

Aaditya K. Ramdas

Curriculum Vitae

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Research summary

My research spans algorithms, theory and applications of statistical inference and machine learning:

- **reproducibility in science and technology**
 - controlling false discoveries in novel static and dynamic settings
 - structured multiple hypothesis testing under dependence
 - selective, simultaneous and post-hoc inference
- **active, sequential decision-making**
 - experimentation for online and streaming settings
 - human-in-the-loop interactive inference
 - large-scale A/B-testing, multi-armed bandits
- **assumption-light uncertainty quantification**
 - always-valid sequential confidence intervals, anytime p -values
 - conformal prediction sets, distribution-free calibration
 - game theoretic statistical inference via betting and e -values

Employment and Background

- 2025- Associate Professor (with tenure),
Department of Statistics and Data Science
Machine Learning Department
Carnegie Mellon University (CMU), Pittsburgh (USA)
- 2024-25 Associate Professor (without tenure)
- 2018-24 Assistant Professor (affiliations same as above).
- 2025 CTO & Cofounder of LotusPetal AI
- 2022-25 Visiting Academic, Amazon Research (AWS),
- 2021-22 Bain Advisor Network, Bain & Company.
- Sum'2019 Visiting professor, Microsoft Research, *Montreal*.
- 2015-18 Postdoctoral Researcher in EECS and Statistics.
University of California, Berkeley (UCB), Berkeley (USA)
Mentors: Michael I. Jordan & Martin J. Wainwright
- 2010-15 MS+PhD in Statistics and Machine Learning.
Carnegie Mellon University (CMU), Pittsburgh (USA)
Advisors: Larry Wasserman & Aarti Singh GPA 4.2/4
- 2009-10 Algorithmic financial trading, Tower Research Capital, (India+USA).
- 2005-09 Bachelors in Computer Science and Engineering.
Indian Institute of Technology (IIT), Bombay (India) GPA 9.44/10, Rank 9/600, 3/60

Selected Awards and Honors

Excludes paper awards, which are mentioned along with the papers in the next section.

- 2026 Young Alumnus Achiever Award (IIT Bombay)
- 2025 IMS Fellowship (Institute of Mathematical Statistics)
- 2025 Statistician of the Year (American Statistical Association, Pittsburgh Chapter)
- 2025 Presidential Early Career Award for Scientists and Engineers (PECASE, White House)
- 2024 Kavli Fellowship (National Academy of Science and Kavli Foundation)

- 2024 Sloan Fellowship (Sloan Foundation)
- 2024 Journal of the American Statistical Association, Discussion Paper
- 2023 IMS Peter Hall Early Career Prize
- 2023 Journal of the Royal Statistical Society, Discussion Paper
- 2022 Google Research Scholar Award
- 2021 COPSS Emerging Leader Award (Inaugural year)
- 2020 NSF CAREER Award
- 2020 Bernoulli New Researcher Award
- 2019 Adobe Faculty Research Award

- 2025 Invited tutorial (2.5 hrs), International Conference on Machine Learning (Canada)
- 2025 Keynote speaker (out of 8), Vienna Congress on Math Finance (Austria)
- 2024 Keynote speaker (out of 2), Waterloo Student Conference (Canada)
- 2024 Invited lecture series (15 hrs), Columbia University (USA)
- 2024 Invited lecture series (6 hrs), Georgia Institute of Technology (USA)
- 2024 Keynote speaker (out of 3), AISTATS (Spain)
- 2023 Keynote speaker (out of 6), Lunteren Annual Meeting of Statisticians (Netherlands)
- 2023 Keynote speaker (out of 3), ELLIS workshop on Robust Machine Learning (Finland)
- 2023 Keynote speaker (out of 6), MobiliT.AI Conference on AI and Transportation (France)
- 2023 Keynote speaker, American Statistical Association, Pittsburgh Chapter (USA)
- 2022 Invited lecture series (3 hrs), CUSO Summer Stat/Prob Summer School (Switzerland)
- 2022 Invited tutorial, National Conference on Communications (India)
- 2021 Keynote speaker, CMU Sports Analytics Conference (USA)

