISTICS*
  Walther, G., Ali, A., Shen, X., Boyd, S.
  2022; 31 (4): 1426-1438
- **Computing tighter bounds on the n-queens constant via Newton's method** *OPTIMIZATION LETTERS*
  Nobel, P., Agrawal, A., Boyd, S.
  2022
- **Covariance prediction via convex optimization** *OPTIMIZATION AND ENGINEERING*
  Barratt, S., Boyd, S.
  2022

- **A general optimization framework for dynamic time warping** *OPTIMIZATION AND ENGINEERING*
  Deriso, D., Boyd, S.
  2022
- **Multi-period liability clearing via convex optimal control** *OPTIMIZATION AND ENGINEERING*
  Barratt, S., Boyd, S.
  2022
- **Confidence Bands for a Log-Concave Density** *JOURNAL OF COMPUTATIONAL AND GRAPHICAL STATISTICS*
  Walther, G., Ali, A., Shen, X., Boyd, S.
  2022
- **Fitting feature-dependent Markov chains** *JOURNAL OF GLOBAL OPTIMIZATION*
  Barratt, S., Boyd, S.
  2022
- **Operator splitting for adaptive radiation therapy with nonlinear health dynamics** *OPTIMIZATION METHODS & SOFTWARE*
  Fu, A., Xing, L., Boyd, S.
  2022
- **Allocation of fungible resources via a fast, scalable price discovery method** *MATHEMATICAL PROGRAMMING COMPUTATION*
  Agrawal, A., Boyd, S., Narayanan, D., Kazhamiaka, F., Zaharia, M.
  2022
- **Minimizing oracle-structured composite functions** *OPTIMIZATION AND ENGINEERING*
  Shen, X., Ali, A., Boyd, S.
  2022
- **Embedded Code Generation With CVXPY** *IEEE CONTROL SYSTEMS LETTERS*
  Schaller, M., Banjac, G., Diamond, S., Agrawal, A., Stellato, B., Boyd, S.
  2022; 6: 2653-2658
- **Strategic Asset Allocation with Illiquid Alternatives**
  Luxenberg, E., Boyd, S., van Beek, M., Cao, W., Kochenderfer, M., ACM
  ASSOC COMPUTING MACHINERY.2022: 249-256
- **PORTFOLIO PERFORMANCE ATTRIBUTION VIA SHAPLEY VALUE** *JOURNAL OF INVESTMENT MANAGEMENT*
  Moehle, N., Boyd, S., Ang, A.
  2022; 20 (3): 33-52
- **Model-Based Deep Learning: On the Intersection of Deep Learning and Optimization** *IEEE ACCESS*
  Shlezinger, N., Eldar, Y. C., Boyd, S. P.
  2022; 10: 115384-115398
- **A Certainty Equivalent Merton Problem** *IEEE CONTROL SYSTEMS LETTERS*
  Moehle, N., Boyd, S.
  2022; 6: 1478-1483
- **Stochastic Control With Affine Dynamics and Extended Quadratic Costs** *IEEE TRANSACTIONS ON AUTOMATIC CONTROL*
  Barratt, S., Boyd, S.
  2022; 67 (1): 320-335
- **Pareto Optimal Projection Search (POPS): Automated Radiation Therapy Treatment Planning by Direct Search of the Pareto Surface** *IEEE TRANSACTIONS ON BIOMEDICAL ENGINEERING*
  Huang, C., Yang, Y., Panjwani, N., Boyd, S., Xing, L.
  2021; 68 (10): 2907-2917
- **Learning Convex Optimization Models** *IEEE-CAA JOURNAL OF AUTOMATICA SINICA*
  Agrawal, A., Barratt, S., Boyd, S.
  2021; 8 (8): 1355-1364

