

Gonzalo Rivero, Ph.D.

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SUMMARY I have over 10 years of experience in the areas of data science and social science research in both industry and academia. At Westat I serve as architect of advanced quantitative tools for social research, and participate in the strategic planning around methods, technologies, staffing and training both in statistical modeling, computational social research, and scientific software development.

As unit leader and head of research and development, I provide expertise in the design, implementation, and evaluation of applied data science solutions. Working closely with a team of methodologists, statisticians, project directors and operations managers, I am responsible for building tools that support faster and more efficient collection of survey data, advice projects areas on research design and analysis with organic and enriched data, and oversee the methodological standards and workflows in advanced analytics, machine learning, and natural language processing.

EDUCATION

Ph.D. in Political Science, <i>New York University</i>	2013
M.A. in Political Science, <i>New York University</i>	2009
M.A. in Social Sciences, <i>Juan March Institute</i> , Madrid	2006
M.A. in History (Prehistory & Archaeology), <i>University of Vigo</i> , Ourense	2004
B.A. in History, <i>University of Vigo</i> , Ourense	2002

EMPLOYMENT **Data Science Manager.** Statistics and Survey Methodology Unit. *Westat.* 2018–present

I lead the vision and strategic direction in new business areas. I am responsible for data science solutions in support of internal operations and external clients in the study areas of public health, clinical trials, education, justice, and policy evaluation. In addition to managing the data science unit, I oversee the training of new and existing staff in new technologies, machine learning, Python, and R.

Data Science Lead. Statistics and Survey Methodology Unit. *Westat.* 2017–2018

Senior Data Scientist. Statistics and Survey Methodology Unit. *Westat.* 2015–2017

Statistical Scientist. Scientific Research Group. *YouGov.* 2014–2015

Senior Analyst. Scientific Research Group. *YouGov.* 2013–2014

TECHNICAL SKILLS

Languages: Python, C++, JavaScript
Experience with `numpy`, `scikit-learn`, `pandas`, `keras`, `NLTK`, `spacy`, `PySpark`
Stack includes `Flask`, `Celery`, `NGINX`, `SQLAlchemy`

Statistics: R, Stata, Jags/Stan, SPSS
Experience with `tidyverse`, `caret`, `Rcpp`, `openNLP`, `statnet`, `rmarkdown`
Development in S3 and S4

Databases: SQL (PostgreSQL and MySQL), MongoDB, ElasticSearch

DevOps: Amazon AWS, Docker, Kubernetes
Experience with `Ansible`, `Fabric`, `Jenkins`, `supervisor/circus`, `OpenCPU`

BOOKS

1. Jungherr, A.; **Rivero, G.** and Gayo-Avello, D. (exp. 2019) *Retooling Politics: How Digital Media is Shaping Democracy*. Cambridge University Press (Under contract).
2. **Rivero, G.** (2011) *Análisis de datos incompletos en Ciencias Sociales*. CIS, Madrid.

PEER-REVIEWED ARTICLES

1. Tourangeau, R.; Sun, H.; Yan, T.; Maitland, A.; **Rivero, G.** and Williams, D. (exp. 2018): "Web Surveys by Smartphones and Tablets: Effects on Data Quality." *Social Science Computer Review*. 36 (5): 542-556.

2. Tourangeau, R.; Maitland, A.; **Rivero, G.**; Sun, H.; Williams, D. and Yan, T. (exp. 2018): "Web Surveys by Smartphones and Tablets: Effects on Survey Responses." *Public Opinion Quarterly*, 81 (4): 896-929.
3. **Rivero, G.** (2017): "Preaching to the Choir. Ideology and Following Behavior in Social Media." *Contemporary Social Science*. OnlineFirst.
4. Fernández-Vázquez, P.; Barberá, P. and **Rivero, G.** (2015): "Rooting Out Corruption or Rooting For Corruption? The Heterogeneous Electoral Consequences of Scandals." *Political Science Research and Methods*, 4 (2): 379-397
5. **Rivero, G.** (2015): "Heterogeneous Preferences in Multidimensional Voting Models: Ideology and Nationalism in Spain." *Electoral Studies*, 40: 136-145.
6. Przeworski, A.; **Rivero, G.** and Xi, T. (2015): "Elections as a Conflict Processing Mechanism." *European Journal of Political Economy*, 39: 235-248.
7. Barberá, P. and **Rivero, G.** (2015): "Understanding the Political Representativeness of Twitter Users," *Social Science Computer Review*, 33 (6): 712-729.