- 2015 Umesh K. Gavaskar Memorial PhD Thesis Award, Department of Statistics, CMU
- 2015 Alan J. Perlis Graduate Student Teaching Award, School of Computer Science, CMU
- 2015 Mihaela Serban Memorial Award, American Statistical Association, Pittsburgh chapter
- 2015 Outstanding Representative Award, Graduate Student Assembly, CMU
- 2014 Graduate Student Teaching Award, Machine Learning Department, CMU
- 2013 Doug Beeferman PhD Fellowship

- 2009 IIT Bombay Cultural Citation, highest honor for cultural accomplishments over 4 years
- 2006-09 Inlaks Full Scholarship, for best all-round student (academic+extra-curricular) in IIT Bombay
- 2005 Prime Minister's invitee to Republic Day Parade, for academic excellence*

IIT Joint Entrance Exam India Rank 47/400,000, *Central Board Exams 97.4%, India Rank 10/300,000

Books

- 2025 Hypothesis testing with e-values.
A. Ramdas, R. Wang inaugural issue, Foundations & Trends in Statistics

Published or accepted peer-reviewed journal papers

Hyperlinks to all papers (arXiv, proceedings, software) are available from my website publications page. They are omitted here for brevity.

- 83. 2026 Testing hypotheses generated by constraints.
M. Larsson, A. Ramdas, J. Ruf Math of Operations Research
- 82. 2026 Combining evidence across filtrations.
YJ. Choe, A. Ramdas J Royal Stat Soc B
- 81. 2026 Multiple testing with anytime-valid Monte-Carlo p-values.
L. Fischer, T. Barry, A. Ramdas Elec J Stat
- 80. 2026 Improving Wald's (approximate) sequential probability ratio test by avoiding overshoot.
L. Fischer, A. Ramdas IEEE Trans Info Theory
- 79. 2026 Huber-robust likelihood ratio tests for composite nulls and alternatives.
A. Saha, A. Ramdas IEEE Trans Info Theory

78. 2026 On admissibility in post-hoc hypothesis testing.
B. Chugg, T. Lardy, A. Ramdas, P. Grünwald [Intl J Approx Reasoning](#)
77. 2025 Empirical Bernstein in smooth Banach spaces.
D. Martinez-Taboada, A. Ramdas [Annals of Applied Prob](#)
76. 2025 Positive semidefinite matrix supermartingales.
H. Wang, A. Ramdas [Elec J Prob](#)
75. 2025 Time-uniform self-normalized concentration for vector-valued processes.
J. Whitehouse, S. Wu, A. Ramdas [Annals of Applied Prob](#)
74. 2025 Anytime-valid FDR control with the stopped e-BH procedure.
H. Wang, S. Dandapanthula, A. Ramdas [Stat Prob Let](#)
73. 2025 Sequential Monte-Carlo testing by betting.
L. Fischer, A. Ramdas [J Royal Stat Soc B](#)
72. 2025 Online selective conformal prediction: errors and solutions.
Y. Sale, A. Ramdas [Trans ML Research](#)
71. 2025 Time-uniform confidence spheres for means of random vectors.
B. Chugg, H. Wang, A. Ramdas [Trans ML Research](#)
70. 2025 Combining exchangeable p-values.
M. Gasparin, R. Wang, A. Ramdas [PNAS](#)
69. 2025 The numeraire e-variable and reverse information projection.
M. Larsson, A. Ramdas, J. Ruf [Annals of Stat](#)
68. 2025 Anytime-valid t-tests and confidence sequences for Gaussian means with unknown variance.
H. Wang, A. Ramdas [Sequential Analysis](#)
67. 2025 The extended Ville's inequality for nonintegrable nonnegative supermartingales.
H. Wang, A. Ramdas [Bernoulli](#)
66. 2024 Randomized & exchangeable improvements of Markov, Chebyshev and Chernoff's inequalities.
A. Ramdas, T. Manole [Statistical Science](#)
65. 2024 On the existence of powerful p-values and e-values for composite hypotheses.
Z. Zhang, A. Ramdas, R. Wang [Annals of Stat](#)
64. 2024 Time-uniform central limit theory and asymptotic confidence sequences.
I. Waudby-Smith, D. Arbour, R. Sinha, E. Kennedy, A. Ramdas [Annals of Stat](#)
63. 2024 Post-selection inference for e-value based confidence intervals.
Z. Xu, R. Wang, A. Ramdas [Elec J Stat](#)
62. 2024 Interactive identification of individuals with positive treatment effect while controlling FDR.
B. Duan, L. Wasserman, A. Ramdas [J Causal Inference](#)
61. 2024 Multiple testing under negative dependence.
Z. Chi, A. Ramdas, R. Wang [Bernoulli](#)
60. 2024 Universal inference meets random projections: a scalable test for log-concavity.
R. Dunn, A. Gangrade, A. Ramdas, L. Wasserman [J Comp Graph Stat](#)
59. 2024 De Finetti's theorem and related results for infinite weighted exchangeable sequences.
R. Barber, E. Candes, A. Ramdas, R. Tibshirani [Bernoulli](#)
58. 2024 Anytime-valid off-policy inference in contextual bandits.
I. Waudby-Smith, L. Wu, A. Ramdas, N. Karampatziakis, P. Mineiro [ACM/IMS J Data Sci](#)
57. 2023 Data fission: splitting a single data point.
J. Leiner, B. Duan, L. Wasserman, A. Ramdas [J American Stat Assoc](#)
[Discussion paper](#)
56. 2023 E-detectors: a nonparametric framework for online changepoint detection.
J. Shin, A. Rinaldo, A. Ramdas [New England J Stat & Data Sci](#)
55. 2023 A unified recipe for deriving (time-uniform) PAC-Bayes bounds.
B. Chugg, H. Wang, A. Ramdas [J ML Research](#)
54. 2023 A permutation-free kernel independence test.
S. Shekhar, I. Kim, A. Ramdas [J ML Research](#)
53. 2023 A composite generalization of Ville's martingale theorem using e-processes.
J. Ruf, M. Larsson, W. Koolen, A. Ramdas [Elec J Prob](#)