- **Convex restrictions in physical design.** *Scientific reports*
  Angeris, G., Vuckovic, J., Boyd, S.
  2021; 11 (1): 12976
- **Dirty Pixels: Towards End-to-end Image Processing and Perception** *ACM TRANSACTIONS ON GRAPHICS*
  Diamond, S., Sitzmann, V., Julca-Aguilar, F., Boyd, S., Wetzstein, G., Heide, F.
  2021; 40 (3)
- **Extracting a low-dimensional predictable time series** *OPTIMIZATION AND ENGINEERING*
  Dong, Y., Qin, S., Boyd, S. P.
  2021
- **Fitting Laplacian regularized stratified Gaussian models** *OPTIMIZATION AND ENGINEERING*
  Tuck, J., Boyd, S.
  2021
- **Tax-Aware Portfolio Construction via Convex Optimization** *JOURNAL OF OPTIMIZATION THEORY AND APPLICATIONS*
  Moehle, N., Kochenderfer, M. J., Boyd, S., Ang, A.
  2021
- **Optimal representative sample weighting** *STATISTICS AND COMPUTING*
  Barratt, S., Angeris, G., Boyd, S.
  2021; 31 (2)
- **Heuristic methods and performance bounds for photonic design** *OPTICS EXPRESS*
  Angeris, G., Vuckovic, J., Boyd, S.
  2021; 29 (2): 2827–54
- **Eigen-stratified models** *OPTIMIZATION AND ENGINEERING*
  Tuck, J., Boyd, S.
  2021
- **Minimum-Distortion Embedding** *FOUNDATIONS AND TRENDS IN MACHINE LEARNING*
  Agrawal, A., Ali, A., Boyd, S.
  2021; 14 (3): 211-378
- **A Distributed Method for Fitting Laplacian Regularized Stratified Models** *JOURNAL OF MACHINE LEARNING RESEARCH*
  Tuck, J., Barratt, S., Boyd, S.
  2021; 22
- **Sample Efficient Reinforcement Learning with REINFORCE**
  Zhang, J., Kim, J., O'Donoghue, B., Boyd, S., Assoc Advancement Artificial Intelligence
  ASSOC ADVANCEMENT ARTIFICIAL INTELLIGENCE.2021: 10887-10895
- **CVXR: An R Package for Disciplined Convex Optimization** *JOURNAL OF STATISTICAL SOFTWARE*
  Fu, A., Narasimhan, B., Boyd, S.
  2020; 94 (14)
- **Bounds for Scattering from Absorptionless Electromagnetic Structures** *PHYSICAL REVIEW APPLIED*
  Trivedi, R., Angeris, G., Su, L., Boyd, S., Fan, S., Vuckovic, J.
  2020; 14 (1)
- **Automatic repair of convex optimization problems** *OPTIMIZATION AND ENGINEERING*
  Barratt, S., Angeris, G., Boyd, S.
  2020
- **Least squares auto-tuning** *ENGINEERING OPTIMIZATION*
  Barratt, S. T., Boyd, S. P.
  2020

- **SWIFTCORE: a tool for the context-specific reconstruction of genome-scale metabolic networks.** *BMC bioinformatics*
  Tefagh, M., Boyd, S. P.
  2020; 21 (1): 140
- **Minimizing a sum of clipped convex functions** *OPTIMIZATION LETTERS*
  Barratt, S., Angeris, G., Boyd, S.
  2020
- **Disciplined quasiconvex programming** *OPTIMIZATION LETTERS*
  Agrawal, A., Boyd, S.
  2020
- **Network optimization for unified packet and circuit switched networks** *OPTIMIZATION AND ENGINEERING*
  Yin, P., Diamond, S., Lin, B., Boyd, S.
  2020; 21 (1): 159–80
- **OSQP: an operator splitting solver for quadratic programs** *MATHEMATICAL PROGRAMMING COMPUTATION*
  Stellato, B., Banjac, G., Goulart, P., Bemporad, A., Boyd, S.
  2020
- **ON THE CONVERGENCE OF MIRROR DESCENT BEYOND STOCHASTIC CONVEX PROGRAMMING** *SIAM JOURNAL ON OPTIMIZATION*
  Zhou, Z., Mertikopoulos, P., Bambos, N., Boyd, S. P., Glynn, P. W.
  2020; 30 (1): 687–716
- **ANDERSON ACCELERATED DOUGLAS-RACHFORD SPLITTING** *SIAM JOURNAL ON SCIENTIFIC COMPUTING*
  Fu, A., Zhang, J., Boyd, S.
  2020; 42 (6): A3560–A3583
- **GLOBALLY CONVERGENT TYPE-I ANDERSON ACCELERATION FOR NONSMOOTH FIXED-POINT ITERATIONS** *SIAM JOURNAL ON OPTIMIZATION*
  Zhang, J., O'Donoghue, B., Boyd, S.
  2020; 30 (4): 3170–97
- **A simple effective heuristic for embedded mixed-integer quadratic programming** *INTERNATIONAL JOURNAL OF CONTROL*
  Takapoui, R., Moehle, N., Boyd, S., Bemporad, A.
  2020; 93 (1): 2–12
- **VARIABLE METRIC PROXIMAL GRADIENT METHOD WITH DIAGONAL BARZILAI-BORWEIN STEPSIZE**
  Park, Y., Dhar, S., Boyd, S., Shah, M., IEEE
  IEEE.2020: 3597–3601
- **Fitting a Kalman Smoother to Data**
  Barratt, S. T., Boyd, S. P., IEEE
  IEEE.2020: 1526–31
- **Optimal Operation of a Plug-in Hybrid Vehicle with Battery Thermal and Degradation Model**
  Kim, J., Park, Y., Fox, J. D., Boy, S. P., Dally, W., IEEE
  IEEE.2020: 3083–90
- **Solution refinement at regular points of conic problems** *COMPUTATIONAL OPTIMIZATION AND APPLICATIONS*
  Busseti, E., Moursi, W. M., Boyd, S.
  2019; 74 (3): 627–43
- **Multi-period portfolio selection with drawdown control**
  Nystrup, P., Boyd, S., Lindstrom, E., Madsen, H.
  SPRINGER.2019: 245–71
- **Infeasibility Detection in the Alternating Direction Method of Multipliers for Convex Optimization** *JOURNAL OF OPTIMIZATION THEORY AND APPLICATIONS*
  Banjac, G., Goulart, P., Stellato, B., Boyd, S.

