Georgia Papadogeorgou

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Education

2013–2018	Ph.D., Biostatistics, Harvard University Thesis Title: Causal Inference Methods in Air Pollution Research Advisors: Francesca Dominici, Corwin M. Zigler
2013-2015	M.A. Biostatistics, Harvard University
2009–2013	B.Sc., Mathematics, National and Kapodistrian University of Athens

Employment

2018–*present*	**Duke University, Department of Statistical Science** Postdoctoral Associate Mentors: David Dunson, Fan Li
2016–2018	**Massachusetts Eye and Ear Institute** Consulting with the group of Teresa C. Chen, M.D. on evaluating the performance of eye measurements as predictors of glaucoma.
May – Aug 2015	**Google Inc**. Decision Support Intern, Geo Data Analytics Team. Worked with high-dimensional and longitudinal data developing methodology for effect estimation of spatial experiments.

Publications

Published

[1] Corwin M. Zigler, **Georgia Papadogeorgou** (2019). Bipartite causal inference with interference. *Statistical Science*. Forthcoming. arXiv:1807.08660

[2] **Georgia Papadogeorgou**, Fabrizia Mealli, Corwin M. Zigler (2019). Causal inference for interfering units with cluster and population level treatment allocation programs. *Biometrics*, 75(3), 778-787. arXiv:1711.01280

[3] **Georgia Papadogeorgou**, Fan Li (2019). Discussion of "Penalized Spline of Propensity Methods for Treatment Comparison". *Journal of the American Statistical Association*, 114(525), 32-35.

[4] **Georgia Papadogeorgou**, Marianthi Kioumourtzoglou, Danielle Braun, Antonella Zanobetti (2019). Low Levels of Air Pollution and Health: Effect Estimates, Methodological Challenges, and Future Directions. *Current Environmental Health Reports*.

[5] **Georgia Papadogeorgou**, Christine Choirat, Corwin M. Zigler (2018). Adjusting for Unmeasured Spatial Confounding with Distance Adjusted Propensity Score Matching. *Biostatistics*, 20(2), 256-272. arXiv:1610.07583v3

Submitted or in revisions

[1] **Georgia Papadogeorgou**, Francesca Dominici. A Causal Exposure Response Function with Local Adjustment for Confounding. *Annals of Applied Statistics*. In revisions. arXiv:1806.00928

[2] Joseph Antonelli, **Georgia Papadogeorgou**, Francesca Dominici. Causal inference in high dimensions: A marriage between Bayesian modeling and good frequentist properties. *Biometrics*. In revisions. arXiv:1805.04899

[3] **Georgia Papadogeorgou**, Zhengwu Zhang, David B. Dunson. Soft Tensor Regression. Under review. arXiv:1910.09699

[4] **Georgia Papadogeorgou**, Fabrizia Mealli, Corwin M. Zigler, Francesca Dominici, Jason Wasfy, Christine Choirat. Causal Impact of the Hospital Readmissions Reduction Program on Hospital Readmissions and Mortality. *Under review.* arXiv:1809.09590

[5] Patrick Schnell, **Georgia Papadogeorgou**. Mitigating Unobserved Spatial Confounding Bias with Mixed Models. *Under review.* arXiv:1907.12150.

Collaborative publications

[1] Hussein Antar, *et al* (including **Georgia Papadogeorgou**) (2019). Analysis of Neuroretinal Rim by Age, Race, and Gender Using High-Density Three-Dimensional Spectral Domain Optical Coherence Tomography. *Journal of Glaucoma*. Forthcoming.

[2] Yingna Liu, *et al* (including **Georgia Papadogeorgou**) (2019). Diagnostic Capability of 3D Peripapillary Retinal Volume for Glaucoma Using Optical Coherence Tomography Customized Software. *Journal of Glaucoma*, 28(8), 708–717.

[3] Alice C. Verticchio Vercellin, *et al* (including **Georgia Papadogeorgou**) (2018). Diagnostic Capability of Three-Dimensional Macular Parameters for Glaucoma Using Optical Coherence Tomography Volume Scans. *Investigative Ophthalmology & Visual Science*, 59(12), 4998-5010.