52. 2023 Online multiple hypothesis testing.
D. Robertson, J. Wason, A. Ramdas Statistical Science
51. 2023 Nonparametric two-sample testing by betting.
S. Shekhar, A. Ramdas IEEE Trans Info Theory
50. 2023 E-values as unnormalized weights in multiple testing.
N. Ignatiadis, R. Wang, A. Ramdas Biometrika
49. 2023 Comparing sequential forecasters.
YJ. Choe, A. Ramdas Operations Research
48. 2023 Game-theoretic statistics and safe anytime-valid inference.
A. Ramdas, P. Grunwald, V. Vovk, G. Shafer Statistical Science
47. 2023 Catoni-style confidence sequences for heavy-tailed mean estimation.
H. Wang, A. Ramdas Stoch Proc & Appl
46. 2023 Dimension-agnostic inference using cross U-statistics.
I. Kim, A. Ramdas Bernoulli
45. 2023 Conformal prediction beyond exchangeability.
R. Barber, E. Candes, A. Ramdas, R. Tibshirani Annals of Stat
44. 2023 Martingale methods for sequential estimation of convex functionals and divergences.
T. Manole, A. Ramdas IEEE Trans Info Theory
Winner, Statistical Society of Canada, Student Paper Award
43. 2023 Permutation tests using arbitrary permutation distributions.
A. Ramdas, R. Barber, E. Candes, R. Tibshirani Sankhya A
42. 2023 Estimating means of bounded random variables by betting.
I. Waudby-Smith, A. Ramdas J Royal Stat Soc B
Discussion paper
Presentation award, Waterloo student conference
41. 2022 On the power of conditional independence testing under model-X.
E. Katsevich, A. Ramdas Elec J Stat
40. 2022 Gaussian universal inference.
R. Dunn, S. Balakrishnan, A. Ramdas, L. Wasserman Biometrika
39. 2022 Brainprints: identifying individuals using magnetoencephalograms.
S. Wu, A. Ramdas, L. Wehbe Nature Comm Bio
38. 2022 Distribution-free prediction sets for two-layer hierarchical models.
R. Dunn, L. Wasserman, A. Ramdas J American Stat Assoc
37. 2022 Large-scale simultaneous inference under dependence.
J. Tian, X. Chen, E. Katsevich, J. Goeman, A. Ramdas Scandinavian J Stat
36. 2022 False discovery rate control using e-values.
R. Wang, A. Ramdas J Royal Stat Soc B
35. 2022 Sequential estimation of quantiles with applications to A/B-testing & bandits.
S. Howard, A. Ramdas Bernoulli
34. 2022 Nested conformal prediction and quantile out-of-bag ensemble methods.
C. Gupta, A. Kuchibhotla, A. Ramdas Pattern Recognition
33. 2021 Testing exchangeability: fork-convexity, supermartingales, and e-processes.
A. Ramdas, J. Ruf, M. Larsson, W. Koolen Intl J Approx Reasoning
32. 2021 Fast and powerful conditional randomization testing via distillation.
M. Liu, E. Katsevich, L. Janson, A. Ramdas Biometrika
31. 2021 On the bias, risk and consistency of sample means in multi-armed bandits.
J. Shin, A. Ramdas, A. Rinaldo SIAM J Math of Data Science
30. 2021 Nonparametric iterated-logarithm extensions of the sequential generalized LRT.
J. Shin, A. Ramdas, A. Rinaldo IEEE J Selected Areas in Info Theory
29. 2021 Path length bounds for gradient descent and flow.
C. Gupta, S. Balakrishnan, A. Ramdas J ML Research
28. 2021 Time-uniform, nonparametric, nonasymptotic confidence sequences.
S. Howard, A. Ramdas, J. Sekhon, J. McAuliffe Annals of Stat
27. 2021 Asynchronous online testing of multiple hypotheses.
T. Zrnic, A. Ramdas, M. Jordan J ML Research

