Daniel Waxman

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Stony Brook University

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EDUCATION

Ph.D. Electrical Engineering, *In Progress*
Stony Brook University
Advisor: Petar Djurić

B.S. Mathematics & Applied Mathematics and Statistics *(cum laude)*, 2021
Stony Brook University

RESEARCH INTERESTS

Causal inference — particularly causal structure learning and studies related to confounders

Fusion methods — particularly Bayesian model combination

Bayesian optimization — particularly in dynamic settings and with non-conventional surrogate models

PUBLICATIONS

Journal Papers

2024 **D. Waxman**, P. M. Djurić. "Dynamic Incremental Ensembles of Basis Expansions." *Submitted.*

2024 **D. Waxman**, K. Butler, P. M. Djurić. "DAGMA-DCE: Interpretable, Non-Parametric Differentiable Causal Discovery." *IEEE Open Journal of Signal Processing*, vol. 5, pp. 393-401, 2024.
[IEEE Xplore] [arXiv] [code]

Conference Papers

2023 M. Ajirak, **D. Waxman**, F. Llorente, P. M. Djurić. "Fusion of GP Predictions with Monte Carlo Sampling." To appear in *2023 57th Asilomar Conference on Signals, Systems, and Computers, Pacific Grove, CA, USA, 2023.*

2023 Y. Liu, C. Cui, **D. Waxman**, K. Butler, P. M. Djurić. "Detecting Confounders in Multivariate Time Series Using Strength of Causation." *Proceedings of the 2023 31st European Signal Processing Conference (EUSIPCO), Helsinki, Finland, 2023.*
[IEEE Xplore] [pdf] [video]

Medical Conference Abstracts

2024 D. Chernoff, **D. Waxman**, P. M. Djurić, L. Czerwonka. "The Development of an Automated Algorithm to Identify and Manage Post-thyroidectomy Hypocalcemia." *American Head and Neck Society 2024 General Meeting*. (Accepted).

INVITED TALKS

2023 Acoustics Research Institute of the Austrian Academy of Sciences (Institut für Schallforschung der Österreichische Akademie der Wissenschaften)
Talk Title: "Causal Discovery via Quantifying Influences" [link] [slides]

2023 Bellairs Workshop on Machine Learning and Statistical Signal Processing for Data on Graphs
Talk Title: "Bayesian Combination"

TEACHING

Sum'22 Random Signals and Systems (ESE 306 @ SBU), Teaching Assistant

Spr'22 Random Signals and Systems (ESE 306 @ SBU), Teaching Assistant

Fall'21 Programming Fundamentals (ESE 124 @ SBU), Teaching Assistant

OUTREACH & SERVICE

Reviewing

2023-24 EURASIP Journal on Advances in Signal Processing

University Service

2021-23 Stony Brook University Graduate Student Organization
Primary Senator, Department of Electrical & Computer Engineering
Member of Diversity, Equity, and Inclusion Committee
Graduate Student Representative for the Graduate Council
Reviewer for the Distinguished Travel Award

2022-23 SBU Strategic Planning Committee [link]
Member of the Strategic Planning Committee, helping to identify priorities for upcoming strategic plan.
Member of Project REACH Visioning Committee and helped draft a new vision statement for the Univeristy

2020-22 SBUHacks [link]
Mentor (2022-Present)
Partner Relations (2021-22)
Volunteer Coordinator (2021-22)

Expository Talks

2022 Stony Brook University Math Club
Making Markov Chains with Metropolis [video]

Mentoring

2022-24 CUNY Directed Reading Program
Edgar Cuapio Diaz, *Gaussian Processes and Bayesian Optimization*
Jonathan Jaimangal, *Measure Theory and Filtering*
Masroor Khonkhodzhaev, *Dynamic Programming and Reinforcement Learning*
Percy Martinez, *Fourier Analysis and Its Applications*
Isabella Chittumuri, *Elements of Statistical Learning*

2023 Stony Brook University Directed Reading Program
Shailen Smith, *Probabilistic Machine Learning*

2022 Bayesian Data Analysis for the Global South (GSU)
Volunteer Teaching Assistant for online course aimed at the Global South and other underrepresented groups taught by Aki Vehtari [certificate]

Updated February 2024