

ABHINANDAN DALAL

CONTACT INFORMATION

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ACADEMIC AFFILIATION

- **PhD in Statistics & Data Science**, The Wharton School, University of Pennsylvania
Advisor: Dylan Small Fall 2021 - Spring 2026 (Expected)
- **Master of Statistics**, Indian Statistical Institute Fall 2019 - Spring 2021
- **Bachelor of Statistics**, Indian Statistical Institute Fall 2016 - Spring 2019

PUBLICATIONS AND PREPRINTS

Accepted/Published

1. William Bekerman*, **Abhinandan Dalal***, Carlo del Ninno, Dylan S. Small (2025). Planning for Gold: Hypothesis screening with split samples for valid powerful testing in matched observational studies. *arXiv:2406.00866*. Accepted at *Biometrika*.
2. Abhinav Chakraborty*, Anirban Chatterjee* and **Abhinandan Dalal*** (2024). PrIsing: Privacy-Preserving Peer Effect Estimation via Ising Model. *Proceedings of The 27th International Conference on Artificial Intelligence and Statistics (AISTATS)*, PMLR 238:2692-2700.

Manuscripts under review/revision

3. **Abhinandan Dalal** and Eric J. Tchetgen Tchetgen (2025). Partial Identification of Causal Effects for Endogenous Continuous Treatments. *arXiv:2508.13946*. Submitted to *Journal of the Royal Statistical Society: Series B*.
4. **Abhinandan Dalal**, Patrick Blöbaum, Shiva Kasiviswanathan and Aaditya Ramdas (2024). Anytime-Valid Inference for Double/Debiased Machine Learning of Causal Parameters. *arXiv:2408.09598*. Revise & Resubmit at *Journal of the American Statistical Association*.

Technical Reports

1. **Abhinandan Dalal**, Diganta Mukherjee and Soumendu Sundar Mukherjee (2021). An endogenous (game-theoretic) approach to explore epidemic dynamics on a network (Masters Dissertation). [Link to report](#)
2. Navonil Deb*, **Abhinandan Dalal*** and Gopal K Basak (2020). Finding Optimal Cancer Treatment using Markov Decision Process to Improve Overall Health and Quality of Life.
arXiv:2011.13960

* denotes equal contribution

3. Arindam Roy Chowdhury*, **Abhinandan Dalal*** and Shubhajit Sen* (2020). Accelerography: Feasibility of Gesture Typing using Accelerometer. *arXiv:2003.14310*
4. Diganta Mukherjee, **Abhinandan Dalal** and Subhrajyoty Roy (2019). Feasibility of Transparent Price Discovery in Tea through Auction in India. *Commodity Insights Yearbook 2019, Multi Commodity Exchange of India Ltd.* [Link to article](#)

AWARDS AND ACCOLADES

Oct 2025	Lawrence D. Brown PhD Student Paper Award , University of Pennsylvania
Sept 2025	J. Parker Bursk Award for Excellence in Research , University of Pennsylvania
Sept 2025	Donald S. Murray Prize for Excellence in Teaching , University of Pennsylvania
June 2025	Best Student Paper in Application of Statistics and Data Science , International Indian Statistical Association
May 2025	George James Term Fund for American Causal Inference Conference , University of Pennsylvania
Dec 2024	Nominated for Best Student Paper in Application of Statistics and Data Science , International Indian Statistical Association
May 2024	George James Term Fund for International Conference on Artificial Intelligence and Statistics (AISTATS) , University of Pennsylvania
June 2022	George James Term Fund for The 2022 IMS Annual Meeting , University of Pennsylvania
May 2021	Nominated for Prasanta Chandra Mahalanobis Gold Medal , Indian Statistical Institute
Dec 2019	Nominated for best paper at International Conference of Operations Research and Decision Sciences (ICORDS) , Indian Institute of Management, Vishakhapatnam
Mar 2019	All India Rank 1 in Mathematical Statistics (MS) in the Joint Admission Test for M.Sc. 2019 (JAM) conducted by the Indian Institute of Technology(s)
Dec 2018	top 25 percentile in the world “Individuals category” and best individual entry from ISI Kolkata at Simon Marais Mathematics Competition undergraduate Asia-Pacific Mathematics competition inspired by William Lowell Putnam Mathematical Competition
2016 - 21	Dean’s List for Toppers , Indian Statistical Institute
June 2016	Secured WBJEE (West Bengal Joint Entrance Examination) rank 53 in engineering entrance

INTERNSHIP EXPERIENCE

May 2024	Applied Scientist Intern , SCOT Regional Forecasting, Amazon <i>Feasibility and utility analysis of Earth Mover distance optimization for regional demand forecasting using proximal causal analysis. Analysis predicts an estimated annual savings of 78million USD.</i> Supervisors: Rahul Gopalsamy & Kenny Shirley
May 2023	Applied Scientist Intern , Amazon Web Services <i>Developed anytime valid inference for causal effect estimation under double/debiased machine learning framework</i> Supervisors: Patrick Blöbaum & Shiva Kasiviswanathan

