GARY HETTINGER, MS

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EDUCATION

University of Pennsylvania, *Perelman School of Medicine*　　　　　　　　Philadelphia, PA
Current PhD Candidate (2020-), Biostatistics　　　　　　　　　　　　　　**Current**

University of Pennsylvania, *Perelman School of Medicine*　　　　　　　　Philadelphia, PA
Master of Science, Biostatistics　　　　　　　　　　　　　　　　　　**May 2022**

Brown University　　　　　　　　　　　　　　　　　　　　　　Providence, RI
Bachelor of Science, Applied Math-Computer Science　　　　　　　　　　　**Dec 2017**

PROFESSIONAL EXPERIENCE

Associate Fellow, Leonard Davis Institute for Health Economics　　　　**Sep 2022 – Present**
University of Pennsylvania, Philadelphia, PA

Associate Data Scientist, R&D Content and Viewership Team　　　　**Apr 2019 – Aug 2020**
Xandr, New York, NY
Developed predictive models, designed and implemented feature testing, and conducted pattern recognition and impact analysis to make data-driven recommendations to stakeholders.

Data Science Software Engineer, Bid Logic Optimization Team　　　　**Feb 2018 – Apr 2019**
AppNexus (Xandr), New York, NY
Designed and implemented scalable, real-time algorithms and applications for automated bidding controller and conducted data analysis on feature and product changes.

Software Engineering Intern, Development Operations Team　　　　**Jun 2017 – Aug 2017**
AppNexus, New York, NY
Developed a data visualization application for displaying data pipeline and detecting system failures.

Technology Development Intern　　　　　　　　　　　　　　**Jun 2016 – Aug 2016**
Optum Technology, Boston, MA
Created an Office Management application that was one of two out of nine intern applications chosen to go into production company-wide.

Publications and Manuscripts in Progress

Petimar, J., Gibson, L., Wolff, M., Mitra, N., Corby, P., **Hettinger, G.,** Gregory, E., Edmondson, E., Block, J., & Roberto, C. (2023). Changes in dental outcomes after implementation of the Philadelphia beverage tax. *American Journal of Preventive Medicine.*

Hettinger, G., Mitra, N., Thom, S., & Margolis, D. (2024). An improved clinical and genetics-based prediction model for diabetic foot ulcer healing. *Advances in Wound Care.*

Siddique, S., **Hettinger, G.**, Dash, A., Neuman, M., Mitra, N., & Lewis, J. (2024). The Role of Hospital Characteristics in Patient Outcomes for Gastrointestinal Bleeding in a National Cohort. *American Journal of Gastroenterology.*

Lee, Y., **Hettinger, G.,** Gibson, L., & Mitra, N. (2024). Policy Effect Evaluation Under Counterfactual Neighborhood Interventions in the Presence of Spillover. *arXiv. Under Review: Journal of the Royal Statistical Society: Series A*.

Hettinger, G., Roberto, C., Lee, Y., & Mitra, N. (2024). Doubly Robust Estimation of Policy-Relevant Causal Effects Under Interference. *arXiv. Under Review: Journal of the Royal Statistical Society: Series C*.

Hettinger, G., Rubin, D., & Huang, J. (2024). Estimating the Instantaneous Reproduction Number With Imperfect Data: A Method to Account for Case-Reporting Variation and Serial Interval Uncertainty. *arXiv. Under Review: American Journal of Epidemiology.*

Hettinger, G., Lee, Y., & Mitra, N. (2024). Multiply Robust Difference-in-Differences Methodology for Heterogeneous Policy Exposures. *arXiv. Under Review: Biometrics.*

Petimar, J., Roberto, C., Block, J., Mitra, N., Gregory, E., Edmondson, E., **Hettinger, G.,** Gibson, L. (2024). Associations of the Philadelphia beverage tax with changes in adult body weight. *Under Review: The Lancet Public Health.*

Gregory, E., Roberto, C., Mitra, N., **Hettinger, G.,** Edmondson, E., Petimar, J., Block, J., Gibson, L. (2024). Change in pediatric weight-related outcomes after implementation of the Philadelphia Beverage Tax. *In Progress: JAMA Pediatrics.*

