CURRICULUM VITAE
Rajarshi Mukherjee

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NAME: Rajarshi Mukherjee
ACADEMIC TITLE: Associate Professor of Biostatistics
WORK ADDRESS: 655 Huntington Ave II-415, Boston, MA 02115
EMAIL: rmukherj@hsph.harvard.edu
HOME ADDRESS: 2 Peabody Terrace, Cambridge, MA 02155

EDUCATION:

Date	Discipline	Degree	Institution
2004-2007	Statistics	BStat	Indian Statistical Institute
2007-2009	Statistics	MStat	Indian Statistical Institute
2009-2014	Biostatistics	PhD	Harvard University

POSTDOCTORAL TRAINING (if applicable):

Research Fellowships

Dates	Field of Research	Place	Title (if applicable)
2014-2017	Statistics	Stanford University	Stein Fellow and Lecturer

ACADEMIC APPOINTMENTS:

Dates	Title	Department	Institution
2017-2018	Assistant Professor	Biostatistics	UC Berkeley
2018- 2024	Assistant Professor	Biostatistics	Harvard TH Chan SPH
2024-	Associate Professor	Biostatistics	Harvard TH Chan SPH

MAJOR ADMINISTRATIVE RESPONSIBILITIES:

Dates	Position Title	Department/Institution
2020-present	Assistant Director of Graduate Studies	HSPH Biostatistics

COMMITTEE SERVICE:

Departmental, School, and University Service:

Dates	Committee & Role	Institution/Organization
2020-present	Organizer of Summer Prep Session for 1st Year	HSPH Biostatistics
2018-present	Member of PhD admissions committee	HSPH Biostatistics
2023-present	Member of Qualifying exam committee	HSPH Biostatistics
2021-2023	Member of application review committee for the Summer Program in Biostatistics & Comp Bio	HSPH Biostatistics

Professional Societies:

Dates	Role	Society Name
2023	Member of Scientific Program Committee	ISCB
2023	ENAR Student Paper Competition Reviewer	ENAR
2024	ENAR Student Paper Competition Reviewer	ENAR
2025	NESS Student Poster Competition Reviewer	NESS

Grant Review Activities:

Dates	Name of Committee	Organization
2022	Personal Research Grants	The Israel Science Foundation
2024	Scientific Review Panel	National Science Foundation
2025	Scientific Review Panel	National Science Foundation

Editorial Roles:

1. Ad hoc reviewer (journals for which you serve as a reviewer)

   Annals of Statistics
   Annals of Applied Probability
   Journal of the American Statistical Association
   Journal of the Royal Statistical Society: Series B
   Journal of Royal Statistical Society: Series C
   Journal of Machine Learning Research
   Bernoulli
   Biometrics
   Biometrika
   Statistica Sinica
   Electronic Journal of Statistics
   Neural Information Processing Systems
   IEEE Transactions of Information theory

Journal of Applied Statistics
Environmental Health Perspectives
Epidemiology
Journal of Causal Inference
Journal of Alzheimer's Disease
Journal of Econometrics
Proceedings of National Academy of Sciences
Journal of Clinical and Translational Research

2. Other editorial roles

Dates	Role	Journal
07/2024-	Associate Editor	Biometrics

Other Public Service (for example expert testimony, interviews):

Dates	Role
2022	Session Organizer, EcoSta 2022
2023	Member of ISCB Scientific Program Committee, ISCB 2023
2023	ENAR Student Paper Award Committee, ENAR 2023
2023	Session Organizer, CM Statistics 2023
2024	ENAR Student Paper Award Committee, ENAR 2024
2024	Session Organanizer, Bernoulli-IMS 11th World Congress in Probability and Statistics

HONORS AND DISTINCTIONS:

Date	Honor/Distinction	Organization	Achievement
2014	IMS LAHA Travel Awards	IMS	Graduate Student Research Award
2017	IMS paper award	IMS	One of 4 best papers in Annals of Statistics in 2017
2024	NSF CAREER Award	NSF	Early Career Recognition
2024	Emerging Leaders Forum	NAM	Invited participation from National Academy of Medicine

FUNDED GRANTS AND UNFUNDED PROJECTS:

COMPLETED GRANTS

2020-2022 Causal Inference and Machine Learning Methods,
NSF EAGER (PI: Rajarshi Mukherjee, HSPH)
Role: Primary Investigator, 20% effort
Total Award Amount: $120,700

