

# Greg Ridgeway

## Rebecca W. Bushnell Professor of Criminology

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## Education

- **Ph.D. – Statistics (1999)**

Dissertation: *Generalization of Boosting Algorithms and Applications of Bayesian Inference to Massive Datasets*

[Department of Statistics](#), University of Washington, Seattle, WA

Advisors: [David Madigan](#) and [Thomas Richardson](#)

- **M.S. – Statistics (1997)**

[Department of Statistics](#), University of Washington, Seattle, WA

- **B.S. – Statistics (1995)**

[California Polytechnic State University](#), San Luis Obispo, CA

## Professional Experience

- **8/2014–present**, [Department of Criminology](#) and [Department of Statistics and Data Science](#), University of Pennsylvania

- Rebecca W. Bushnell Professor of Criminology (7/2022–present)

- Full Professor (7/2020–present)

- [Data-Driven Discovery Initiative](#), Co-director (2021–present)

- Chair, Department of Criminology (7/2019–6/2025)

- Associate Professor (8/2014–6/2020)

- Undergraduate Chair (7/2023–6/2024)

- [Quattrone Center for the Fair Administration of Justice](#), Penn Law (8/2015–present)
- [Center for Causal Inference](#), Perelman School of Medicine (8/2016–present)
- [Graduate Group in Epidemiology and Biostatistics](#), Perelman School of Medicine (12/2017–present)
- [Warren Center for Network and Data Science](#), SEAS (3/2023–present)
- [Population Studies Center](#) (1/2024–present)
- **1/2021–12/2025**, Co-editor-in-chief, [Journal of Quantitative Criminology](#)
- **7/2012–7/2014**, [National Institute of Justice](#), U.S. Department of Justice  
Directed the Department of Justice’s science agency (approximately 80 staff; \$250M/year), advancing science and innovation in forensics, technology, and social science
  - Acting Director (1/2013–7/2014)
  - Deputy Director, Senior Executive Service (7/2012–7/2014)
- **7/2000–6/2012**, [RAND Corporation](#)  
Led a major research portfolio on policing, courts, corrections, gangs, guns, drugs, and justice policy (approximately 50-person research team; ~40 proposals/year; ~\$10M/year projects)
  - RAND Safety & Justice Program, Director (1/2009–6/2012)
  - RAND Center on Quality Policing, Director (1/2008–6/2012)
  - RAND Safety & Justice Program, Acting Director (11/2007–1/2009)
  - [RAND Statistics Group](#), Senior Statistician (5/2007–6/2012)
  - RAND Safety & Justice Program, Associate Director (8/2006–11/2007)
  - [RAND Statistics Group](https://www.rand.org/statistics.html, Full Statistician (5/2003–5/2007)
  - [RAND Statistics Group](https://www.rand.org/statistics.html, Associate Statistician (7/2000–5/2003)
- **7/2001–8/2001**, Department of Sociology, University of Washington — Visiting Scholar
- **9/1999–6/2000**, Department of Statistics, University of Washington — Lecturer
- **6/1996–9/1997**, [Microsoft Research](#) — Research assistant

- **9/1993–9/1995**, California Department of Mental Health, [Atascadero State Hospital](#) — Research assistant (Clinical Safety Project)
- **8/1994–9/1995**, UC Berkeley Cooperative Extension — Research assistant (Integrated Hardwood Range Management Program)

## University Service

- **2021–present**, Co-director, Data Driven Discovery Initiative  
Launched a new data science initiative; staffing; post-doc program; data science for social good; seed grants; data science minor (with Bhuv Jain)
- **2022–present**, Committee member, Senate Committee on Students and Educational Policy  
Advises on admissions, instruction, academic integrity, teaching evaluation, grading policies, student records, disciplinary systems, and campus environment
- **2019–2025**, Chair, Department of Criminology  
Stimulated grant- and donor-funded research (especially Philadelphia justice policy analysis); secured strategic senior hires; seeded crime policy lab
- **2021–2024**, Committee member, Committee on Planning and Priorities  
Advises SAS on emerging issues in education, research, and operations
- **2019–2021**, SAS Data Driven Discovery Working Group  
Strategic planning on hiring, programming, data science coverage, and new opportunities
- **2014–2023**, Director, Master of Science in Criminology program  
Admissions; career planning; alumni network; placements; joint programs (Fels, SP2, Law)
- **2018–2022**, Committee member, Committee on Undergraduate Education  
Advises Dean and faculty on SAS undergraduate educational mission
- **2018–2020**, Committee member, Vice Provost for Education Fellowship Selection Committee  
Selects nominees for limited-submission fellowships

