Arman Oganisian

Biostatistics PhD Candidate

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@StableMarkets https://github.com/stablemarkets

Education

2016 – Pres. **PhD, Biostatistics - University of Pennsylvania**
Advisors: Jason Roy and Nandita Mitra
Committee: Russell Taki Shinohara (chair), Dylan Small, Edward I. George

2016 – 2018 **MS, Biostatistics - University of Pennsylvania**
Thesis: Joint Bayesian Hierarchical Model for Multiple Utilization Outcomes.
GPA: 4.0/4.0.

2009 – 2013 **BA, Quantitative Economics - Providence College**
Minor: Mathematics.
GPA: 3.9/40. *summa cum laude*.

Professional Appointments

2016 – Pres. **Associate Fellow**
Leonard Davis Institute for Health Economics, University of Pennsylvania.

Employment History

2015-2016 **Senior Analyst** Boston, MA
Analysis Group
Worked in the health economics and outcome research (HEOR) practice. Conducted statistical analyses for large pharmaceutical companies - wrote analysis plans, supervised Analysts, lead client calls, drafted abstracts and manuscripts.

2013-2015 **Analyst** Boston, MA
Analysis Group

2012-2012 **Equity Derivatives Analyst** New York, NY
Jefferies & Co.
Summer internship at an equity trading floor. Built statistical models predicting probability of mergers and spin-offs. Formulated option trading strategies based on results.

Computing Skills

Statistical	R, Matlab, SAS.
General Purpose	C++/Rcpp, Python.
Other	Git/GitHub, Bash, MySQL, LaTeX.

Awards

2019 **Travel Award, ICHPS 2020**
Travel award to International Conference on Health Policy Statistics (ICHPS) 2020 in San Diego, CA.
In recognition of working paper on Bayesian nonparametric approach to zero-inflated outcomes.

Research Publications

Working Papers

Oganisian, A., Mitra, N. & Roy, J. (2018). A bayesian nonparametric method for estimating causal treatment effects on zero-inflated outcomes. *arXiv*. https://arxiv.org/pdf/1810.09494.pdf

Spieker, A. J., **Oganisian, A.**, Ko, E. M., Roy, J. A. & Mitra, N. (2017). A causal approach to analysis of censored medical costs in the presence of time-varying treatment. *arXiv*. https://arxiv.org/pdf/1705.08742.pdf

Methodology Development

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.

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

Applied Research

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. Proceedings of the Amercian Society for Radiation Oncology 61st Annual Meeting. doi:https://doi.org/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. PMID: 30870597. 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:https://doi.org/10.1016/j.jid.2019.02.024

Talks and Presentations

Invited

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

2019 **Joint Statistical Meetings (JSM). Denver, CO.**
Bayesian nonparametric model for zero-inflated outcomes.

Contributed

2018 **Joint Statistical Meetings (JSM). Vancouver, BC, Canada.**
A Bayesian Nonparametric Method for Zero-Inflated Data with Applications to Medical Costs

2017 **Joint Statistical Meetings (JSM). Baltimore, MD.**
A Parametric Bayesian Approach to Estimating Causal Treatment Effect on Medical Costs.

Teaching

Lectures

2019 Causal Inference Summer Institute 2018 and 2019
Invited to teach computing session on instrumental variables at annual summer institute hosted jointly by University of Pennsylvania and Rutgers University.

2019 BSTA670 Programming and Computation for Biomedical Data Science
PhD-level biostatistics course. Lecture title: Bayesian Computation: MCMC Sampling, Integration, and Approximation Methods.

2018 BSTA622 Statistical Inference II
PhD-level biostatistics course. Lecture title: Bayesian Motivations of Penalized Regression and the EM Algorithm.

2018 Short course at JSM 2018: Introduction to Bayesian Nonparametric Methods for Causal Inference.
Interactive Dirichlet Process tutorial with R Shiny. `https://stablemarkets.shinyapps.io/dpmixapp/`.

Teaching Assistantships

2018 HPR604 - Introduction to Statistics for Health Policy,
Masters in Health Policy course, Perelman School of Medicine, University of Pennsylvania

BSTA660 - Design of Observational Studies
PhD-level biostatistics course, Department of Biostatistics, Epidemiology, and Informatics, University of Pennsylvania

Professional Contributions

2017-19 Student representative, biostatistics PhD/MS curriculum committee.

2019 Session Chair, Bayesian Approaches to High Dimensional Data. Contributed Papers. Eastern North American Region. Philadelphia, PA.

2017 Session Chair, New Ideas in Causal Inference. Poster Session. Eastern North American Region. Washington, D.C.