## Marc Ratkovic

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Department of Politics, Princeton University • Princeton, NJ 08544 ratkovic@princeton.edu • 608.658.9665 • https://www.princeton.edu/~ratkovic

#### Education

1 II.D., 1 official Science. University of wisconsin-wadison.	2011
Dissertation Title: "Data-Driven Discovery for Political Science."	
Advisor: David L. Weimer	
M.S., Statistics. University of Wisconsin-Madison.	2010
M.A., Political Science. University of Wisconsin-Madison.	2010
B.A., College Scholar. Cornell University.	2000
Honors Thesis: "A Formal Model For Estimating PAC Preferences Over	
Legislators."	
Advisor: Walter R. Mebane, Jr.	

Ph D. Political Science University of Wisconsin-Madison

### **Positions**

Assistant Professor, Depratment of Politics, Princeton University	2013-
Lecturer, Department of Politics and Woodrow Wilson School of Public and	2012-2013
International Affairs, Princeton University.	
Postdoctoral Fellow in the Program for Quantitative and Analytical Political	2011-2012
Science, Princeton University.	
Predoctoral Fellow in the Program for Quantitative and Analytical Political	2010-2011
Science, Princeton University.	2010 2011

### **Awards**

Gosnell Prize for Excellence in Political Methodology, for "Sparse Estimation with Uncertainty: Subgroup Analysis in Large Dimensional Designs." With Dustin Tingley. July 22, 2016.

Thomas R. Ten Have Memorial Award for Best Poster, for "Identification of Treatment Effect Heterogeneity as a Variable Selection Problem." With Kosuke Imai. Atlantic Causal Inference Conference, Ann Arbor. May 20, 2011.

Nomination for Best Paper, for "Identification of Treatment Effect Heterogeneity as a Variable Selection Problem." With Kosuke Imai. Annual Midwest Political Science Association Meeting, Chicago. April 1, 2011.

Department of Political Science Teaching Award. University of Wisconsin-Madison. Fall, 2007.

### Research

### **Publications in Refereed Journals**

"Sparse Estimation with Uncertainty: Subgroup Analysis in Large Dimensional Designs." Forthcoming, *Political Analysis*. With Dustin Tingley.

"Robust Estimation of Inverse Propensity Weights for Marginal Structural Models." 2015. Journal of the American Statistical Association. 110(511): 1013-1023. Lead Article. With Kosuke Imai.

"Covariate Balancing Propensity Score." 2014. *Journal of the Royal Statistical Society: Series B.* 76(1): 243-263. With Kosuke Imai.

"Estimating Treatment Effect Heterogeneity in Randomized Program Evaluation." 2013. Annals of Applied Statistics. 7(1): 443-470. With Kosuke Imai.

"Finding Jumps in Otherwise Smooth Curves: Identifying Critical Events in Political Processes." 2010. *Political Analysis* 18(1): 57-77. With Kevin H. Eng.

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## Papers Under Review

"Voting, Speechmaking, and the Dimensions of Conflict in the US Senate." Revise and resubmit, Political Analysis. With In Song Kim and John Londregan.

"A Sparse Decomposition of Democracy and Trade." With In Song Kim and John Londregan.

"Balancing within the Margin: Causal Effect Estimation with Support Vector Machines."

## **Working Papers**

"Looking Under Consensus: Inferring Individual Level Preference through Speech and Votes in the Federal Open Market Committee." With Ted Enamorado and Gabriel Lopez-Moctezuma.

"Strengthening Weak Instruments by Modeling Compliance." With Yuki Shiraito

"Bicoordinate Descent for the LASSO." With In Song Kim and John Londregan.

"It Depends on How You Use It: A Statistical Method for Differentiating Word Context." With Ben Johnson.

### **Published Software**

"sparsereg: Sparse Bayesian Models for Regression, Subgroup Analysis, and Panel Data." With Dustin Tingley. Available through the Comprehensive R Archive Network.

"SVMMatch: Causal Effect Estimation and Diagnostics with Support Vector Machines." Available through the Comprehensive R Archive Network.

"CBPS: R Package for Covariate Balancing Propensity Score." With Kosuke Imai and Christian Fong. Available through the Comprehensive R Archive Network.

"FindIt: R Package for Estimating Heterogeneous Treatment Effects." With Kosuke Imai. Available through the Comprehensive R Archive Network.

# **Teaching Experience**

Assistant Professor and Lecturer, Princeton University

2012-

Undergraduate and Graduate: Quantitative Analysis and Politics:

2006-2010

Applied Quantitative Analysis; Policy Research Seminar

Teaching Assistant, University of Wisconsin-Madison

Ph.D. Level: Regression for Political Science.

Masters Level: Statistics for Public Policy I and II.

Undergraduate Level: Intro to American Government.

2010

Instructor, University of Wisconsin-Madison

R Short Course, Social Science Computing Center.

2002-2005

Math Teacher, New York City

Intermediate School 392. Brooklyn, NY.

### **Selected Invited Talks**

What If? Machine Learning for Causal Inference. February 2016. Harvard and MIT.

Conference on Ideal Point Models. May 01-02, 2015. MIT.

Annual Summer Meeting, Society for Political Methodology. July 26, 2014.

Summer School in Quantitative Methods, Empirical Political Economy Network. May 19-20, 2014. CIDE, Mexico City.

Annual Meeting of the Society for Political Methodology. July 19, 2012. University of North Carolina-Chapel Hill.

Machine Learning Seminar. March 14, 2012. Department of Computer Science, Princeton University.

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Thomas R. Ten Have Memorial Presentation. May 25, 2012. Atlantic Causal Inference Conference, Johns Hopkins University.

Experiments Seminar. September 8, 2011. Institution for Social and Policy Studies, Yale University.

Annual Meeting of the Society for Political Methodology. July 29, 2011. University of North Carolina-Chapel Hill.

Annual Meeting of the Midwest Political Science Association. April 1, 2011. Chicago, IL. New Faces in Political Methodology Conference. May 1, 2010. Quantitative Social Science Initiative, Pennsylvania State University.

## Affiliations/Memberships

American Political Science Association, Society of Political Methodology, Midwest Political Science Association, American Statistical Association.

### References

Kosuke Imai Professor of Politics Department of Politics Princeton University kimai@princeton.edu 609.258.6601

David Weimer

Professor of Public Affairs and Political Science Department of Political Science and La Follette School of Public Affairs University of Wisconsin - Madison weimer@lafollette.wisc.edu 608.262.5713 John Londregan Professor of Politics and International Affairs Woodrow Wilson School Princeton University jbl@princeton.edu 609.258.4854

Dustin Tingley Professor of Government Harvard University dtingley@gov.harvard.edu