Arman Oganisian, PhD

Thomas J. & Alice M. Tisch Assistant Professor of Biostatistics

Last Updated: August 2025

arman_oganisian@brown.edu

https://stablemarkets.netlify.app

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

2025-pres.	Brown University Department of Biostatistics Thomas J. & Alice M. Tisch Assistant Professor of Biostatistics	Providence, RI
2021-2025	Brown University Department of Biostatistics Assistant Professor of Biostatistics	Providence, RI
2017-2021	University of Pennsylvania Leonard Davis Institute for Health Economics Associate Fellow	Philadelphia, PA
2015-2016	Analysis Group Senior Analyst - Health economics and outcome research (HEOR).	Boston, MA
2013-2015	Analysis Group Analyst - HEOR.	Boston, MA

Awards

2025	**Dean's Award for Excellence in Research Collaboration** Awarded by the School of Public Health, Brown University.
2022	**Salomon Faculty Research Award** Awarded by the 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.

Awards (continued)

2020 **ICHPS Travel Award**
Awarded by International Conference on Health Policy Statistics (ICHPS) during the 2020 meeting in San Diego, CA.

Funding

Active

2023-2026 PCORI ME2023C131348 - Bayesian Machine Learning for Causal Inference in EHR data with Missing Covariates
Role: co-PI. 20% FTE.

2022-2025 PCORI MNJ3PA7MXFN6 - Statistical Methods for Optimizing Dynamic Patient-Level Treatment and Monitoring Strategies
Role: Subcontract PI; PI: Jason Roy. 15% FTE.

2021-2026 NIH R01AI167694 - Data Science for Decision Support in the HIV Care Cascade
Role: Co-investigator. PI: Joseph Hogan. 15% FTE.

2024-2027 NIH R01AG078759 - Benefits and Harms of Long-term Osteoporosis Pharmacotherapy: Impact of Treatment Length, Type, Switching, and Holidays.
Role: Co-investigator. PI: Kaley Hayes. 5% FTE.

2024-2029 NIH R01AG088522 - Post-Acute Care Medication Use and Functional Recovery in Heart Failure.
Role: Co-investigator. co-PIs: Goyal Parag; Andrew Zullo. 7.5% FTE.

2024-2029 NIH RF1AG089541 - Prescribing Cascades among Nursing Home Residents with ADRD.
Role: Co-investigator. PI: Andrew Zullo. 10% FTE.

Papers Published and Under Review

$^{+}$mentee; *senior/co-senior author.

Submitted, Under Review, or Invited Revision

1 $^{+}$Fernández-Morales, E., ***Oganisian, A.** & *Lee, Y. (n.d.). Bayesian shrinkage priors for penalized synthetic control estimators in the presence of spillovers. *Under Revision*. https://arxiv.org/abs/2501.08231
[Submitted 01/2025; Revision Invited 05/2025].

2 Hayes, K. N., Belanger, E., **Oganisian**, **A.**, Joshi, R., Xia, W., Grove, L., Corcoran, K., & Zullo, A. R. (n.d.). Predictors of a gabapentinoid–loop-diuretic prescribing cascade in u.s. nursing home residents. *Under Revision*.

3 Hsieh, H.-C., Lu, H., Gantenberg, J., **Oganisian**, **A.**, Eaton, C., & Howe, C. (n.d.). Non-random selection without type 1 or 2 selection bias. *Under review*.

4 **Oganisian**, **A.**, Hogan, J., Sang, E., DeLong, A., Mosong, B., Fraser, H., & Mwangi, A. (n.d.). Decision-support for hiv care retention: A case study in bayesian causal modeling with incomplete information. *Under Review*. https://arxiv.org/abs/2410.22481

5 Han^{+}, S. W., Mitra, N., Hettinger, G., & ***Oganisian, A.** (2025). Bayesian sensitivity analyses for policy evaluation with difference-in-differences under violations of parallel trends. *Under Review*. https://arxiv.org/abs/2508.02970

Statistical Methodology

6 **Oganisian**, **A.** (2026). Considerations for estimating causal effects of informatively timed treatments. *Epidemiology (In Press.)* https://arxiv.org/abs/2508.21804

7 [+]Ji, H., & [*]**Oganisian, A.** (2025). causalBETA: An R package for bayesian semiparametric casual inference with event-time outcomes. *Observational Studies (In Press)*. https://doi.org/10.48550/arXiv.2310.12358