Hettinger, G., Long, Q., & Parikh, R. (2024+). Comparative Effectiveness of Second-Line Therapies for Advanced Non-Small Cell Lung Cancer: A Propensity-Score-Based Real-World Analysis. *In progress: Journal of Clinical Oncology Clinical Cancer Informatics.*

Hettinger, G., Getzen, E., & Long, Q. (2024+). Intrinsic and Extrinsic Evaluation of Machine Learning Propensity Score Models for Longitudinal EHR Data. *In progress.*

Presentations

2024

Dec   **(Accepted Invited Talk) International Biometric Conference (IBC)***, Atlanta, GA*
        Transportability of Policy Effects under Heterogeneous Exposure and Demographic Distributions

Aug   **(Topic-Contributed Talk) Joint Statistical Meetings (JSM)***, Portland, OR*
        Robust Estimation and Transportation of Causal Effect Curves for Difference-in-Differences Designs

May   **(Contributed Talk) American Causal Inference Conference (ACIC)***, Seattle, WA*
        Evaluating Policy Mechanisms Through Exposure Heterogeneity Using Difference-in-Differences

Apr   **(Contributed Talk) European Causal Inference Meeting (EuroCIM)***, Copenhagen, DK*
        Counterfactual Policy Effect Estimation under Treatment and Spillover Heterogeneity

Mar   **(Invited Talk) Eastern North American Region (ENAR) International Biometric Society Spring Meeting***,
        Baltimore, MD*
        A Difference-in-Differences Framework for Heterogeneous Policy Exposures with an Eye Towards
        Generalizing and Transporting Policy Effects

2023

Dec   **(Contributed Talk) International Conference on Statistics and Data Science (ICSDS)***, Lisbon, PT*

Multiply Robust Estimation of Heterogeneous Direct and Indirect Policy Effects

Nov   **(Contributed Talk) Center for Causal Inference Seminars**, *Philadelphia, PA*
New Methods for Evaluating Heterogeneous Policies with Heterogeneous Exposures

Aug   **(Contributed Talk) Joint Statistical Meetings (JSM)**, *Toronto, CA*
Difference-in-Differences Estimators Under Heterogeneous Direct and Indirect Policy Exposures

Jun   **(Invited Talk) New England Statistical Symposium (NESS)**, *Boston, MA*
Estimation of Policy-Relevant Causal Effects in the Presence of Interference under the Difference-in-Differences Framework with an Application to the Philadelphia Beverage Tax

Jun   **(Contributed Poster) New England Statistical Symposium (NESS)**, *Boston, MA*
Pairwise Doubly-Robust Difference-in-Differences Estimators in the Presence of Heterogeneous Direct and Indirect Policy Exposures

May   **(Contributed Poster) American Causal Inference Conference (ACIC)**, *Austin, TX*
Pairwise Doubly-Robust Difference-in-Differences Estimators in the Presence of Heterogeneous Direct and Indirect Policy Exposures

Mar   **(Contributed Poster) Department of Biostatistics, Epidemiology, and Informatics Research Day, University of Pennsylvania**, *Philadelphia, PA*
Multiply Robust Difference-in-Differences Estimators in the Presence of Heterogeneous Direct and Indirect Policy Exposures

Mar   **(Invited Talk) Eastern North American Region (ENAR) International Biometric Society Spring Meeting**, *Nashville, TN*
A Difference-in-Differences Framework to Estimate Causal Effects for Policy Interventions in the Presence of Heterogeneous Interference

Jan   **(Invited Talk) International Conference on Health Policy Statistics**, *Scottsdale, AZ*
Estimation of Policy-Relevant Causal Effects in the Presence of Spillovers under the Difference-in-Differences Framework

2022
Dec   **(Invited Talk) International Conference of the ERCIM Working Group on Computational and Methodological Statistics**, *London, UK*
Estimation of Heterogeneous Policy-Relevant Causal Effects under the Difference-in-Differences Framework with Spillover

Aug   **(Contributed Talk) Joint Statistical Meetings (JSM)**, *Washington D.C.*
Estimating Causal Effects of the Philadelphia Beverage Tax Policy in the Presence of Spillover