26. 2021 Classification accuracy as a proxy for two-sample testing.
I. Kim*, A. Ramdas*, A. Singh, L. Wasserman Annals of Stat
Winner, Stat Learning & Data Science Student Paper Award
25. 2021 Online control of the familywise error rate.
J. Tian, A. Ramdas Stat Meth in Medical Research
24. 2021 Predictive inference with the jackknife+.
R. Barber, E. Candes, A. Ramdas, R. Tibshirani Annals of Stat
23. 2020 Interactive martingale tests for the global null.
B. Duan, A. Ramdas, S. Balakrishnan, L. Wasserman Elec J Stat
22. 2020 A general interactive framework for FDR control under structural constraints.
L. Lei, A. Ramdas, W. Fithian Biometrika
21. 2020 Simultaneous high-prob. bounds on the FDP in structured, regression & online settings.
E. Katsevich, A. Ramdas Annals of Stat
20. 2020 The limits of distribution-free conditional predictive inference.
R. Barber, E. Candes, A. Ramdas, R. Tibshirani Information & Inference
19. 2020 Time-uniform Chernoff bounds via nonnegative supermartingales.
S. Howard, A. Ramdas, J. Sekhon, J. McAuliffe Prob Surveys
18. 2020 Universal inference.
L. Wasserman*, A. Ramdas*, S. Balakrishnan* PNAS
17. 2020 Optimal rates and tradeoffs in multiple testing.
M. Rabinovich, A. Ramdas, M. Wainwright, M. Jordan Stat Sinica
16. 2019 Decoding from pooled data (I): sharp information-theoretic bounds.
A. El-Alaoui, A. Ramdas, F. Krzakala, L. Zdeborova, M. Jordan SIAM J Math of Data Science
15. 2019 Decoding from pooled data (II): phase transitions of message passing.
A. El-Alaoui, A. Ramdas, F. Krzakala, L. Zdeborova, M. Jordan IEEE Trans Info Theory
14. 2019 A unified treatment of multiple testing with prior knowledge using the p-filter.
A. Ramdas, R. Barber, M. Wainwright, M. Jordan Annals of Stat
13. 2019 Function-specific mixing times and concentration away from equilibrium.
M. Rabinovich, A. Ramdas, M. Wainwright, M. Jordan Bayesian Analysis
12. 2019 DAGGER: a sequential algorithm for FDR control on DAGs.
A. Ramdas, J. Chen, M. Wainwright, M. Jordan Biometrika
11. 2018 On kernel methods for covariates that are rankings.
H. Mania, A. Ramdas, M. Wainwright, M. Jordan, B. Recht Elec J of Statistics
10. 2018 The power of online thinning in reducing discrepancy.
R. Dwivedi, O. N. Feldheim, O. G. Gurevich, A. Ramdas Prob Theory Related Fields
9. 2017 Iterative methods for solving factorized linear systems.
A. Ma, D. Needell, A. Ramdas SIAM J Matrix Analysis and App
8. 2017 Rows vs. columns: randomized Kaczmarz or Gauss-Seidel for ridge regression.
A. Hefny*, D. Needell*, A. Ramdas* SIAM J Scientific Comp.
7. 2016 p-filter: multi-layer FDR control for grouped hypotheses.
R. Barber*, A. Ramdas* J Royal Stat Soc B
6. 2016 Wasserstein two-sample testing and related families of nonparametric tests.
A. Ramdas, N. Garcia, M. Cuturi Entropy
5. 2016 Fast & flexible ADMM algorithms for trend filtering.
A. Ramdas, R. Tibshirani J Comp and Graphical Stat
4. 2015 Convergence properties of the rand. extended Gauss-Seidel & Kaczmarz methods.
A. Ma*, D. Needell*, A. Ramdas* SIAM J Matrix Analysis and App.
3. 2015 Towards a deeper geometric, analytic and algorithmic understanding of margins.
A. Ramdas, J. Peña Opt Meth and Software
2. 2015 Regularized brain reading with shrinkage and smoothing.
L. Wehbe, A. Ramdas, R. Steorts, C. Shalizi Annals of Applied Stat
1. 2014 Simultaneously uncovering patterns of brain regions involved in story reading.
L. Wehbe, B. Murphy, P. Talukdar, A. Fyshe, A. Ramdas, T. Mitchell PLoS ONE