8 **Oganisian**, **A.**, Girard, A., Steingrimsson, J. A., & Moyo, P. (2024). A bayesian framework for causal analysis of recurrent events with timing misalignment. *Biometrics*, *80*(4). https://doi.org/10.1093/biomtc/ujae145

9 **Oganisian**, **A.**, Getz, K. D., Alonzo, T. A., Aplenc, R., & Roy, J. A. (2024). Bayesian semiparametric model for sequential treatment decisions with informative timing. *Biostatistics*, *25*(4), 947–961. https://doi.org/10.1093/biostatistics/kxad035

10 **Oganisian**, **A.**, Mitra, N., & Roy, J. (2022). Hierarchical bayesian bootstrap for heterogeneous treatment effect estimation. *The International Journal of Biostatistics*. https://doi.org/10.1515/ijb-2022-0051

11 **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. https://doi.org/10.1111/biom.13244

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

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

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

Invited Reviews and Commentaries

15 **Oganisian**, **A.** (2025). Invited book review - “Bayesian Precision Medicine” by Peter F. Thall. *Biometrics*. https://doi.org/10.1093/biomtc/ujaf108

16 **Oganisian**, **A.**, & Linero, A. (2025). Priors and propensity scores in bayesian causal inference. *Observational studies*, *11*(1), 47. https://doi.org/10.1353/obs.2025.a956841

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

Collaborative

18 Xie, K., Korzun, J., Zhou, D. J., Chang, E., Ghosn, N. J., Lavelle, S., **Oganisian**, **A.**, Acton, E. K., Gelfand, M. A., Roth, D., Litt, B., & Ellis, C. A. (2025). Comparative effectiveness of anti-seizure medications in emulated trials using medical informatics. *Brain*. https://doi.org/10.1093/brain/awaf238

19 Hayes, K., Zullo, A., Berry, S., **Oganisian**, **A.**, Aggarwal, S., Adegboye, M., & Cadarette, S. (2025). Osteoporosis medication use over time in the united states and canada. *Osteoporosis International*. https://doi.org/10.1007/s00198-025-07484-3

20 Hayes, K. N., Sendhil, S. R., Aggarwal, S., Zullo, A. R., Berry, S. D., **Oganisian**, **A.**, Adegboye, M., & Cadarette, S. (2025). Real-world differences in denosumab persistence, reinitiation, and switching among cohorts of older adults in canada and the united states. *Journal of Bone and Mineral Research Plus (In Press)*.

21 Khan, M., Joyce, N., Pfeiffer, M., Riester, M., Ott, B., **Oganisian**, **A.**, Curry, A., Margolis, S., & Zullo, A. (2025). Effects of initiating different antidepressant subclasses on motor vehicle crash risk among older adults with depression. *Journal of the American Geriartrics Society*. https://doi.org/10.1111/jgs.19527

22 Sendhil, S., Cadarette, S., Aggarwal, S., Berry, S., Zullo, A., **Oganisian**, **A.**, & Hayes, K. (2025). Follow-on osteoporosis therapy after denosumab discontinuation among medicare beneficiaries. *Osteoporosis International (In Press.)*

23 Zhang, S., Zullo, A. R., Mor, V., Berry, S. D., Grove, L. R., **Oganisian**, **A.**, & Hayes, K. N. (2025). Hypertension treatment, blood pressure, and deprescribing among us nursing home residents with and without dementia before and after the covid-19 pandemic. *Journal of the American Medical Directors Association (In Press)*.

24 Hayes, K. N., **Oganisian**, **A.**, & Kiel, D. P. (2024). Improving the value and interpretation of observational studies comparing treatment effects of osteoporosis medications depends on standardized reporting of methods. *Journal of Bone and Mineral Research*, *39*(7), 807–809. https://doi.org/10.1093/jbmr/zjae099

25 Li, Y., Vader, D. T., **Oganisian**, **A.**, Boge, C. L. K., Hayes, M., Newman, A., Olson, T., Freedman, J., Elgarten, C. W., & Fisher, B. T. (2023). Effect of cytomegalovirus infection on post-transplant hospitalization days among children undergoing allogeneic hematopoietic cell transplantation: A marginal structural model approach. *Pediatric Transplantation*, e14526. https://doi.org/10.1111/petr.14526

26 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.