May   **(Contributed Poster) American Causal Inference Conference (ACIC)**, *Berkeley, CA*
Estimation of Causal Effects for Philadelphia Beverage Tax in Presence of Spillover

Mar   **(Contributed Talk) Eastern North American Region (ENAR) International Biometric Society Spring Meeting**, *Houston, TX*

A Bayesian Model-based Approach for Estimating the Instantaneous Reproduction Number Using Case-Notification Data in the Presence of Reporting Variation and Serial Interval Uncertainty

Awards

2024   ASA Philadelphia Chapter Exceptional Achievement Award for a Graduate Student
Awarded by the American Statistical Association Philadelphia Chapter.

ASA Health Policy Statistics Section Student Paper Competition Award
Awarded by the American Statistical Association at 2024 Joint Statistical Meetings.

2023   NESS Student Paper Competition Winner
Awarded at 2023 New England Statistical Symposium.

DBEI Best Poster Award
Awarded at 2023 University of Pennsylvania Department of Biostatistics, Epidemiology, and Informatics Research Day.

2022   Tom Ten Have Award for Best Poster
Awarded at 2022 American Causal Inference Conference.

2021   Jonathan Raz Award for Best Qualifying Exam
Awarded by University of Pennsylvania, Graduate Group in Epidemiology and Biostatistics.

2017   Summa Cum Laude
Awarded by Brown University during Graduation 2017.

TEACHING

2024   **Summer Workshop**, Biostatistics, University of Pennsylvania
Summer Undergraduate Internship Program (SUIP)
"Introduction to Causal Inference"

Invited Guest Lecture, Epidemiology, University of Pennsylvania
EPID 6450: *Research Methods in Cancer Epidemiology*
"Evaluation Methods for Panel Data Studies"

2023   **Invited Guest Lecture**, Biostatistics, University of Pennsylvania
BSTA 7900: *Causal Inference in Biomedical Research*
"Interference in Causal Inference: Challenges and Recent Approaches"

Invited Guest Lecture, Biostatistics, University of Pennsylvania
BSTA 7900: *Causal Inference in Biomedical Research*
"Causal Inference for Longitudinal Panel Data"

Graduate Teaching Assistant, Biostatistics, University of Pennsylvania
BSTA 6320: *Statistical Methods for Survival and Categorical Data*

2022   **Graduate Teaching Assistant**, Biostatistics, University of Pennsylvania
BSTA 6510: *Introduction to Linear Models and Generalized Linear Models*

2017   **Undergraduate Teaching Assistant**, Computer Science, Brown University
        CSCI1570: Design and Analysis of Algorithms

2015   **Undergraduate Teaching Assistant**, Economics, Brown University
        ECON 1110: Intermediate Microeconomics

SERVICE

Conferences

2024   **Session Organizer,** Joint Statistical Meetings
        (Invited) Session: Improving Decision-Making with Methods to Transport Causal Knowledge to Policy-Relevant Contexts

        Session Chair, ENAR
        (Contributed) Session 27: Health Policy Applications

        Poster Competition Judge, American Causal Inference Conference

        Outreach Committee, International Conference for Health Policy Statistics

        Outreach Committee, Society for Causal Inference

        Student Paper Award Committee, ENAR

2023   **Session Chair,** ENAR
        (Contributed) Session 106: Epidemiological Studies and Causal Inference

        Student Volunteer, ENAR

Editorial

2023-   Reviewer, Statistics in Medicine
2023-   Reviewer, Nature Communications Medicine
2023-   Reviewer, Informatics in Medicine
2023-   Reviewer, International Journal of Biostatistics
2023-   Editorial Assistant, Observational Studies

Leadership

2024-   **Steering Committee**
        Council for Emerging and New Statisticians (CENS), ENAR

2023-   **Student Representative**
        Council for Emerging and New Statisticians (CENS), ENAR

2022-23 **Director of Data Analytics**
        Graduate and Professional Student Assembly, University of Pennsylvania

2021-22 **Deputy Director, External Affairs Committee**
        Graduate and Professional Student Assembly, University of Pennsylvania

2021-22 **Student Representative**