Develop statistical analysis tools for performing causal in observational studies by allowing flexible use of machine learning methods

2020-2023 Pre-disease biomarkers of persistent organic pollutants, immune ,

system, and amyotrophic lateral sclerosis

CDC (PI: Marc Weisskopf, HSPH)

Role: Primary Investigator, 8% effort

Develop statistical models to analyze the effects of chemical mixtures on

amyotrophic lateral sclerosis

ACTIVE GRANTS

2024-2029 CAREER: Statistical Methods in Observational Studies – Theory, Methods, and Beyond
NSF
Role: Primary Investigator, 16% effort
Total Award Amount: $450,00

Study aspects of causal inference are divided into two broad parts, specialized to adjust for high-dimensional measured confounding and low-dimensional non-parametric modeling. In this process, this project not only aims to resolve several open theoretical directions in this area but also develop methods that respond to the needs of the field.

2021-2025 Robust methods for missing data in electronic health records based studies

NIH R01 (PI: Sebastien Haneuse)

Role: Co- Investigator, 20% effort

Develop statistical methods to address challenges arising due to complex non-ignorable missing data in the context of performing causal inference from electronic health records data.

2020-2025 Metals and developmental origins of late life cognitive function

NIH R01 (PI: Marc Weisskopf)

Role: Co-Investigator, 10% effort

This study will examine the association between prenatal and early childhood metal exposures and late-life cognitive function, as well as the role of socioeconomic status (SES) and adult cumulative lead exposure

2020-2024 Pre-disease biomarkers of persistent organic pollutants, immune system, and amyotrophic lateral sclerosis

CDC (PI: Marc Weisskopf)

Role: Co-Investigator, 8% effort

Develop methods for understanding the effect of exposure to organic pollutants on ALS.

2023-2024 Child and adult Metal exposures, gene expression and neuropathologically confirmed Alzheimer's Disease.

NIH R56 (PI: Marc Weisskopf)

Role: Co-Investigator, 9% effort

This study will examine the association between early childhood and adult metal exposures and both clinical dementia and neuropathological Alzheimer's Disease (AD), as well as whether early life metal exposures modify the effects of adult metal exposures. We will also assess the relationship between metal exposures and brain mRNA profiles (gene expression) and their possible relation to dementia and neuropathological AD.

2020-2025 Metals and Metal Mixtures: Cognitive Aging, Remediation, and Exposure Sources, NIH P42 (MEMCARE)
Role: Co-Investigator, 8% effort

Develop statistical methods to explore the effects of exposures to heavy metals and its effect on late-life cognitive decline that can be potentially mediated through EV-miRNA biomarkers.

2025 Maternal Exposure to Childhood Abuse and Disparities in Offspring Neurodevelopment: Identifying Mechanisms
NIH R01 (PI: Andrea Roberts)

Role: Co-Investigator, 5% effort

Neurodevelopmental deficits, including autism and attention deficit hyperactivity disorder (ADHD), are major causes of disability, morbidity, and unemployment across the life course. Ascertaining the mechanisms by which a mother's abuse affects offspring neurodevelopment will have a profound impact on the design of public health interventions to protect the healthy development of children. We will examine three biological pathways that may account for the association of maternal childhood abuse with offspring neurodevelopmental deficits: 1) endocrine dysfunction during pregnancy, 2) inflammation during pregnancy, and 3) genetic loading for neurodevelopmental disorders.

2023-2025 ECHO Consortium on Perinatal Programming of Neurodevelopment
NIH UG3 (PI: Rosalind Wright, Kecia Carroll, Robert Wright)

Role: Co-Investigator, 3.9% effort

Leveraging ECHO's longitudinal design with assessments over vulnerable

developmental windows, combined with its large sample size, diverse geography, diverse population characteristics, and broad exposure assessment, this proposal will partner with the greater ECHO program to drive an exponential increase in our understanding of neurodevelopmental risk patterns that presage psychopathology in youth, providing particular insight into etiologies related to complex environmental mixtures. The longitudinal design also can provide insight into how and when to optimally intervene (nutrition, policy, exposure reduction) to reduce risk.