[4] Linda Yi-Chieh Poon, *et al* (including **Georgia Papadogeorgou**) (2018). Effects of Age, Race, and Ethnicity on the Optic Nerve and Peripapillary Region Using Spectral-Domain OCT 3D Volume Scans. *Translational Vision Science & Technology*, 7(6), 12-12.

[5] Ziad Khoueir, *et al* (including **Georgia Papadogeorgou**) (2017). Diagnostic Capability of Peripapillary Three-dimensional Retinal Nerve Fiber Layer Volume for Glaucoma Using Optical Coherence Tomography Volume Scans. *American Journal of Ophthalmology*, 182, 180-193.

Honors and Awards

Jan 2019	UF Statistics Winter Workshop Travel Award, Gainesville FL, January 18-19, 2019.
Apr 2018	Young investigator oral presentation award. European Causal Inference Meeting, Florence Italy, April 11-13, 2018.
Fall 2016	Certificate of Distinction in Teaching. Applied Bayesian Analysis. Fall semester 2016.
Nov 2016	Rose Traveling Fellowship. Funding for travel to Florence, Italy to work with Dr. Fabrizia Mealli.
Aug 2016	Student Paper Award. *2016 Joint Statistical Meeting* - Health Policy Statistics Section, Chicago IL, July 30-Aug 4, 2016.

Jun 2016	Poster Award Winner. *ISBA 2016 World Meeting* - EnviBayes section, Sardinia Italy, June 13-17, 2016.
Spring 2016	Certificate of Distinction in Teaching. Statistical Inference I. Spring semester 2016.
Spring 2016	The Derek Bok Center Distinction in Teaching award. Statistical Inference I. Spring semester 2016.
Oct 2015	Student Travel Award. Poster presentation at the 2015 *International Conference of Health Policy Statistics*, Providence, Oct 7-9, 2015.
2011-2012	Honorary title from the State Scholarship Foundation for 2nd best GPA (9.7/10) among the third year students of the Department of Mathematics, University of Athens.
2010-2011	Honorary title from the State Scholarship Foundation for 2nd best GPA (9.8/10) among the second year students of the Department of Mathematics, University of Athens.
2009-2010	Honorary title from the State Scholarship Foundation for 3rd best GPA (9.7/10) among the first year students of the Department of Mathematics, University of Athens.

Teaching Experience

Aug-Dec 2017	**Applied Bayesian Analysis**. Teaching Assistant. Assisted professor with lessons. Explained challenging quantitative concepts to Master's level students. Helped with homework assignments, graded tests and exams, and held office hours to ensure students understood course concepts.
Aug 2017	**Operational Math**. Instructor. Developed the material and taught linear algebra and real analysis to incoming Ph.D. students at the Department of Biostatistics.
Aug-Dec 2016	**Applied Bayesian Analysis**. Teaching Assistant.
Jan-May 2016	**Statistical Inference I**. Teaching Assistant. Assisted lessons, graded exams and homework, held office hours, and led problem solving labs for PhD and Master's level students.
Jan-May 2015	**Statistical Inference I**. Teaching Assistant.

Invited Presentations

[1] Adjusting for unmeasured spatial confounding with distance adjusted propensity score matching. *Bayesian Causal Inference Workshop*, Ohio State University, Columbus, OH, June 2-4, 2019.

[2] Mitigating Unobserved Spatial Confounding Bias with Mixed Models. *Atlantic Causal Inference Conference*, Montreal, Canada, May 22-24, 2019.

[3] Unmeasured spatial confounding in air pollution studies. *The University of Texas at Austin*, May 10, 2019.

[4] A comparative effectiveness study of power plant NO_x emission reduction strategies accounting for spatial confounding and interference. *U.S. Environmental Protection Agency*, Feb 28, 2019.

[5] Spatial Statistics and Causal Inference: Spatial Confounding and Interference in Air Pollution Research. Environmental Epidemiology seminar, *University of North Carolina*, Feb 8, 2019.

[6] Spatial Statistics and Causal Inference: Spatial Confounding and Interference in Air Pollution Research. Online presentation, *SAMSI*, Jan 19, 2018.

[7] Adjusting for Unmeasured Spatial Confounding with Distance Adjusted Propensity Scores. *International Conference on Health Policy Statistics*, Charleston SC, Jan 10-12, 2018.

