Greg Ridgeway

Table of contents

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)

  – Penn Injury Science Center (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, Full Statistician (5/2003–5/2007)

- RAND Statistics Group, 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.

- **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."

- **2013** — US Patent 8,538,906: "System and method for medical treatment hypothesis testing using relative likelihood of treatment results."

- **2003** — US Patent 6,606,613: "Methods and apparatus for using task models to help computer users complete tasks."

- **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."

- **2001** — US Patent 6,195,622: "Methods and apparatus for building attribute transition probability models for use in pre-fetching resources."

- **2000** — US Patent 6,154,767: "Methods and apparatus for using attribute transition probability models for pre-fetching resources."

- **2000** — US Patent 6,088,718: "Methods and apparatus for using resource transition probability models for pre-fetching resources."

- **2000** — US Patent 6,012,052: "Methods and apparatus for building resource transition probability models…"

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

Coming soon

- 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 (selected; see Google Scholar for full list)

- Ridgeway, G. (to appear). "A Conditional Ordinal Stereotype Model to Estimate Police Officers' Propensity to Escalate Force," *Journal of the American Statistical Association.* (Data/code: GitHub)
- Amaral, F. A., Loeffler, C., & Ridgeway, G. (2024). "Prosecutorial discretion not to invoke the criminal process and its impact on firearm cases," *Journal of Criminal Justice*, 95:102313.
- Gyourko, J. R., & Ridgeway, G. (2024). "Predictors of Identity Fraud Victimization of Adolescent Youth in Foster Care," *Victims & Offenders.*
- Nguyen, V., & Ridgeway, G. (2023). "Judges on the Benchmark: Developing a Sentencing Feedback System," *Justice Quarterly*, 41(1):1–37.
- 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/gregridgeway/
- **Machine Learning for Social Science** (CRIM4012/6012): https://github.com/gregridgeway/

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)