2019; 183 (2): 490–519

- **A Distributed Method for Optimal Capacity Reservation** *JOURNAL OF OPTIMIZATION THEORY AND APPLICATIONS*
  Moehle, N., Shen, X., Luo, Z., Boyd, S.
  2019; 182 (3): 1130–49
- **Learning Probabilistic Trajectory Models of Aircraft in Terminal Airspace From Position Data** *IEEE TRANSACTIONS ON INTELLIGENT TRANSPORTATION SYSTEMS*
  Barratt, S. T., Kochenderfer, M. J., Boyd, S. P.
  2019; 20 (9): 3536–45
- **Greedy Gaussian segmentation of multivariate time series** *ADVANCES IN DATA ANALYSIS AND CLASSIFICATION*
  Hallac, D., Nystrup, P., Boyd, S.
  2019; 13 (3): 727–51
- **Disciplined geometric programming** *OPTIMIZATION LETTERS*
  Agrawal, A., Diamond, S., Boyd, S.
  2019; 13 (5): 961–76
- **Real-Time Radiation Treatment Planning with Optimality Guarantees via Cluster and Bound Methods** *INFORMS JOURNAL ON COMPUTING*
  Ungun, B., Xing, L., Boyd, S.
  2019; 31 (3): 544–58
- **Computational Bounds for Photonic Design** *ACS PHOTONICS*
  Angeris, G., Vuckovic, J., Boyd, S. P.
  2019; 6 (5): 1232–39
- **Quantitative flux coupling analysis** *JOURNAL OF MATHEMATICAL BIOLOGY*
  Tefagh, M., Boyd, S. P.
  2019; 78 (5): 1459–84
- **A convex optimization approach to radiation treatment planning with dose constraints** *OPTIMIZATION AND ENGINEERING*
  Fu, A., Ungun, B., Xing, L., Boyd, S.
  2019; 20 (1): 277–300
- **A convex optimization approach to radiation treatment planning with dose constraints.** *Optimization and engineering*
  Fu, A., Ungun, B., Xing, L., Boyd, S.
  2019; 20 (1): 277-300
- **Distributed Majorization-Minimization for Laplacian Regularized Problems** *IEEE-CAA JOURNAL OF AUTOMATICA SINICA*
  Tuck, J., Hallac, D., Boyd, S.
  2019; 6 (1): 45–52
- **Differentiable Convex Optimization Layers**
  Agrawal, A., Amos, B., Barratt, S., Boyd, S., Diamond, S., Kolter, J.
  edited by Wallach, H., Larochelle, H., Beygelzimer, A., d'Alche-Buc, F., Fox, E., Garnett, R.
  NEURAL INFORMATION PROCESSING SYSTEMS (NIPS).2019
- **Quantitative flux coupling analysis.** *Journal of mathematical biology*
  Tefagh, M., Boyd, S. P.
  2018
- **Fitting jump models** *AUTOMATICA*
  Bemporad, A., Breschi, V., Piga, D., Boyd, S. P.
  2018; 96: 11–21
- **End-to-end Optimization of Optics and Image Processing for Achromatic Extended Depth of Field and Super-resolution Imaging** *ACM TRANSACTIONS ON GRAPHICS*
  Sitzmann, V., Diamond, S., Peng, Y., Dun, X., Boyd, S., Heidrich, W., Heide, F., Wetzstein, G.
  2018; 37 (4)