CHAPTERS IN BOOKS

1. Barberá, P. and **Rivero, G.** (2012): ¿Un tweet, un voto? Desigualdad en el debate político en Twitter. In Cotarelo, R. and Crespo, I. (ed.): *La comunicación política y las nuevas tecnologías*. Ed. Libros de la Catarata: 200-220.
2. Lapuente, V.; Fernández-Vázquez, P. and **Rivero, G.** (2011): Carencias en el control vertical y horizontal de la corrupción. In Estefanía, J. (Ed.): *Informe sobre la Democracia en España, 2011*. Fundación Alternativas: 199-222.

OTHER PUBLICATIONS

1. Riddles, J.; Burke, J.; **Rivero, G.** and Rust, K. (2017): Adjustments to Student Weights to Account for Student Nonresponse in the National Assessment of Educational Progress. *Proceedings of the Joint Statistical Meetings*. American Statistical Association.
2. **Rivero, G.** and Fernández-Vázquez, P. (2011): Las consecuencias electorales de los escándalos de corrupción municipal, 2003-2007. *Estudios de Progreso*, 59.

UNDER REVIEW

1. Suhay, E.; Klasnja, M. and **Rivero, G.** (2018): "Explanations for Inequality and Political Attitudes among Affluent Americans."
Awards: APSA Best Paper Prize 2018. Class and Inequality Section.
2. **Rivero, G.**; Tourangeau, R.; Cook, T. and Edwards, B. (2017): "Adaptive Designs in Context: Combining Paradata and Geographical Information."
3. Gallego, J.; **Rivero, G.** and Martínez-Gordillo, J.D. (2017): "Preventing Rather than Punishing: An Early Detection Model for Corruption in Public Procurement."

WORKING PAPERS

1. Klasnja, M.; Smeets, P.; Suhay, E. and **Rivero, G.** (2017): "The Political Preferences of the Wealthy in the U.S. and the Netherlands."
2. Sun, H. and **Rivero, G.** (2017): "One Size Does not Fit All. Measuring Interviewer Quality in Face-to-Face Surveys."

ADDITIONAL TRAINING

Short courses

R and Spark: Tools for Data Science Workflows. *NISS* Sep. 2017
 Statistical Learning and Data Mining. *Trevor Hastie/Rob Tibshirani* Oct. 2016

Long courses

Quantitative Methods for Social Research. *ICPSR, University of Michigan* June-Aug. 2005
Courses: Bayesian Statistics, Advanced MLE, Game Theory II, Regression Analysis III
 PGCert in Advanced Methods of Applied Statistics, *UNED* 2005
Areas: Robust Statistics, Resampling Methods, Multivariate Statistics
 Coursework of the Ph.D. in Economic Theory, *U. Santiago de Compostela* 2004
Courses: Microeconomics, Macroeconomics, Social Choice, Game Theory, Cooperative Games

RESEARCH AFFILIATIONS	Research affiliate (<i>Doctor miembro</i>). <i>Juan March Institute</i> , Madrid Visiting Scholar. Institute for Economic Analysis, <i>CSIC</i> , Barcelona	2013–present 2010–2011
GRANTS	<i>Digital Media and Politics</i> , €8,000. University of Konstanz. Andreas Jungherr (PI) <i>Dictatorial Repression and Judicial Systems. The Determinants of Authoritarian Stability and Transitional Justice</i> , €30,000. Spanish Ministry of Science. Paloma Aguilar (PI) <i>Technologies of Rebellion and Violence during Civil War</i> , €12,000. Institut Català Internacional per la Pau. With Laia Balcells (PI) <i>Disentangling the Origins and Consequences of Authoritarian Institutions</i> , €3,612. Juan March Institute. With Abel Escriba (Co-PI)	2017 2012–2015 2011 2010
FELLOWSHIPS & AWARDS	Best Paper Prize. <i>Class and Inequality Section, APSA</i> McCracken Fellowship, <i>GSAS, New York University</i> Juan March Fellowship, <i>Juan March Institute</i> Research assistant fellowship, <i>U. de Santiago de Compostela</i> Xunta de Galicia Graduate Fellowship, <i>Xunta de Galicia</i> Prize to the best academic record, <i>Universidade de Vigo</i> Research assistant fellowship, <i>Spanish Ministry of Education</i>	2018 2007–2012 2003–2007 June–Sept. 2003 2002–2003 2002 2001–2002
TEACHING EXPERIENCE	<i>Workshops & Summer Schools</i> “Big Data en investigación social y opinión pública” (20 hours) <i>U. Católica, Montevideo</i> “Big Data for Public and Private Sectors” (40 hours). <i>U. del Rosario, Bogotá</i> “Advanced R” (6 hours). <i>Westat</i> “Introduction to Statistical Programming in R” (6 hours). <i>Westat</i> “Incomplete Data Analysis in Surveys” (8 hours). <i>U. Autònoma de Barcelona</i> <i>Teaching Assistant</i> Power & Politics in America. Prof. Patrick Egan. <i>NYU</i> Power & Politics in America. Prof. Sanford Gordon. <i>NYU</i> International Politics. Prof. Shanker Satyanath. <i>NYU</i> Quantitative Methods for Political Science. Prof. Matthew Stevens. <i>NYU</i>	July 2019 June 2017 June 2016 Feb. 2016 Nov. 2010 Fall 2012 Spring 2012 Fall 2011 Fall 2008 & Spring 2009
INVITED TALKS	Universidad del Rosario (Colombia) University of Durham, Universidad del Rosario (Colombia) Trinity College of Dublin TIGER (Toulouse School of Economics) Instituto Tecnológico Autónomo de México, Spanish National Research Council Universitat Autònoma de Barcelona	2017 2017 2016 2014 2012 2011
ORGANIZED CONFERENCES	The Organization of Security and Justice System Institutions in Autocracies. <i>Hosting institution: Juan March Institute - Carlos III, Madrid</i> <i>Committee: P. Aguilar, A. Escribà-Folch, J.A. Mayoral, J. Ríos Figueroa, and G. Rivero</i> Contingent Disruption: Digital Media and Politics. <i>Hosting institution: University of Konstanz, Konstanz</i> <i>Committee: D. Gayo-Avello, A. Jungherr, and G. Rivero</i>	June, 2015 May, 2018
OUTREACH	Member of the editorial board of the social science blog “Politikon” <i>Mentions and interviews in media</i>	2015–present