- May 2020** **Summer@Duke Statistical Science internship** (virtual due to Covid 19)
 On *Designing powerful randomization for exact p-values of causal effects under network interference*
 Supervisor: Alexander Volfovsky
- May 2020** **Research Intern at Bio-inspired Communication (BCS) Lab, Technische Universität (TU) Darmstadt, Germany** (virtual due to Covid 19)
 On *Moments of Causal Estimator of binary Markovian input given output in a Poisson channel*
 Supervisor: Heinz Köppl
- May 2019** **Summer Intern at DST- Center for Policy Research at Indian Institute of Science**
 Analysing usefulness of public R & D grants in India- *BIRAC and SBIRI: Exploring Causal Aspects using Regression Discontinuity Design* Supervisor: Venkat Nadella

TEACHING AND MENTORING

Teaching Assistantships at Penn

- Fall 2025** STAT 9210: **Observational Studies** (for Graduate Students)
- Spring 2025** STAT 5330: **Stochastic processes** (for Undergraduate Students)
- Spring 2025** STAT 1110: **Introductory Statistics** (for Undergraduate Students)
- Fall 2024** STAT 4320: **Mathematical Statistics** (for Undergraduate Students)
- Fall 2023** STAT 4300 & STAT 5100: **Probability** (for Undergraduate/Graduate Students)
- Spring 2023** STAT 9700: **Mathematical Statistics** (for Graduate Students)
- Spring 2022** STAT 521: **Applied Econometrics II** (for Graduate Students)

Mentoring Experience

- Spring 2025** **Wharton Directed Reading Program (WDRP)** mentor for *Sheyan Lalmo-hammed*
- Fall 2024** **PhD Peer program** mentor for incoming PhD student *Soham Mallick* to navigate the program and transition to Penn
- Spring 2024** **Undergraduate Research in Probability and Statistics (URPS)** mentor for *Roberto Ligeralde*, with Da Wu
- Spring 2022** **Undergraduate Research in Probability and Statistics (URPS)** mentor for *Ryan Jeong* and *Alexandru Lopotenco*, with Prof. Robin Pemantle

CONFERENCES & WORKSHOPS

- Partial Identification of Causal Effects for Continuous Treatments under Sensitivity Models
 - Lawrence D. Brown PhD Student Workshop, University of Pennsylvania, Philadelphia, PA (2025) **Invited Talk**.
 - Penn Center for Causal Inference Seminar, University of Pennsylvania, Philadelphia, PA (2025).
- Observational Causal Inference with Unknown/Mismeasured Network Interference

- PhD Student Seminar, Dept. of Statistics & Data Science, University of Pennsylvania, Philadelphia, PA (2025).
- Planning for Gold: Hypothesis screening with split samples for valid powerful testing in matched observational studies.
 - Annual Conference of International Indian Statistical Association, Lincoln, NE (2025).
 - PhD Student Seminar, Dept. of Statistics & Data Science, University of Pennsylvania, Philadelphia, PA (2024).
- Role of Earth-Movers Distance as a metric for Regional Forecasting
 - Intern Presentations, Amazon Supply Chain Optimization Technologies, New York City, NY (2024).
- Anytime Valid Inference for Double/Debiased Machine Learning of Causal Parameters
 - Conference on Frontiers in Machine Learning and Econometrics, co-hosted by the Federal Reserve Bank of Philadelphia and Center for Applied AI at the University of Chicago Booth School of Business, Chicago, IL (2025).
 - American Causal Inference Conference, Detroit, MI (2025).
 - Annual Conference of International Indian Statistical Association, Kochi, India (2024).
 - Penn Center for Causal Inference Seminar, Philadelphia, PA (2024).
 - Young Researcher Presentations, Amazon Supply Chain Optimization Technologies, New York City, NY (2024).
 - Intern Presentations, Amazon Web Services, Santa Clara, CA (2023).
- Modeling county level firearms related fatal assaults in the United States
 - Joint Statistical Meeting, Toronto, Canada (2023).
- An endogenous approach to explore epidemic dynamics on a network
 - IMS Annual Meeting, London, UK (2022).
- Modern Statistical Challenges under a Causal Lens
 - P.C.M. Gold Medal Presentation, Indian Statistical Institute, Kolkata, India (2021) **Invited Talk**.
- Feasibility of Automation in Price Setting for Tea Auction
 - International Conference of Operations Research and Decision Sciences (ICORDS), Indian Institute of Management Vishakhapatnam, India (2019).
 - XXIXth Annual General Conference on Contemporary Issues in Development Economics, Jadavpur University, Kolkata, India (2019).
 - Third International Conference on Issues in Economic Theory and Policy, Presidency University, Kolkata, India (2019).

PROFESSIONAL SERVICE

- **Reviewer** for Journal of the Royal Statistical Society: Series B, Biometrics, Journal of the American Statistical Association

- **Student Member** Wharton Causal Data Science Lab ([WCDSL](#))
- **Co-organizer** for Statistics Dept. Student Seminar 2021-22 at Penn

SKILLS

Computer Skills

- R, MS Office
- \LaTeX
- C, SPSS, SQL, Git (basic)

Language Skills

- Bengali (native)
- English, Hindi (fluent)
- Spanish (rudimentary)