27 Harrigan, J. J., Abdallah, H., Clarke, E. L., **Oganisian**, **A.**, Roy, J. A., Lautenbach, E., Reesey, E., Wernovsky, M., Tolomeo, P., Morawski, Z., Jacob, J., Grippi, M. A., & Kelly, B. J. (2021). Respiratory microbiome disruption and risk for ventilator-associated lower respiratory tract infection. *Clinical Infectious Diseases*. https://doi.org/10.1093/cid/ciab678

28 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). https://doi.org/10.1001/jamanetworkopen.2019.21653

29 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. https://doi.org/10.37765/ajmc.2020.43769

30 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. https://doi.org/10.1007/s11606-018-4698-x

31 Grandhi, N., Mohiuddin, J., **Oganisian**, **A.**, Manjunath, S., Mitra, N., Plastaras, J., Metz, J., Ben-Josef, E., & 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. https://doi.org/10.1016/j.ijrobp.2019.06.1970

32 Vekeman, F., Pina-Garza, J. E., Cheng, W. Y., Tuttle, E., Giguere-Duval, P., **Oganisian**, **A.**, Damron, J., Duh, M. S., Shen, V., Saurer, T. B., Montouris, G. D., & 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. https://doi.org/10.1080/03007995.2019.1595552

33 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. https://doi.org/10.1016/j.jid.2019.02.024

Invited Talks

06/2025 **Western North American Region (WNAR) 2025. Whistler, Canada**
Bayesian Semiparametric Inference for Dynamic Treatment Strategies with Informative Timing

06/2025 **Western North American Region (WNAR) 2025. Whistler, Canada**
Causal Inference with Recurrent Event Outcomes: Estimands, Identification, and Bayesian Inference

05/2025 **StanBio Connect 2025. Virtual.**
Bayesian Causal Inference with Survival Outcomes

03/2025 **Eastern North American Region (ENAR) 2025. New Orleans, LA.**
Causal Inference with Recurrent Event Outcomes: Estimands, Identification, and Bayesian Inference

10/2024 **2024 NYU Langone Biostatistics Symposium: Advances in Causal Inference Methods. New York, NY.**
Bayesian Semiparametric Inference for Dynamic Treatment Strategies

11/2024 **Statistical and Quantitative Sciences Seminar (SQSS) at Takeda Pharmaceuticals. Boston, MA.**
Bayesian Causal Inference in Clinical Trials with Dynamic Treatment Regimens

09/2024 **Emory University, Department of Biostatistics and Bioinformatics. Atlanta, GA.**
Bayesian Semiparametric Inference for Dynamic Treatment Strategies with Informative Timing

09/2024 **Banff International Research Station (BIRS) Workshop 2024. Oaxaca, Mexico.**
Bayesian Semiparametrics for Sequential Decision-Making: Applications in Acute Myeloid Leukemia

08/2024 **Joint Statistical Meetings (JSM) 2024. Portland, OR.**
Bayesian Semiparametric Models for Sequential Treatments Strategies: Applications in Acute Myeloid Leukemia

07/2024 **International Society for Bayesian Analysis (ISBA) 2024. Venice, Italy.**
Bayesian Models for Counterfactual Prediction and Optimization with Incomplete Information: Applications in HIV Care Retention

03/2024 **International Workshop on HIV and Hepatitis Observational Databases (IWHOD) 2024. Vilamoura, Portugal.**
Bayesian ML for Predicting Return-Time Outcomes for HIV Care Retention

Invited Talks (continued)

12/2023 **Computational and Methodological Statistics (CMstatistics) 2023. Berlin, Germany.**
Bayesian semiparametric models for dynamic treatment rules with incomplete time-varying covariates

11/2023 **University of Massachusetts at Amherst, Department of Mathematics & Statistics. Amherst, MA.**
Bayesian Semiparametric Causal Inference for Sequential Treatment Decisions with Incomplete Information

08/2023 **Joint Statistical Meetings (JSM) 2023. Toronto, Canada.**
Bayesian Semiparametric Models for Sequential Treatments Strategies with Informative Timing

07/2023 **Econometrics & Statistics (EcoSta) 2023. Tokyo, Japan.**
Bayesian semiparametric models for informatively timed, dynamic treatments with incomplete covariate trajectories

05/2023 **University of Minnesota, Institute for Research in Statistics and Applications (IRSA). Minneapolis, MN.**
Bayesian Modeling and Computation in Causal Inference – Applications in Sequential Decision-Making

