

# Arman Oganisian

## Biostatistics PhD Candidate

 [stablemarkets.netlify.com](https://stablemarkets.netlify.com)     [aoganisi@upenn.edu](mailto:aoganisi@upenn.edu)  
 @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: 3.9/4.0. *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 and econometric analyses for large pharmaceutical companies - wrote analysis plans, supervised Analysts, lead client calls, drafted abstracts and manuscripts. Extensive experience with causal methods for observational data (matching, regression adjustment, propensity scores, etc).
- 2013-2015    **Analyst** Boston, MA  
Analysis Group

## Computing Skills

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|-----------------|-----------------------------------------------------------|
| Statistical     | R, Matlab, SAS.                                           |
| General Purpose | C++/Rcpp, Python.                                         |
| Other           | Git/GitHub, Bash, MySQL, L <sup>A</sup> T <sub>E</sub> X. |

## Awards

- 2020    **ENAR 2020 Distinguished Student Paper Award**  
International Biometric Society Eastern North American Region's (ENAR) Distinguished Student Paper Award for the 2020 ENAR Spring Meeting in Nashville, TN.
- 2020    **ICHPS 2020 Travel Award**  
International Conference on Health Policy Statistics (ICHPS) travel award for 2020 meeting in San Diego, CA.

## Research Publications

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### 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\*Biophysics*, 105(1, Supplement), E219–E220. Proceedings of the American 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

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### Invited

- 2020     **International Conference on Health Policy Statistics. San Diego, CA.**  
*An all-in-one Bayesian nonparametric model for medical cost prediction, clustering, and causal estimation*
- 2019     **Joint Statistical Meetings. Denver, CO.**  
*Bayesian nonparametric model for zero-inflated outcomes.*

### Contributed

- 2018     **Joint Statistical Meetings. Vancouver, BC, Canada.**  
*A Bayesian Nonparametric Method for Zero-Inflated Data with Applications to Medical Costs*
- 2017     **Joint Statistical Meetings. Baltimore, MD.**  
*A Parametric Bayesian Approach to Estimating Causal Treatment Effect on Medical Costs.*

## Teaching

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### 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
- 2018 BSTA660 - Design of Observational Studies  
PhD-level biostatistics course, Department of Biostatistics, Epidemiology, and Informatics, University of Pennsylvania

## Professional Contributions

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- 2020 Session Chair, Causal Inference Methods for Health Policy Research. International Conference on Health Policy Statistics. San Diego, CA.
- 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.
- 2017-19 Student representative, biostatistics PhD/MS curriculum committee.