PENDING GRANTS

2025-2029 Statistical Methods for Analyzing Critical Windows of Environmental Exposure and Interactions with Omics Biomarkers in Neurodevelopment Studies

NIH R01 (PI: Rajarshi Mukherjee)

Role: Primary Investigator, 10% effort
Total budget: $2,767,149
Total direct: $2,161,055

Develop statistical methods to address fundamental challenges in identifying critical windows of exposure for environmental mixtures analysis by developing, implementing, and evaluating a suite of novel methods that allow incorporating the time-varying nature of exposures and associated omics-biomarkers as intermediate variables.

2025-2030 Metals and Metal Mixtures: Cognitive Aging, Remediation, and Exposure Sources, NIH P42 (MEMCARE)
Role: Co-Investigator, 10%

Exposure to environmental metals contamination contributes to cognitive aging, a topic with tremendous public health importance. Our innovative Metals and Metal Mixtures: Cognitive Aging, Remediation, and Exposure Sources Superfund Research Center (MEMCARE-SRC) not only tests the paradigm-shifting hypothesis that early life is a critical window for metal exposures that impact late-life cognitive health, but it also offers novel engineering solutions to remediate metals contamination of water, an important metal exposure source. By integrating four highly relevant Research Projects and four Cores, the MEMCARESRC will lead critical scientific research and development of environmental remediation solutions that help reduce exposures to metals and metal mixtures and will also develop new prevention and mitigation strategies that slow cognitive aging in Superfund and other communities affected by heavy metals contamination.

TEACHING AND TRAINING:

TEACHING IN HARVARD CHAN SCHOOL COURSES

Dates	Course number/Title	Responsibility
Fall 2018	BST 235, Advanced Regression and Statistical Learning	Primary instructor
Fall 2019	BST 235, Advanced Regression and Statistical Learning	Primary instructor
Spring 2022	BST 241, Inference II	Primary instructor
Spring 2023	BST 241, Inference II	Primary instructor
Spring 2024	BST 241, Inference II	Primary instructor
Fall 2024	BST 240, Probability Theory II	Primary instructor

TEACHING IN OTHER COURSES

Dates	Course number/Title/Institution	Responsibility
Fall 2014	Stat 141, Intro to Biostatistics, Stanford	Primary instructor
Fall 2015	Stat 141, Intro to Biostatistics, Stanford	Primary instructor
Fall 2016	Stat 141, Intro to Biostatistics, Stanford	Primary instructor
Spring 2015	Stat 60, Intro to Stats, Stanford	Primary instructor
Spring 2016	Stat 314, Topics Course, Stanford	Primary instructor
Spring 2017	Stat 204, Sample Survey, Stanford	Primary instructor
Spring 2018	PH 240, Biostatistics Theory, UC Berkeley	Primary instructor

ADVISORY AND SUPERVISORY RESPONSIBILITIES

Primary/Co- PhD Advisor Role

Dates	Name of trainee	Type of supervision	Current position
2019-2023	Nathan Huey	Thesis Advisor – PhD	Researcher, Sloth Institute
2021-	Sean McGrath	Advisor – PhD	Postdoc, HMS
2022-	Daniel Xu	Advisor – PhD	
2023-	M. Shankaranarayana	Advisor – PhD	
2020-	Christina Howe	Co-advisor – PhD	

Primary/Co- Postdoc Advisor Role

Dates	Name of trainee	Type of supervision	Current position
2019-2022	Nilanjana Laha	Advisor – Postdoc	Asst. Prof, UT A&M
2022-2023	Julien Chhor	Co-Advisor – Postdoc	Asst. Prof, Toulouse Econ
2022-	Shuo Sun	Co-Advisor – Postdoc	
2022-	Jung Wun Lee	Co-Advisor – Postdoc	Asst. Prof, BU
2024	Samriddha Lahiry	Co-Advisor – Postdoc	Research Scientist, NUS

PhD Committee Member Advisor Role (Department of Biostatistics)