## Awards

- **2025**, [Fellow](#), American Society of Criminology
- **2024**, [Fellow](#), Academy of Experimental Criminology
- **2013**, [Fellow](#), American Statistical Association
- **2007**, American Statistical Association [Outstanding Statistical Application Award](#) (with J. Grogger) for “Testing for racial profiling in traffic stops from behind a veil of darkness.”  
RAND Gold Medal Award for contributions advancing RAND’s mission.
- **2005**, Commendation by ATF Los Angeles Field Division and the Attorney General of California for contributions to reducing firearms-related crimes in Los Angeles.  
RAND President’s Choice Award for developing pioneering methods for racial profiling.

- **1999**, Z.W. Birnbaum Award (UW Department of Statistics) for excellence in research and presentation.

## Patent Awards

- **2014**  
— US Patent [8,719,210](#): “System and Method for Medical Treatment Hypothesis Testing.” Granted May 6, 2014
- **2013**  
— US Patent [8,538,906](#): “System and method for medical treatment hypothesis testing using relative likelihood of treatment results.” Granted September 17, 2013
- **2003**  
— US Patent [6,606,613](#): “Methods and apparatus for using task models to help computer users complete tasks.” Granted August 12, 2003
- **2001**  
— US Patent [6,330,554](#): “Methods and apparatus using task models for targeting marketing information to computer users based on a task being performed.” Granted December 11, 2001  
— US Patent [6,195,622](#): “Methods and apparatus for building attribute transition probability models for use in pre-fetching resources.” Granted February 27, 2001
- **2000**  
— US Patent [6,154,767](#): “Methods and apparatus for using attribute transition probability models for pre-fetching resources.” Granted November 28, 2000  
— US Patent [6,088,718](#): “Methods and apparatus for using resource transition probability models for pre-fetching resources.” Granted July 11, 2000  
— US Patent [6,012,052](#): “Methods and apparatus for building resource transition probability models for use in pre-fetching resources, editing resource link topology, building resource link topology templates, and collaborative filtering.” Granted January 4, 2000

## Grants and Contracts

- **2020–2023** — Principal Investigator, “[Prosecutors and Criminal Justice Reform: Independent Research Partnership with the Philadelphia District Attorney’s Office](#),” Arnold Ventures, \$2,509,009 (with Aurelie Ouss)
- **2020–2022** — Co-Principal Investigator, “Evaluation of Philadelphia Group Violence Intervention,” Urban Affairs Coalition and Philadelphia Office of Violence Prevention, \$150,269 (with Ruth Moyer)
- **2020–2022** — Principal Investigator, “Crime Prevention Through Intelligence & Information Sharing,” Neubauer Family Foundation, \$543,298 (with Aaron Chalfin)

- **2016** — Site PI, “Disrupting Illegal Gun Transfers,” NIJ (prime: RAND), 2013-R2-CX-0016, \$42,118
- **2015–2016** — Site PI, “Replication of the Cardiff Violence Prevention Model in the United States,” RWJF (prime: NFCDC&PI), Grant 72352, \$213,572
- **2011–2012** — Program Director, “Developing the Center of Research and Security Studies,” Ministry of Interior, Abu Dhabi, \$1,500,000
- **2010–2012** — Co-PI, “NLECTC Information and Geospatial Technology Center of Excellence,” NIJ 2010-IJ-CX-K007, \$6,000,000 (with John Hollywood)
- **2010–2012** — Co-PI, “Experimental Evaluation of the BJA DMI Training and Technical Assistance Initiative,” BJA 2010-DJ-BX-1672, \$2,900,000 (with Beau Kilmer and Jessica Saunders)
- **2010–2012** — Co-PI, “Enabling the Police to Serve the Needs of 21st Century Israel,” Israel Ministry of Public Security and RAND Israel Policy Fund, \$1,600,000 (with Steven Popper)
- **2010–2012** — Principal Investigator, “Predictive Policing Analytic and Evaluation Research Support,” NIJ 2009-IJ-CX-K114, \$1,084,846
- **2008–2010** — Principal Investigator, “Case weighting for federal public defender services,” AOUSC USCA08F0404, \$564,510 (with Nick Pace)
- **2008–2012** — Principal Investigator, “Evaluation of the Los Angeles County Juvenile Justice Crime Prevention Act Programs,” LA County Probation, \$1,610,000 (with Terry Fain and Susan Turner)
- **2008** — Principal Investigator, “Development of internal benchmarking system,” New York City Police Foundation, \$32,000
- **2007** — Principal Investigator, “Assessment of racial bias in NYPD stop, question, and frisk practices,” New York City Police Foundation, \$120,000
- **2007–2008** — Principal Investigator, “Strategies for improving police recruiting,” San Diego Police Department, \$160,000
- **2006–2007** — Co-PI, “Analysis of Graduate Driver Licensing...,” NICHD 1R03HD052547-01, \$184,122 (with Pinar Karaca-Mandic)
- **2004–2009** — Principal Investigator, “Improving Police-Community Relations in Cincinnati,” City of Cincinnati 45X0028, \$1,581,300
- **2002–2004** — Principal Investigator, “DOJ Racial Profiling Initiative,” City of Oakland EM3.20.02, \$75,000
- **2001–2008** — Co-PI, “Strategic Disruption of Firearms Markets,” NIJ 2001-IJ-CX-0028,