[8] Statistical challenges in air pollution research: from spatial confounding to interference. Invited seminar at the *University of Minnesota, Department of Biostatistics*, Minneapolis MN, Oct 25, 2017.

Workshops

[1] Workshop title: Bayesian Causal Inference for Experimental and Observational Studies.
Section title: Bayesian Adjustment for Confounding with Continuous Treatments: Introduction and Code.
Speakers: Fabrizia Mealli, Fan Li, Laura Forastiere, Georgia Papadogeorgou.
Atlantic Causal Inference Conference, Montreal, Canada, May 22-24, 2019.

Contributed Posters and Presentations

[1] Soft Tensor Regression. Poster presentation at the *CRCNS2019 PI Meeting*, Austin, TX, September 2–4, 2019.

[2] Causal Inference with Interfering Units for Cluster and Population Level Treatment Allocation Programs. Topic contributed presentation at the *2019 Joint Statistical Meeting* at Denver, CO, July 27–August 1, 2019.

[3] Soft Tensor Regression. Poster presentation at the *21st Meeting of New Researchers in Statistics and Probability*, Fort Collins, CO, July 24–27, 2019.

[4] Causal Inference for Interfering Units for Cluster and Population Level Treatment Allocation Programs. Poster presentation at the UF Statistics Winter Workshop, Gainesville FL, January 18-19, 2019.

[5] Causal Inference for Interfering Units for Cluster and Population Level Intervention Programs. Oral presentation at the ENAR Spring Meeting, Atlanta GA, March 25-28, 2018.

[6] A Causal Inference Approach for Estimating Health Effects at Low Air Pollution Levels. Oral presentation at the *2017 Joint Statistical Meeting*, Baltimore MD, July 29-August 3, 2017.

[7] Causal Inference for interfering units under treatment regimes that incorporate covariate information in the counterfactual treatment assignment. Poster presentation at the *2017 Atlantic Causal Inference Conference*, Chapel Hill NC, May 23-25, 2017.

[8] Estimating Health Effects at Low Pollution Levels. Poster presentation at the *2017 Sisbayes meeting*, Rome Italy, Feb 7-8, 2017.

[9] Spatial Confounding Adjustment with Propensity Score Matching. Oral presentation at the *2016 Joint Statistical Meeting*, Chicago IL, Jul 29-Aug 3, 2016.

[10] A Causal Inference Approach for Estimating an Exposure Response Curve: Estimating Health Effects at Low Pollution Levels. Poster presentation at the *ISBA 2016 World Meeting*, Sardinia Italy, Jun 13-17, 2016.

[11] A Causal Inference Approach for Estimating an Exposure Response Curve: Estimating Health Effects at Low Pollution Levels. Oral presentation at the 2016 *ENAR Spring Meeting*, Austin TX, Mar 6-9, 2016.

[12] Controlling for Unobserved Spatially Correlated Confounders in Observational Studies. Poster presentation at the 2015 *International Conference of Health Policy Statistics*, Providence, Oct 7-9, 2015.

[13] Estimating the Causal Effect of Coal Burning Power Plants on CO_2 Emissions. Oral presentation at the 2015 *ENAR Spring Meeting*, Miami, Mar 15-18, 2015.

Other Posters and Presentations

[1] Papadogeorgou, G., Dominici, F. (2016). A Causal Inference Approach for Estimating Health Effects at Low Air Pollution Levels. *Environmental Statistics Seminar*. Harvard University.

[2] Papadogeorgou, G., Zigler, C. (2016) Unmeasured spatial confounding. *Environmental Statistics Seminar*. Harvard University.

[3] Papadogeorgou, G., Dominici, F., Zigler, C. (2014). Estimating the Causal effect of switching from coal to natural gas as primary fuel of power plants on CO_2 emissions. Interactive poster presentation at the *HSPH Poster Day*, Harvard T.H. Chan School of Public Health, Boston, Nov 7, 2014.

Journal Referee

Journal of the American Statistical Association, Biometrika, Annals of Applied Statistics, Biometrics, Biostatistics, Journal of the Royal Statistical Society: Series A (Statistics in Society), Epidemiology, American Journal of Epidemiology, Statistical Methods in Medical Research, PLOS One, Journal of Clinical Epidemiology, Spatial Economic Analysis, Environment International, Methods in Ecology and Evolution.