Dates	Name of trainee	Type of supervision	Current position
2019-2021	Yue Song	Committee member – PhD	Data Scientist, Google
2018-2019	Thomas Kolokotrones	Committee member – PhD	Postdoc, HMS
2019-2022	Andy Shi	Committee member – PhD	Data Scientist, EPRI
2019-2022	Gabriel Loewinger	Committee member – PhD	Postdoc, NIH
2019-2022	Alexander Levis	Committee member – PhD	Postdoc, CMU
2019-2022	Maya Ramachandran	Committee member – PhD	Data Scientist, DELFI
2019-2022	Aaron Sonabend	Committee member – PhD	Data Scientist, Google
2020-2023	Daniel Li	Committee member – PhD	Resident Physician, JHU
2020-2023	Beau Cocker	Committee member – PhD	Postdoc, Columbia U
2020-2023	Wenying Deng	Committee member – PhD	Biostatistician, Regeneron
2020-2023	Shuting Shen	Committee member – PhD	Postdoc, Duke
2019-2023	Octavious Smiley	Committee member – PhD	Asst. Prof, UT Dallas
2022-	Eric Cohn	Committee member – PhD	Sr. Research Assc, Westat
2022-	Ellen Considine	Committee member – PhD	
2024-	Raphael Kim	Committee member – PhD	
2025-	Dominic De Santo	Committee member – PhD	
2025-	Salvador Belkus	Committee member – PhD	
2025-	Stephanie Armbruster	Committee member – PhD	
2025-	Christian Covington	Committee member – PhD	
2025-	Riddhiman Saha	Committee member – PhD	

PhD Committee Member Advisor Role (Other Departments)

Dates	Name of trainee	Type of supervision	Department
2023-	Justin Farmer	Committee member – PhD	Environmental Health
2023-	Ruby Hickman	Committee member – PhD	Environmental Health
2024-	Manqing Liu	Committee member – PhD	Epidemiology
2024-	Alexander Mercier	Committee member – PhD	Epidemiology
2024-	Fuyu Gu	Committee member – PhD	Epidemiology

INVITED PRESENTATIONS:

Dates	Title or topic of presentation	Organization/Location
Jan 12, 2015	Hypothesis Testing for High Dimensional Sparse Binary Regression,	International Conference on Robust Statistics (ICORS), 2015
July 14, 2016	Minimax and Adaptive Estimation of Nonlinear Functionals,	International Biometric Conference (IBC), 2016
Aug 16, 2016	On Detection of "Sparse Signals",	International Indian Statistical Association (IISA) Conference, 2016
Dec 13, 2016	Detection Thresholds for β-Model on Sparse Graphs,	Meetings in Mathematical Statistics (MMS), 2016
Dec 21, 2016	On Detection, Dependence, and Dichotomous Variables,	International Chinese Statistical Association (ICSA) Conference, 2016
Dec 22, 2016	Detection Thresholds for β-Model on Sparse Graphs,	International Chinese Statistical Association (ICSA), Conference 2016
June 21, 2017	Detection Thresholds in Ising Models,	Statistical Foundations Workshop, Cambridge University
Oct 31, 2017	Detection Thresholds in Ising Models,	Asilomar Conference on Signals, Systems, and Computers
Nov 27, 2017	On Estimation of Nonparametric Functionals,	Department of Statistics Seminar, Columbia University
Dec 13, 2017	Sparse Signal Detection in Genomics,	Department of Biostatistics Seminar, National Taiwan University
Dec 16, 2017	Testing Degree Corrections in Stochastic Block Models,	Computational and Methodological Statistics (CM Statistics) Conference, 2017
Dec 27, 2017	Sparse Signal Detection with Binary Outcomes,	Statistics Seminar, Academia Sinica
Mar 6, 2018	Global Testing against Sparse Alternative under Ising Models,	Statistics Seminar, ENSAE Paris
Mar 23, 2018	Testing Degree Corrections in Stochastic Block Models,	Conference on Information Sciences and Systems (CISS), Princeton University
Apr 18, 2018	Effect of Dependence on Testing,	Department of Statistics Neyman Seminar, UC Berkeley
Dec 17, 2018	Minimax Exponents of Sparse Testing,	Meetings in Mathematical Statistics (MMS), 2018

Jan 04, 2019 Sparse Signal Detection with "Network Data",
Young Statisticians Meeting (YSM), 2019

Apr 04, 2019 Inference in Observational Studies,
Department of Biostatistics Seminar, U Michigan

Jun 18, 2019 Inference in Observational Studies,
Applied Statistics Unit Seminar, Indian Statistical Institute

Jun 27, 2019 Sparse Signal Detection with "Network Data",
International Conference on Econometrics and Statistics (EcoSta), 2019

Oct 25, 2019 Minimax Exponents in Sparse Testing,
Department of Mathematics Seminar, U Mass Amherst

May 07, 2020 On PC Adjustments for High Dimensional Association Studies,
Department of Biostatistics Seminar, Boston University

Nov 09, 2020 Inference in Observational Studies using Machine Learning,
INFORMS Annual Meeting, 2020