- **A semidefinite programming method for integer convex quadratic minimization** *OPTIMIZATION LETTERS*
  Park, J., Boyd, S.
  2018; 12 (3): 499–518
- **Saturating Splines and Feature Selection** *JOURNAL OF MACHINE LEARNING RESEARCH*
  Boyd, N., Hastie, T., Boyd, S., Recht, B., Jordan, M.
  2018; 18
- **A general system for heuristic minimization of convex functions over non-convex sets** *OPTIMIZATION METHODS & SOFTWARE*
  Diamond, S., Takapoui, R., Boyd, S.
  2018; 33 (1): 165-193
- **Prediction error methods in learning jump ARMAX models**
  Breschi, V., Bemporad, A., Piga, D., Boyd, S., IEEE
  IEEE.2018: 2247–52
- **Infeasibility Detection in the Alternating Direction Method of Multipliers for Convex Optimization**
  Banjac, G., Goulart, P., Stellato, B., Boyd, S., IEEE
  IEEE.2018: 340
- **OSQP: An Operator Splitting Solver for Quadratic Programs**
  Stellato, B., Banjac, G., Goulart, P., Bemporad, A., Boyd, S., IEEE
  IEEE.2018: 339
- **Introduction to Applied Linear Algebra – Vectors, Matrices, and Least Squares**
  Boyd, S., Vandenberghe, L.
  Cambridge University Press.2018
- **Saturating Splines and Feature Selection.** *Journal of machine learning research : JMLR*
  Boyd, N. n., Hastie, T. n., Boyd, S. n., Recht, B. n., Jordan, M. I.
  2018; 18
- **Embedded Mixed-Integer Quadratic Optimization Using the OSQP Solver**
  Stellato, B., Naik, V. V., Bemporad, A., Goulart, P., Boyd, S., IEEE
  IEEE.2018: 1536–41
- **Dynamic Resource Allocation for Energy Efficient Transmission in Digital Subscriber Lines** *IEEE TRANSACTIONS ON SIGNAL PROCESSING*
  Zhang, N., Yao, Z., Liu, Y., Boyd, S. P., Luo, Z.
  2017; 65 (16): 4353-4366
- **Network Inference via the Time-Varying Graphical Lasso.** *KDD : proceedings. International Conference on Knowledge Discovery & Data Mining*
  Hallac, D., Park, Y., Boyd, S., Leskovec, J.
  2017; 2017: 205–13
- **Toeplitz Inverse Covariance-Based Clustering of Multivariate Time Series Data.** *KDD : proceedings. International Conference on Knowledge Discovery & Data Mining*
  Hallac, D., Vare, S., Boyd, S., Leskovec, J.
  2017; 2017: 215–23
- **Stochastic Matrix-Free Equilibration** *JOURNAL OF OPTIMIZATION THEORY AND APPLICATIONS*
  Diamond, S., Boyd, S.
  2017; 172 (2): 436-454
- **Linear Convergence and Metric Selection for Douglas-Rachford Splitting and ADMM** *IEEE TRANSACTIONS ON AUTOMATIC CONTROL*
  Giselsson, P., Boyd, S.
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- **SnapVX: A Network-Based Convex Optimization Solver** *JOURNAL OF MACHINE LEARNING RESEARCH*
  Hallac, D., Wong, C., Diamond, S., Sharang, A., Sosic, R., Boyd, S., Leskovec, J.

2017; 18

- **Toeplitz Inverse Covariance-Based Clustering of Multivariate Time Series Data**
  Hallac, D., Vare, S., Boyd, S., Leskovec, J., ACM
  ASSOC COMPUTING MACHINERY.2017: 215-223
- **Network Inference via the Time-Varying Graphical Lasso**
  Hallac, D., Park, Y., Boyd, S., Leskovec, J., ACM
  ASSOC COMPUTING MACHINERY.2017: 205-213
- **Stochastic Mirror Descent in Variationally Coherent Optimization Problems**
  Zhou, Z., Mertikopoulos, P., Bambos, N., Boyd, S., Glynn, P.
  edited by Guyon, Luxburg, U. V., Bengio, S., Wallach, H., Fergus, R., Vishwanathan, S., Garnett, R.
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