\$647,952 (with George Tita)

- **2001–2002** — Principal Investigator, “Data mining and Columbia counterdrug strategies,” Office of the Secretary of Defense (three projects) \$57,845, \$27,965, \$19,165

## Publications

### Working papers

- Ridgeway, G., & Loeffler, C. (2027). “Crime Statistics,” *Annual Review of Statistics and Its Applications*, 14.
- Gyourko, J. R., & Ridgeway, G. “Safeguarding the Credit Records of Youth in Foster Care: What Interventions Reduce Risk of Child Identity Fraud?”

### Peer-reviewed articles

- G. Ridgeway (to appear). “[A Conditional Ordinal Stereotype Model to Estimate Police Officers’ Propensity to Escalate Force](#),” *Journal of the American Statistical Association*. ([Data and code](#))
- F.A. Amaral, C. Loeffler, & G. Ridgeway (2024). “[Prosecutorial discretion not to invoke the criminal process and its impact on firearm cases](#),” *Journal of Criminal Justice*, 95:102313.
- J.R. Gyourko & G. Ridgeway (2024). “[Predictors of Identity Fraud Victimization of Adolescent Youth in Foster Care](#),” *Victims & Offenders*.
- V. Nguyen & G. Ridgeway (2023). “[Judges on the Benchmark: Developing a Sentencing Feedback System](#),” *Justice Quarterly*, 41(1):1–37.
- E.C. South, J.M. MacDonald, V.W. Tam, G. Ridgeway, C.C. Branas (2023). “[Effect of Abandoned Housing Interventions on Gun Violence, Perceptions of Safety, and Substance Use in Black Neighborhoods: A Citywide Cluster Randomized Trial](#),” *JAMA Internal Medicine* 183(1):31-39.
- Z. F. Meisel, F. Shofer, A. Dolan, E. B. Goldberg, K. V. Rhodes, E. P. Hess, V. R. Bellamkonda, J. Perrone, C. C. Cannuscio, L. Becker, M. A. Rodgers, M. M. Zyla, J. J. Bell, S. McCollum, E. Engel-Rebitzer, M. J. Nguemeni Tiako, G. Ridgeway, and M. M. Schapira (2022). “[A multicentered randomized controlled trial comparing the effectiveness of pain treatment communication tools in emergency department patients with back pain or kidney stone pain](#),” *American Journal of Public Health* 112(S1):S45-S55.
- G. Ridgeway, J. Rosenberger, and L. Xue (2021). “[Statisticians Engage in Gun Violence Research](#),” *Statistics and Public Policy* 8(1):73-79.
- Y. Wu and G. Ridgeway (2021). “[Effect of Public Transit on Crime: Evidence from SEPTA strikes in Philadelphia](#),” *Journal of Experimental Criminology* 17:267-286.
- G. Ridgeway, B. Cave, J. Grieco, and C.E. Loeffler (2021). “[A Conditional Likelihood Model of the Relationship Between Officer Features and Rounds Discharged in Police Shootings](#),” *Journal of Quantitative Criminology* 37(1):303-326.