Feb 17, 2021 Testing against Sparse Alternatives under Ising Models,
Department of Statistics and Biostatistics Seminar, Rutgers University

Feb 26, 2021 Causal Inference: What, Who, and How
Special Topics in Public Health, Harvard T.H. Chan School of Public Health

Mar 18, 2021 Inference in Observational Studies
Department of Statistics Seminar, University Illinois Urbana Champagne

Apr 19, 2021 Inference in Observational Studies: Some Basic Results
Guest Lecturer, Statistics 364, Department of Statistics, Harvard University

Jul 02, 2021 A New Central Limit Theorem for the Augmented IPW Estimator, Variance Inflation, Cross-Fit Covariance, and Beyond
International Chinese Statistical Association (ICSA), Conference 2021

Sep 29, 2021 On PC Adjustments for High Dimensional Association Studies,
Department of Statistics Seminar, University of Pennsylvania

Apr 22, 2022 On PC Adjustments for High Dimensional Association Studies,
Department of Statistics Seminar, Columbia University

Jun 05, 2022 On PC Adjustments for High Dimensional Association Studies,
International Conference on Econometrics and Statistics (EcoSta), 2022

Jul 02, 2022 A New Central Limit Theorem for the AIPW Estimator for ATE
New Advances in Statistics and Data Science (NASDS), Conference 2022

Aug 04, 2022 Signal Detection under Ising Models
Statistical Network Analysis and Beyond Conference, New York University

Oct 13, 2022 On PC Adjustments for High Dimensional Association Studies,
Applied Statistics Unit Seminar, Indian Statistical Institute

Nov 03, 2022 On Inference in Observational Studies
Department of Biostatistics Seminar, Columbia University

Dec 01, 2022 Discussion of "Disentangling Confounding and Dependence in Spatial Statistics"
Harvard Data Science Initiative Causal Inference Seminar, Harvard University

Dec 17, 2022 A New Central Limit Theorem for the Augmented IPW Estimator, Variance Inflation, Cross-Fit Covariance, and Beyond
Computational and Methodological Statistics (CM Statistics) Conference, 2022

Dec 26, 2022 Adaptive Estimation of Nonparametric Functionals
International Indian Statistical Association (IISA) Conference, 2022

Jun 01, 2023 A New Central Limit Theorem for the AIPW Estimator for ATE
International Indian Statistical Association (IISA) Conference, 2023

Sept 25, 2023 On PC Adjustments for High Dimensional Association Studies
Department of Statistics Seminar, University of Missouri

Oct 06, 2023 On Inference in Observational Studies
Department of Statistics Seminar, North Carolina State University

Oct 20, 2023 On PC Adjustments for High Dimensional Association Studies
Department of Data Science and Operations Seminar, University of Southern California

Oct 24, 2023 On Inference in Observational Studies
Department of Statistics Seminar, University of Florida

Dec 13, 2023 Testing against Sparse Alternatives under Ising Models
Statistics and Mathematics Unit Seminar, Indian Statistical Institute

Mar 28, 2024 Nuisance Function tuning for Functional Estimation,
Department of Mathematics and Statistics Seminar, Boston University

May 15, 2024 Nuisance Function tuning for Functional Estimation,
American Causal Inference Conference, 2024

May 24, 2024 On Statistical Inference under Spatiotemporal and Network Dependence,
New England Statistics Symposium, 2024

Oct 09, 2024 On Inference in Observational Studies,
Department of Statistics Seminar, U Washington St. Louis

Dec 29, 2024 Nuisance Function Tuning for Optimal Doubly Robust Estimation,
International Indian Statistical Association (IISA) Conference, 2024

Jan 29, 2025 Inference for ATE & GLMs when $\frac{p}{n} \to \delta \in (0, \infty)$,
Causal Inference: Bridging Theory and Practice, TSIMF, Sanya, China

Jan 04, 2025 Inference for ATE & GLMs when $\frac{p}{n} \to \delta \in (0, \infty)$,
Stat Math Unit Seminar, Indian Statistical Institute

Feb 07, 2025 Inference for ATE & GLMs when $\frac{p}{n} \to \delta \in (0, \infty)$,
IDSS Seminar, MIT

Mar 20, 2025 Inference for ATE & GLMs when $\frac{p}{n} \to \delta \in (0, \infty)$,
International Indian Statistical Association (IISA) Webinar

BIBLIOGRAPHY:

Peer-reviewed publications (*: Alphabetical Authorship/Lead Authorship/Equal Contribution; **: Student/Postdoc First Authorship)

1. **Mukherjee R**, Pillai NS, Lin X. (2015) Hypothesis Testing for High Dimensional Sparse Binary Regression. Annals of Statistics; 43(1): 352-381.

