Arman Oganisian
Assistant Professor of Biostatistics
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Education

2021	**University of Pennsylvania** Ph.D. in Biostatistics Advisors: Nandita Mitra and Jason Roy Committee: Russell Shinohara, Dylan Small, Edward I. George	Philadelphia, PA
2018	**University of Pennsylvania** M.S. in Biostatistics	Philadelphia, PA
2013	**Providence College** B.A. in Quantitative Economics, *summa cum laude* Minor in Mathematics; Liberal Arts Honors Program.	Providence, RI

Employment

Academic

2021-pres.	**Brown University** Assistant Professor, Tenure Track. Department of Biostatistics.	Providence, RI
2017-2021	**University of Pennsylvania** Associate Fellow, Leonard Davis Institute for Health Economics.	Philadelphia, PA

Industry

2015-2016	**Analysis Group** Senior Analyst. Health economics and outcome research (HEOR) practice.	Boston, MA
2013-2015	**Analysis Group** Analyst. HEOR practice.	Boston, MA

Awards

2022	**Salomon Faculty Research Award** $10,784 grant funding my proposal for "Bayesian Machine Learning for Sequential Decision-Making with Incomplete Information." Awarded by Office of the Vice President for Research (OVPR), Brown University.
2021	**Saul Winegrad Award for Outstanding Dissertation** Awarded by University of Pennsylvania, Biomedical Graduate Studies.
2020	**ENAR Distinguished Student Paper Award** Awarded by International Biometric Society Eastern North American Region's (ENAR) at 2020 ENAR Spring Meeting in Nashville, TN.
2020	**ICHPS Travel Award** Awarded by International Conference on Health Policy Statistics (ICHPS) during the 2020 meeting in San Diego, CA.

Funding

Working and Published Papers

Working

Oganisian, A., Getz, K. D., Alonzo, T. A., Aplenc, R. & Roy, J. A. (2022). Bayesian semiparametric model for sequential treatment decisions with informative timing. doi:`10.48550/ARXIV.2211.16393`

Li, Y., **Oganisian, A.**, Boge, C. L., Hayes, M., Newman, A. & Fisher, B. T. (2020). Marginal structural model to estimate the effect of cytomegalovirus infection on hospitalization among children undergoing allogeneic hematopoietic cell transplantation *Under Review*.

Oganisian, A., Mitra, N., Ko, E. & Roy, J. (2020). Bayesian nonparametric causal inference for cost-efficacy estimands with censored cost and survival times.

Oganisian, A., Mitra, N. & Roy, J. (2020). Hierarchical bayesian bootstrap for heterogeneous treatment effect estimation. *Under Revision*. arXiv: `2009.10839 [stat.ME]`

Statistical Methodology

Oganisian, A., Mitra, N. & Roy, J. A. (2021). A bayesian nonparametric model for zero-inflated outcomes: Prediction, clustering, and causal estimation. *Biometrics*, *77*(1), 125–135. doi:`10.1111/biom.13244`

Oganisian, A. & Roy, J. A. (2021a). A practical introduction to bayesian estimation of causal effects: Parametric and nonparametric approaches. *Statistics in Medicine*, *40*(2), 518–551. doi:`10.1002/sim.8761`

Oganisian, A. & Roy, J. A. (2021b). Nonparametric bayes: A bridge between cultures. *Observational Studies*, *7*(1), 175–178.   `https://muse.jhu.edu/article/799730/pdf`

Oganisian, A. & Roy, J. A. (2020). Invited discussion - bayesian regression tree models for causal inference: Regularization, confounding, and heterogeneous effect. *Bayesian Analysis*. 998–1006. doi:`10.1214/19-BA1195`

Hubbard, R. A., Huang, J., Harton, J., **Oganisian, A.**, Choi, G., Utidjian, L., ... Chen, Y. (2019). A bayesian latent class approach for ehr-based phenotyping. *Statistics in Medicine*, *38*(1), 74–87. doi:`10.1002/sim.7953`

Oganisian, A. (2019). Chirp: Chinese restaurant process mixtures for regression and clustering. *The Journal of Open Source Software*, *4*, 1287. doi:`10.21105/joss.01287#`

Collaborative

Huang, A. W., Haslberger, M., Coulibaly, N., Galárraga, O., **Oganisian, A.**, Belbasis, L. & Panagiotou, O. A. (2022). Multivariable prediction models for health care spending using machine learning: A protocol of a systematic review. *Diagnostic and Prognostic Research*, *6*(1), 1–5.