El Mundo. *"El voto oculto de Donald Trump"*. Oct. 27, 2016.
Univisión. *"Por qué es muy improbable que fallen las encuestas como dice Trump."* Oct. 25, 2016.
El País. *"La corrupción sale gratis en España"*. Jul. 2, 2016.
Expansión. *"El porqué de la corrupción política"*. Jun 30, 2016.
Xataka. *"¿Predice el big data sobre redes sociales mejor que las encuestas quiénes ganan las elecciones?"* Dec. 15, 2015.
Pacific Standard. *"Why do we elect corrupt politicians."* Nov. 24, 2014.
El País. *"Rajoy y Rubalcaba empatan en la valoración de los usuarios de Twitter"*. Sep. 26, 2011.

Writings in media

Ahora. *"Cuando PP y PSOE perdieron a los jóvenes"*, with María Ramos. Jul. 8 2016.
El País. *"El éxito de las encuestas"*, with Kiko Llaneras. Mar. 30, 2015.
European Politics and Policy Blog, London School of Economics. *"Political discussions on Twitter during elections are dominated by those with extreme views"*, with Pablo Barberá. Dec. 13, 2014.

CONFERENCES

Political science: APSA (2010, 2011, 2013, 2015, 2017), MPSA (2010, 2011, 2015, 2017, 2018), EPSA (2011, 2012), ECPR (2010), IPSA (2011, 2012), CES (2018)
Statistics and survey methods: FedCASIC (2018), BigSurv (2018), AAPOR (2017), ITSEW (2016), MOLS (2018), JSM (2017)
Others: ALICE (2011)

RESEARCH ASSISTANSHIPS

Prof. Adam Przeworski (NYU). Collection of constitutional and electoral data for the dataset *Political Institutions and Political Events*. 2008 – 2011
Prof. Covadonga Meseguer (CIDE). Technical review and discussion of the book *Learning, Policy Making, and Market Reforms*. Cambridge University Press. 2007 – 2008

SERVICE & MEMBERSHIP

Referee

Journals: British Journal of Political Science; Public Opinion Quarterly; Political Behavior; Journal of Conflict Resolution; Communication Research; Dados; Spanish Journal of Political Science; Journal of Survey Statistics and Methodology; Armed Forces and Society; War in History; Social Science Computer Review; Southern European Politics and Society; El Profesional de la Información; Revista Internacional de Sociología
Book publishers: Cambridge University Press
Funders: Spanish National Agency for Evaluation and Prospective, Institute of Education Sciences

Expert panels

Bureau of Justice Statistics

Mentorship

Shane Campbell (Washington Statistical Society, 2017-2018)
Ruodan Zhang (Midwest Political Science Association, 2017-2018)

Professional memberships

American Political Science Association (Political Methodology Section), American Statistical Association (Statistical Learning and Data Science Section)

MISCELLANEA

Tracking of the Spanish 2011 legislative elections using sentiment analysis, with Pablo Barberá 2011
Website: <http://www.tuitometro.es/> (Inactive since November, 20, 2011)