03/2023 **Eastern North American Region (ENAR) 2023. Nashville, TN.**
Bayesian Semiparametric Model for Sequential Treatment Decisions in with Informative Timing

01/2023 **International Conference on Health Policy Statistics (ICHPS) 2023. Phoenix, AZ.**
Bayesian Semiparametric Model for Sequential Treatment Decisions in with Informative Timing

12/2022 **Computational and Methodological Statistics (CMstatistics) 2022. London, United Kingdom.**
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

Invited Talks (continued)

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

Service

Paper Referee Service

Biometrics, *Biostatistics*, *Statistics in Medicine*, *Journal of the American Statistical Association*, *Journal of the Royal Statistical Society: Series C*, *International Journal of Biostatistics*, *Observational Studies*, *Journal of Causal Inference*, *American Journal of Epidemiology*, *Econometrics and Statistics*

Grant Review Service

2025 Scientific Reviewer; Patient-Centered Outcomes Research Institute (PCORI) Methods Panel; Funding Cycle 2025-2.

2024 Scientific Reviewer; Patient-Centered Outcomes Research Institute (PCORI) Methods Panel; Funding Cycle 2023-3.

2024 Scientific Reviewer, National Institutes of Health (NIH), National Institute of Neurological Disorders and Stroke (NINDS).

2024 Scientific Reviewer, Canadian Statistical Sciences Institute (CANSSI).

School and Departmental Service

2023 Faculty search committee. Department of Epidemiology, Brown University.

2023 Faculty search committee. Department of Biostatistics, Brown University.

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

Service (continued)

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

2021-2023 PhD Admission Committee, Department of Biostatistics, Brown University.

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

Conference Service

2025 Chair, Student Committee. International Conference on Health Policy Statistics (ICHPS).

2024 Student Paper Award Committee. Eastern North American Region (ENAR).

2023 Scientific Committee. Bayesian Young Statisticians Meeting (BAYSM).

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

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

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

2021 Program Committee. ICML Workshop "The Neglected Assumptions In Causal Inference"

2020 Program Committee. NeurIPS Workshop "Consequential Decision Making in Dynamic Environments"

Organized Conference Sessions

12/2023 Invited Session Organizer and Chair for "Bayesian Nonparametrics and Machine Learning Methods for Causal Inference". Computational and Methodological Statistics (CMStatistics) 2023.

12/2022 Invited Session Organizer and Chair for "Bayesian nonparametrics for causal inference: Part II". Computational and Methodological Statistics (CMStatistics) 2022.

07/2022 Invited Session Organizer and Chair for "Recent Developments in Probabilistic Machine Learning Methods for Causal Inference". International Biometrics Conference (IBC) 2022.

05/2021 Co-organizer. "Frontiers of Causal Inference in Data Science: Perspectives from Leaders in Tech and Academia". University of Pennsylvania.

12/2021 Session Organizer. "Causal inference challenges in health policy decision making". CMStatistics.

10/2020 Session Chair, "Causal Inference Methods for Health Policy Research. International Conference on Health Policy Statistics". San Diego, CA.

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)

Teaching and Advising

Course Instruction

Fall, 2021-2024 PHP2515: Fundamentals of Probability and Statistical Inference.

Spring, 2024-2025 PHP2530: Bayesian Statistical Methods

Teaching and Advising (continued)

Summer Institutes and Short Course Instruction

2025 Center for Causal Inference Summer Institute, UPenn.
Instructor; half-day session on Bayesian Causal Inference.

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

Advising

Esteban Fernandez, PhD Biostatistics, 2026.

Yuzhou Peng, ScM Biostatistics, 2026.

Zizhao Xie, ScM Biostatistics, 2026.

Valentin Kirilenko, ScM Biostatistics, 2026.

Zhaoxiang Ding, ScM Biostatistics, 2025.

Tova Ibbotson, ScM Biostatistics, 2024.

Zihan Zhou, ScM Biostatistics, 2024.

Anthony Girard, ScM Biostatistics, 2023.

Nancy Liu, ScM Biostatistics, 2023.

PhD Dissertation Committee

Chunnan Liu, Department of Biostatistics, 2028

Yalin Deng, Dept. of Health Services, Policy, and Practice, 2027

Nicholas Lewis, Department of Biostatistics, 2025

Blake Hansen, Department of Biostatistics, 2025

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.