Harrigan, J. J., Abdallah, H., Clarke, E. L., **Oganisian, A.**, Roy, J. A., Lautenbach, E., ... Kelly, B. J. (2021). Respiratory microbiome disruption and risk for ventilator-associated lower respiratory tract infection. *Clinical Infectious Diseases*. ciab678. doi:`10.1093/cid/ciab678`

Takvorian, S. U., **Oganisian, A.**, Mamtani, R., Mitra, N., Shulman, L. N., Bekelman, J. E. & Werner, R. M. (2020). Association of Medicaid Expansion Under the Affordable Care Act With Insurance Status, Cancer Stage, and Timely Treatment Among Patients With Breast, Colon, and Lung Cancer. *JAMA Network Open, 3*(2). doi:10.1001/jamanetworkopen.2019.21653

Harrison, J. M., **Oganisian, A.**, Grande, D. T., Mitra, N., Chhabra, M. & Chaiyachati, K. H. (2020). Economic outcomes of insurer-led care management for high-cost medicaid patients. *The American journal of managed care, 26*(7), 310–316. doi:10.37765/ajmc.2020.43769

Singh, P., Forman, H., Adamson, A. S., Mostaghimi, A., Ogdie, A. R., **Oganisian, A.** & Barbieri, J. S. (2019). Impact of industry payments on prescribing patterns for tumor necrosis factor inhibitors among medicare beneficiaries. *Journal of General Internal Medicine, 34*(2), 176–178. doi:10.1007/s11606-018-4698-x

Grandhi, N., Mohiuddin, J., **Oganisian, A.**, Manjunath, S., Mitra, N., Plastaras, J., ... Wojcieszynski, A. (2019). Association of radiation dose with local failure in hepatocellular carcinoma (hcc). *International Journal of Radiation Oncology*Biology*Physics, 105*(1, Supplement), E219–E220. doi:10.1016/j.ijrobp.2019.06.1970

Vekeman, F., Pina-Garza, J. E., Cheng, W. Y., Tuttle, E., Giguere-Duval, P., **Oganisian, A.**, ... Isojarvi, J. (2019). Development of a classifier to identify patients with probable lennox-gastaut syndrome in health insurance claims databases via random forest methodology. *Current Medical Research and Opinion, 35*(8), 1415–1420. doi:10.1080/03007995.2019.1595552

Wan, J., **Oganisian, A.**, Spieker, A. J., Hoffstad, O. J., Mitra, N., Margolis, D. J. & Takeshita, J. (2019). Racial/ethnic variation in use of ambulatory and emergency care for atopic dermatitis among us children. *Journal of Investigative Dermatology, 139*(9), 1906–1913.e1. doi:10.1016/j.jid.2019.02.024

Invited Talks

12/2022	**Computational and Methodological Statistics (CMstatistics) 2022. London, UK.** *Bayesian Semiparametric Model for Sequential Treatment Decisions in with Informative Timing*
10/2022	**BIO-PhRMA Workshop on Advancing Analytical Methodologies for Unmeasured Confounders in RWE. Virtual.** *Bayesian Methods for Causal Inference: Using Priors to assess Sensitivity to Unmeasured Confounding*
10/2022	**International Biometrics Society (IBS) Journal Club. Virtual.** *Discussion of "Zero-Inflated Beta Distribution Regression Modeling" (invited discussant)*
08/2022	**Joint Statistical Meetings (JSM) 2022. Washington DC, USA.** *Cultural fit of Nonparametric Bayes (invited panel discussion)*
07/2022	**International Society for Bayesian Analysis (ISBA) 2022. Montreal, Canada.** *Bayesian Semiparametric Model for Sequential Treatment Decisions in with Informative Timing*
07/2022	**International Biometrics Conference (IBC) 2022. Riga, Latvia.** *Bayesian Semiparametric Model for Sequential Treatment Decisions in with Informative Timing*
06/2022	**Statistical Society of Canada (SSC) 2022 annual meeting. Virtual.** *Hierarchical Bayesian Bootstrap for Heterogenous Treatment Effect Estimation*
02/2022	**Center for Causal Inference, University of Pennsylvania. Virtual.** *Bayesian Semiparametric Model for Sequential Treatment Decisions in Continuous Time*
01/2022	**Department of Biostatistics, Vanderbilt University. Virtual.** *Hierarchical Bayesian Bootstrap for Heterogeneous Treatment Effect Estimation*
12/2021	**Computational and Methodological Statistics (CMstatistics) 2021. London, UK.** *Hierarchical Bayesian Bootstrap for Heterogeneous Treatment Effect Estimation*
05/2021	**Novartis - Advanced Methods and Data Science Forum. Virtual.** *Bayesian Estimation of Causal Effects: Parametric and Nonparametric Approaches*

