

# Matt Wytock

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<b>Contact</b>	<p>mwytoc@stanford.edu stanford.edu/~mwytoc 212 Packard Building Stanford, CA 94305</p>
<b>Academic Employment</b>	<p><b>Postdoctoral Scholar</b>, 2016–present <b>Stanford University</b>, Stanford, CA Electrical Engineering Department Sponsors: Stephen Boyd and Arun Majumdar</p> <p><b>Research Assistant</b>, 2010–2016 <b>Carnegie Mellon University</b>, Pittsburgh, PA Machine Learning Department Advisor: J. Zico Kolter</p>
<b>Education</b>	<p><b>PhD, Machine Learning</b>, 2016 <b>Carnegie Mellon University</b>, Pittsburgh, PA Thesis: Optimizing Optimization: Scalable Convex Programming with Proximal Operators Advisor: J. Zico Kolter</p> <p><b>Master of Science, Machine Learning</b>, 2014 <b>Carnegie Mellon University</b>, Pittsburgh, PA</p> <p><b>Bachelor of Science, Computer Science</b>, 2005 <b>University of California, San Diego</b></p>
<b>Preprints</b>	<p>Dynamic Energy Management with Scenario-based Robust MPC. Matt Wytock, Nicholas Moehle and Stephen Boyd. Preprint, September 2016.</p> <p>A New Architecture for Optimization Modeling Frameworks. Matt Wytock, Steven Diamond, Felix Heide and Stephen Boyd. Preprint, September 2016.</p> <p>Probabilistic Segmentation via Total Variation Regularization. Matt Wytock and J. Zico Kolter. Preprint, November 2015.</p> <p>A Fast Algorithm for Sparse Controller Design. Matt Wytock and J. Zico Kolter. Preprint, December 2013.</p>
<b>Publications</b>	<p>Epigraph Projections for Fast General Convex Programming. Po-Wei Wang, Matt Wytock and J. Zico Kolter. <i>International Conference on Machine Learning</i>, 2016.</p> <p>Preventing Cascading Failures in Microgrids with One-sided Support Vector Machines. Matt Wytock, Srinivasa Salapaka and Murti Salapaka. <i>IEEE Conference on Decision and Control</i>, 2014.</p> <p>Fast Newton Methods for the Group Fused Lasso. Matt Wytock, Suvrit Sra and J. Zico Kolter. <i>Conference on Uncertainty in Artificial Intelligence</i>, 2014.</p>

Contextually Supervised Source Separation with Application to Energy Disaggregation. Matt Wytock and J. Zico Kolter. *AAAI Conference on Artificial Intelligence*, 2014.

Large-scale Probabilistic Forecasting in Energy Systems using Sparse Gaussian Conditional Random Fields. Matt Wytock and J. Zico Kolter. *IEEE Conference on Decision and Control*, 2013.

Sparse Gaussian Conditional Random Fields: Algorithms, Theory and Applications to Energy Forecasting. Matt Wytock and J. Zico Kolter. *International Conference on Machine Learning*, 2013.

## Grants and Awards

Siebel Scholar, Energy Science, 2016.

National Science Foundation Graduate Research Fellowship, Honorable Mention, 2010.

Google Founders' Award (for Google's top achievements): Search-based keyword tool, 2010.

Google Operating Committee Award (for top 10 achievements of each year): Custom Search Engine, 2009.

## Teaching Experience

**Convex Optimization.** Teaching Assistant. Carnegie Mellon University, Fall 2015. Instructor: Ryan Tibshirani.

**Statistical Machine Learning.** Teaching Assistant. Carnegie Mellon University, Spring 2014. Instructors: Larry Wasserman and Ryan Tibshirani.

## Industry Experience

**Senior Staff Software Engineer**, 2005-2015

**Google**, Mountain View, CA

Built and led teams in search, ads as well as new product areas.

**Assistant Software Engineer**, 2002-2005

**Neurome**, San Diego, CA

Developed computational methods for neuroscience.

**Student Programmer**, 2002

**Center for Atmospheric Sciences, Scripps Institute of Oceanography**, San Diego, CA

Data processing for simulations of atmospheric physics.

## Professional Service

Program Committee. *International Conference on Machine Learning*, 2016.

Reviewer. *American Control Conference*, 2016.

Organizer of ACC workshop on enabling the grid of the future, 2015.

Program Committee. *AAAI Conference on Artificial Intelligence*, 2014.

Reviewer. *IEEE Transactions on Power Systems*, 2013.

## Patents

Generating and Displaying Tasks. R. Guha, R. Srikant, V. Gupta, D. Martin, M. Manjunatha, A. Dai, C. Au, E. Erbicéanu, S. Gupta, M. Wytock, C. Lischke, III, V. Raghunathan. Filed December 5, 2013.

Automatic Ad Creative Generation. L. Brunsman, S. Rajaraman, P. Deshwal, M. Wytock, S. Kates. Filed July 28, 2011.

Automatic Abstracted Creative Generation from a Web Site. L. Brunsman, S. Rajaraman, P. Deshwal, M. Wytock, S. Kates. Filed July 28, 2011.

Targeting Content Without Keywords. L. Brunsman, S. Rajaraman, P. Deshwal, M. Wytock, S. Kates. Filed July 19, 2010.

Dynamic Specification of Custom Search Engines at Query-time, and Applications thereof. O. Hansson, M. Wytock, P. Riley, R. Guha. U.S. Patent 8892552.

Systems and Methods for Customizing Behavior of Multiple Search Engines. P. Riley, R. Guha, C. Anderson, M. Wytock, O. Hansson. U.S. Patent 7801876 and 8301615.