Raiden B. Hasegawa, Ph.D.

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EDUCATION

2014-2019	Ph.D., Statistics, The Wharton School, University of Pennsylvania Dissertation title: *Essays in Causal Inference: Addressing Bias in Observational and Randomized Studies Through Analysis and Design* Advisor: Professor Dylan S. Small
2012-2013	Additional graduate coursework, Scientific Computing, Courant Institute of Mathematical Sciences, New York University
2006-2010	B.A., *cum laude*, *Distinction in Major*, Economics, Yale University

PROFESSIONAL EXPERIENCE

2019-Present	Google, Data Scientist
2012-2014	Federal Reserve Bank of New York, Research Associate *Research Areas: Bayesian macroeconomic forecasting, Bayesian VAR models, particle filtering, parallel scientific computing* *Programming Languages: Matlab, Stata and Python, Bash and Awk scripting*
2011-2012	GreenOrder, Sustainability Analyst *Provided management and strategy consulting services to Fortune 500 companies with a focus on sustainability*
2010-2011	DC Energy, Investment Analyst *Designed, tested and implemented quantitative trading strategies in wholesale power markets.* *Programming Languages: PHP, MySQL, R*

PUBLICATIONS (⋆ denotes co-first authors, equal contributions)

- **Hasegawa, Raiden B.**, Deshpande, Sameer K., Small, Dylan S., and Rosenbaum, Paul R. Causal Inference with Two Versions of Treatment (2019+). *Journal of Educational and Behavioral Statistics*, to appear.

- **Hasegawa, Raiden B.**, Small, Dylan S., and Webster, Daniel W. (2019). Bracketing in the Comparative Interrupted Time-Series Design to Address Concerns about History Interacting with Group: Evaluating Missouri Handgun Purchaser Law. *Epidemiology*, 30, 3, 371-379.

- Fogarty, Colin B.⋆ and **Hasegawa, Raiden B.**⋆ (2019). Extended sensitivity analysis for heterogeneous unmeasured confounding with an application to sibling studies of returns to education. *Annals of Applied Statistics*, 13, 2, 767-796.

- Deshpande, Sameer K.⋆, **Hasegawa, Raiden B.**⋆ et al.(2017) Association of Playing High School Football with Cognition and Mental Health Later in Life. *JAMA Neurology*, 74, 8, 909-918.

- **Hasegawa, Raiden B.** and Small, Dylan S. (2017). Sensitivity Analysis for Matched Pair Studies of Binary Data: From Worst Case to Average Case Analysis. *Biometrics*, 73, 4, 1424-1432.

- Del Negro, Marco, **Hasegawa, Raiden B.**, and Schorfheide, Frank (2016). Dynamic Prediction Pools: An Investigation of Financial Frictions and Forecasting Performance. *Journal of Econometrics*, 192, 22, 391-405.

SUBMITTED PAPERS

- **Hasegawa, Raiden B.** and Small, Dylan S.. Estimating Malaria Vaccine Efficacy in the Absence of a Gold Standard Case Definition: Mendelian Factorial Design. *Under Minor Revision for Journal of the American Statistical Association*.

- Deshpande, Sameer K., **Hasegawa, Raiden B.**, Weiss, Jordan, and Small, Dylan S. The association between football participation in adolescence and mental health in early adulthood. *Under Revision for PLOS ONE*.

MANUSCRIPTS IN PROGRESS

- Keele, Luke J., **Hasegawa, Raiden B.**, and Small, Dylan S. Bracketing Bounds for Differences-in-Differences with an Application to Voter ID Laws.

- **Hasegawa, Raiden B.** Covariance Adjustment in Matched Pair Observational Studies: Choosing Adjustment Algorithms for Power and Design Sensitivity.

RESEARCH INTERESTS

causal inference • design and analysis of observational studies • sensitivity analysis • evidence factors and multiple comparisons • statistical applications in social and biomedical sciences

CONFERENCE PRESENTATIONS AND POSTERS

- *Effects of Playing High School Football on Mental Health in Early Adulthood: An Observational Study* ■ Add Health Users Conference, Jul 2018 @ NIH

- *Extended Sensitivity Analysis for Heterogeneous Unmeasured Confounding with an Application to Sibling Studies of Returns to Education* ■ Atlantic Causal Inference Conference, May 2018 @ CMU

AWARDS

– National Science Foundation Travel Award, 2018
   Awarded to the five best junior researcher posters at the 2018 Atlantic Causal Inference Conference; for the poster *Extended Sensitivity Analysis for Heterogeneous Unmeasured Confounding with an Application to Sibling Studies of Returns to Education*

TEACHING

2014-2018   Department of Statistics, The Wharton School, University of Pennsylvania *(TA)*
                STAT 101 & 102: *Introductory Business Statistics*
                STAT431: *Mathematical Statistics*
                STAT471: *Intermediate Statistics*
                STAT474: *Modern Regression for Social, Behavioral and Biological Sciences*
                STAT613: *Regression Analysis for Business*

2016-2018   Wharton Moneyball Academy *(Graduate Instructor)*
Sports data science summer course for advanced high school students.

CONSULTING EXPERIENCE

2016-2017   Race-based bias in personal property insurance payouts case, *Statistical Expert*
– Expert report led to a "fair and balanced settlement."
– Methods: clusted logistic regression used to assess the correlation between racial composition and proportion of insurance claims outstanding by zipcode-year.

2016   Electricians' union discrimination case, *Statistical Expert*
– Methods: robust permutational tests used to assess the possible presence of racial bias in the "quality" of jobs assigned by an electricians' union to its members.

PROGRAMMING EXPERIENCE

In order of proficiency/experience: R, Matlab, Python, C++, Haskell, SQL, Bash, Stata