- R. Moyer and G. Ridgeway (2020). “[The Effect of Outpatient Methadone Maintenance Treatment Facilities on Place-Based Crime](#),” *Journal of Experimental Criminology* 16(2):227–245.
- G. Ridgeway, R. Moyer, and S. Bushway (2020). “[Sentencing Scorecards: Reducing Racial Disparities in Prison Sentences at Their Source](#),” *Criminology & Public Policy* 19(4):1113–1138.
- G. Ridgeway (2020). “[The Role of Individual Officer Characteristics in Police Shootings](#),” *The ANNALS of the American Academy of Political and Social Science* 687(1):58–66. ([technical appendix](#) showing the decomposition of information)
- G. Ridgeway, J. Grogger, R.A. Moyer, and J.M. MacDonald (2019). “[Effect of Gang Injunctions on Crime: A Study of Los Angeles from 1988-2014](#),” *Journal of Quantitative Criminology* 35(3):517–541.
- C.E. Loeffler, J.M. Hyatt, and G. Ridgeway (2019). “[Measuring Self-Reported Wrongful Convictions Among Prisoners](#),” *Journal of Quantitative Criminology* 35(2):259–286.
- R. Moyer, J.M. MacDonald, G. Ridgeway, and C. Branas (2019). “[Effect of Remediating Blighted Vacant Land on Shootings: A Citywide Cluster Randomized Trial](#),” *American Journal of Public Health* 109(1):140–144.
- G. Ridgeway, M. Nørgaard, T.B. Rasmussen, W.D. Finkle, L. Pedersen, H.E. Bøtker, and H.T. Sørensen (2019). “[Benchmarking Danish Hospitals on Mortality and Readmission Rates After Cardiovascular Admission](#),” *Clinical Epidemiology* 11:67–80.
- Ridgeway, G. (2019). “[Experiments in Criminology](#),” *Annual Review of Statistics and Its Applications*, 6:37–61.
- Ridgeway, G. (2018). “Policing in the Era of Big Data,” *Annual Review of Criminology*, 1:401–419.
- Ridgeway, G., & MacDonald, J. M. (2014). “A Method for Internal Benchmarking of Criminal Justice System Performance,” *Crime & Delinquency*, 60(1):145–162.
- Saunders, J., Lundberg, R., Braga, A. A., Ridgeway, G., & Miles, J. (2015). “A Synthetic Control Approach to Evaluating Place-Based Crime Interventions,” *Journal of Quantitative Criminology*, 31(3):413–434.

For a complete and always-current publications list, link your Google Scholar profile [here](#).

## Software development

- **fastDR — Fast Doubly Robust Estimation**  
Implements doubly robust treatment effect estimation using boosted propensity scores and weighted GLMs.  
Development: <https://github.com/gregridgeway/fastDR>

- **gbm — Generalized Boosted Regression Models**  
Gradient boosting and related models (C++ engine, R frontend).  
Development: <https://github.com/gbm-developers/gbm>

## Presentations

(This section is long on the original page; paste in additional items as needed. A few examples follow.)

- 2020 — “Modern Benchmarking and the Search for Unusual Hospitals, Communities, and Cops,” Keynote, Health Policy Statistics Section, Joint Statistical Meetings (virtual).
- 2019 — “Officer Features and Shooting Risk,” Inaugural Ingram Olkin S3 Forum, American Statistical Association, Alexandria, VA.
- 2018 — “Criminological Data Science,” Fields Institute, University of Toronto, Toronto, Canada.

## Professional activities

- 2021–2025 — Editor-in-chief, *Journal of Quantitative Criminology* (with John MacDonald)
- 2025–2028 — Committee member, ASA Committee on Law and Justice Statistics
- 2023–2024 — Chair, ASA Committee on Law and Justice Statistics
- 2021–2024 — Committee member, Policy Committee, American Society of Criminology
- 2018–2020 — Associate Editor, *Journal of Quantitative Criminology*
- 2016–2018 — Editorial board, *Journal of Quantitative Criminology*
- 2019–2020 — Committee member, Nominations Committee, American Society of Criminology
- 2009–2010 — Committee member, ASA Committee on Law and Justice Statistics
- 2004–2008 — Associate Editor, *Bayesian Analysis*

## Teaching experience and student advising

### Course notes

- **Criminal Justice Data Analytics** (CRIM4002/6002): <https://github.com/gregridge-way/>
- **Machine Learning for Social Science** (CRIM4012/6012): <https://github.com/gregridge-way/>

### Ph.D. students (committee roles)

- 2024 — John Gyourko, *Credit Checks and Credit Freezes for Children and Youth in Foster Care...* (committee member)
- 2023 — Alex Knorre, *Essays on Gun Violence in the United States* (committee member)
- 2023 — David Mitre Becerril, *The Effects of Neighborhood Investments on Public Safety* (committee member)
- 2022 — Viet Nguyen, *Understanding the trade-offs for less punitive sentencing practices* (committee member)



- 2020 — Ruth Moyer, *Changes Within the Urban Environment and Their Effect on Crime...* (committee chair)
- 2020 — Jacob Kaplan, *The Effect of Lighting and Building Security on Crime* (committee member)
- 2020 — Yuhao Wu, *Empirical Studies of the Effects of Legal Reforms... in China* (committee member)