2. Barnett I, **Mukherjee R**, Lin X. (2017) Generalized Higher Criticism for SNP sets in Genetic Association Testing. Journal of American Statistical Association; 112(517): 64–76.

3. Basu K, **Mukherjee R**.* (2017) Asymptotic Normality of Scrambled Geometric Net Quadrature. Annals of Statistics; 45(4): 1759-1788.

4. Robins JM, Li L, **Mukherjee R**, Tchetgen Tchetgen E, Vaart Avd. (2017) Minimax Estimation of a Functional in a Structured High Dimensional Model. Annals of Statistics; 45(5): 1951-1987.

5. **Mukherjee R***, Sen S. (2017) Optimal Adaptive Inference in Random Design Binary Regression. Bernoulli; 24(1): 699-739.

6. **Mukherjee R***, Mukherjee S, Sen S. (2018) Detection Thresholds for the β-Model on Sparse Graphs. Annals of Statistics; 46(3): 1288-1317.

7. **Mukherjee R***, Mukherjee S, Yuan M. (2018) Global Testing against Sparse Alternatives under Ising Models. Annals of Statistics; 46(5): 2062-2093.

8. **Mukherjee R***, Sen B. (2019) On Efficiency of Plug-In Principles for Estimating Smooth Integral Functionals of a Non-increasing Density. Electronic Journal of Statistics; 13(2): 4416-4448.

9. Lin L, **Mukherjee R***, Robins JM. (2020) On nearly assumption-free tests of nominal confidence interval coverage for causal parameters estimated by machine learning. Statistical Science; 35(3): 518-539.

10. Lin L, **Mukherjee R***, Robins JM. (2020) Rejoinder to "On nearly assumption-free tests of nominal confidence interval coverage for causal parameters estimated by machine learning." Statistical Science; 35(3): 518-539.

11. Han Y, Jiao J, **Mukherjee R***. (2020) On estimation of L_r-norms in Gaussian white noise models. Probability Theory and Related Fields. 177: 1243–1294.

12. **Mukherjee R***, Sen S. (2021) Testing Degree Corrections in Stochastic Block Models. Annales de l'Institut Henri Poincaré, Probabilités et Statistiques, 57(3), 1583-1635

13. **Mukherjee R***, Ray G. (2021) On Testing for Parameters in Ising Models. Annales de l'Institut Henri Poincaré, Probabilités et Statistiques, 58(1), 164-187.

14. Liu R, **Mukherjee R***, Robins J, Tchetgen Tchetgen E. (2021) On Adaptive Estimation of Nonparametric Functionals. Journal of Machine Learning Research, 22(1), 4507-4572.

15. Requia W, Amini H, **Mukherjee R**, Gold D, Schwarz J. (2021) Health impacts of wildfire-related air pollution in Brazil: A nationwide study of more than 2 million hospital admissions between 2008 and 2018. Nature Communications, 12(1), 6555.

16. Ho C-H, Huang Y-J, Lai Y-J, **Mukherjee R**, Hsiao C-H. (2022) The misuse of distributional assumptions in functional class scoring gene-set and pathway analysis. Genes, Gneomics, and Genetics, 12(1), jkab365.

17. Requia, W.J., Papatheodorou, S., Koutrakis, P., **Mukherjee, R.**, Roig, H.L. (2021) Increased preterm birth following maternal wildfire smoke exposure in Brazil. International Journal of Hygiene and Environmental Health, 240,113901

18. Huang, Y-J., **Mukherjee, R.,** Hsiao, C-H. (2022) Probabilistic Edge Inference of Gene Networks with Bayesian Markov Random Field Modeling. Frontiers of Genetics. 13:1034946

19. Deng, W., Cocker, B., **Mukherjee, R.,** Liu, J., Coull, B. (2022) Towards a Unified Framework for Uncertainty-aware Nonlinear Variable Selection with Theoretical Guarantees, NeurIPS, 35, 27636-27651.

20. Laha**, N., **Mukherjee, R. (**2022**)** On Support Recovery With Sparse CCA: Information Theoretic and Computational Limits, IEEE Transactions of Information Theory, 69(3), 1695-1738.