01/2021	**University of Washington, Department of Biostatistics. Virtual.**
	A Bayesian nonparametric model for zero-inflated outcomes: prediction, clustering, and causal inference.
01/2021	**Brown Univerisity, Department of Biostatistics. Virtual.**
	A Bayesian nonparametric model for zero-inflated outcomes: prediction, clustering, and causal inference.
11/2020	**Center for Causal Inference, University of Pennsylvania. Virtual.**
	Hierarchical Bayesian Bootstrap for Heterogeneous Treatment Effect Estimation
08/2020	**Stan Conference (StanCon). Virtual.**
	Bayesian Causal Inference in Stan: Partial Pooling and Sensitivity Analysis
06/2020	**Department of Population Health Science and Policy. Icahn School of Medicine at Mt. Sinai. Virtual.**
	Bayesian Nonparametric Causal Estimation with Zero-Inflated Outcomes
01/2020	**International Conference on Health Policy Statistics (ICHPS). San Diego, CA.**
	An all-in-one Bayesian nonparametric model for medical cost prediction, clustering, and causal estimation

Teaching and Advising

Instructor

| Fall 2021-2022 | PHP2515: Fundamentals of Probability and Statistical Inference. Brown University. |

Summer Institutes and Short Courses

| 2019 | Center for Causal Inference Summer Institute, UPenn. |
| | Instructor; instrumental variables computing session at annual summer institute hosted by Center for Causal Inference. |

Advising

| | Anthony Girard, ScM Biostatistics, 2023. |
| | Nancy Liu, ScM Biostatistics, 2023. |

PhD Dissertation Committee

| | Gauri Kamat, Department of Biostatistics, 2024. |
| | Meghan Cupp, Department of Epidemiology, 2024 |

Guest Lectures

2022	PHP2610 Causal Inference and Missing Data, Brown.
	Lecture title: Bayesian Inference for Causal effects of Dynamic Treatment Rules.
2020	BSTA790 Causal Inference in Biomedical Research, UPenn
	Lecture title: Overview of Bayesian Methods for Causal Inference.
2020	BSTA670 Programming and Computation for Biomedical Data Science, UPenn
	Lecture title: Bayesian Computation: Metropolis-Hastings Samplers and Monte Carlo Integration.

Academic Service

Reviewer

Journal of Causal Inference

American Journal of Epidemiology

Biometrics

Biostatistics

International Journal of Biostatistics

Journal of the American Statistical Association

Journal of the Royal Statistical Society: Series C

Observational Studies

Statistics in Medicine

School and Departmental Service

2022-   Masters in Public Health (online) Admission Committee. Brown School of Public Health.

2021-   Academic Programs Committee, Department of Biostatistics, Brown University.

2021-   PhD Admission Committee, Department of Biostatistics, Brown University.

2022-   Social Media Faculty Coordinator, Department of Biostatistics, Brown University.

Conference Activities

2022   Invited Session Organizer and Chair for "Recent Developments in Probabilistic Machine Learning Methods for Causal Inference". International Biometrics Conference (IBC) 2022.

Invited Session Organizer and Chair for "Recent Developments in Probabilistic Machine Learning Methods for Causal Inference". International Biometrics Conference (IBC) 2022.

2022   Student Poster Award Committee, New England Statistical Symposium (NESS) 2022.

2022   Outreach Committee, International Conference on Health Policy Statistics (ICHPS) 2023.

2021   Program Committee, NeurIPS2021 Workshop "Your Model is Wrong: Robustness and misspecification in probabilistic modeling"

2021   Program Committee, ICML2021 Workshop "The Neglected Assumptions In Causal Inference"

2021   Co-organizer. "Frontiers of Causal Inference in Data Science: Perspectives from Leaders in Tech and Academia". University of Pennsylvania.

2021   Session Organizer. "Causal inference challenges in health policy decision making". CMStatistics.

2020   Program Committee, NeurIPS2020 Workshop "Consequential Decision Making in Dynamic Environments"

2020   Session Chair, "Causal Inference Methods for Health Policy Research. International Conference on Health Policy Statistics". San Diego, CA. Papers. Eastern North American Region. Philadelphia, PA. American Region. Washington, D.C.

Other Committee/Board Memberships

2021-2022   Stan Governing Body (elected to 1-year term). `https://mc-stan.org/`.

Professional Memberships

2017-pres.   American Statistical Association

2017-pres.   International Biometric Society, Eastern North American Region (ENAR)