21. Khorasanizadeh. M, Maroufi, SF., **Mukherjee, R**., Sankaranarayanan, M., Moore, J. (2022) Middle Meningeal Artery Embolization in Adjunction to Surgical Evacuation for Treatment of Subdural Hematomas: a Nationwide Comparison of Outcomes with Isolated Surgical Evacuation, Neurosurgery, , 10-1227

22. Chhor, J.**, **Mukherjee, R.***, Sen, S. Sparse (2023) Signal Detection in Heteroscedastic Gaussian Sequence Models: Sharp Minimax Rates, Bernoulli, 30(3), 2127-2153.

23. Sonabend, A.**, Laha, N., Cai, T., **Mukherjee, R.*** (2023) Semi-Supervised Off Policy non-Markovian Reinforcement Learning, Journal of Machine Learning Research, 24(323), 1-86.

24. McGrath, S.**, **Mukherjee, R.**, Requia, W.J., Lee, WL. (2023) Wildfire exposure and academic performance in Brazil:a causal inference approach for spatiotemporal data, Science of Total Environment, 905, 167625.

25. Laha, N.**, Huey, N.**, Coull, B., **Mukherjee, R.*** (2023) On Statistical Inference with High Dimensional Sparse CCA, Information and Inference,12(4), 2818-2850.

26. Hou, J., **Mukherjee, R.**, Cai, T. (2023) Efficient and Robust Semi-supervised Estimation of ATE with Partially Annotated Treatment and Response, Journal of Machine Learning Research, 24(265), 1-58.

27. Benz, L., **Mukherjee, R.,** Wang, R., Arterburn, D., Fischer, H., Lee, C., Shortreed, S.M., Haneuse, S. (2024) Adjusting for Selection Bias Due to Missing Eligibility Criteria in Emulated Target Trials, American Journal of Epidemiology, kwae471.

28. Levis, A., **Mukherjee, R.**, Wang, R., Haneuse, S. (2024) Double sampling and semiparametric methods for informatively missing data, Statistics in Medicine, 43(30), 6086-6098.

29. Deb, N., **Mukherjee, R.***, Mukherjee, S., Yuan, M. (2024) Detecting Structured Signals in Ising Models, Annals of Applied Probability, 34(1A), 1-45.

30. Laha, N**, Sonabend, A.**, **Mukherjee, R.*,** Cai, T. (2024) Finding the Optimal Dynamic Treatment Regime under Fisher Consistent Surrogate Loss, Annals of Statistics, 52(2), 679-707.

31. Liu, L. **Mukherjee, R*.**, Robins, J. (2024) Assumption-lean falsification tests of rate double-robustness of double-machine-learning estimators, Journal of Econometrics, 240(2), 105500.

32. Farmer, J., Specht, A., Pushon, T., Jackson, B., Bidlack, F., Bakalar, C., **Mukherjee, R.**, Davis, M., Steadman, D., Weisskopf, M. (2024) Lead exposure across the life course and age of death, Science of Total Environment, 927, 171975.

33. Bhattacharya, B., **Mukherjee, R.** (2024) Sparse Uniformity Testing, IEEE Transactions of Information Theory.

34. Levis, A., **Mukherjee, R.**, Wang, R., Haneuse, S. (2025) Robust causal inference for point exposures with missing confounders, Canadian Journal of Statistics, 53(2), e11832.

35. Jiang, K.**, **Mukherjee, R*.,** Sen, S., Sur, P. (2025) A New Central Limit Theorem for the Augmented IPW Estimator: Variance Inflation, Cross-Fit Covariance, and Beyond, Annals of Statistics, 53(2), 647-675.

36. Sun, S.**, Haneuse, S., Levis, A., Lee, C., Arterburn, D., Fischer, H., Shortreed, S.M., **Mukherjee, R.** (2025) Estimating weighted quantile treatment effects with missing outcome data by double sampling, Biometrics, 81(2), ujaf038.

37. Bhattacharya, S., **Mukherjee, R.***, Ray, G. (2025) Sharp Signal Detection Under Ferromagnetic Ising Models, IEEE Transactions of Information Theory.

38. Bhattacharya, S., **Mukherjee, R.***, Ogburn, B. (2025) Nonsense associations in Markov random fields with pairwise dependence. Biometrika, asaf041.