Published, full-length, peer-reviewed conference papers

Most AI/ML conferences have blind peer-reviewing, low acceptance rates (20-30%), and official proceedings. Oral talks often indicate top few percent of all papers. The following list excludes short workshop papers, which usually have high acceptance rates, and often no proceedings. There is no paper mentioned below that was also extended to a journal paper listed above.

77. 2026 A martingale kernel two-sample test.
A. Chatterjee, A. Ramdas [elegant paper award](#) ALT
76. 2026 Eventually LIL regret: almost sure $\ln \ln T$ regret for a sub-Gaussian mixture on unbounded data.
S. Agrawal, A. Ramdas ALT
75. 2026 Vector-valued self-normalized concentration inequalities beyond sub-Gaussianity.
D. Martinez-Taboada, T. Gonzalez-Lara, A. Ramdas ALT
74. 2025 Sharp matrix empirical Bernstein inequalities.
H. Wang, A. Ramdas NeurIPS
73. 2025 Private evolution converges.
T. Gonzalez-Lara, A. Ramdas, G. Fanti NeurIPS
72. 2025 Sequentially auditing differential privacy.
T. Gonzalez-Lara, M. Dulce-Rubio, M. Ribero, A. Ramdas NeurIPS
71. 2025 Optimistic algorithms for adaptive estimation of the average treatment effect.
O. Neopane, A. Ramdas, A. Singh ICML
70. 2025 Improving the statistical efficiency of cross-conformal prediction.
M. Gasparin, A. Ramdas ICML
69. 2025 QA-Calibration of Language Model Confidence Scores.
P. Manggala, A. Mastakouri, E. Kirschbaum, S. Kasivishwanathan, A. Ramdas ICLR
68. 2025 Conformalized interactive imitation learning: handling expert shift & intermittent feedback.
M. Zhao, H. Admoni, R. Simmons, A. Ramdas, A. Bajcsy ICLR
67. 2025 Scalable causal structure learning via amortized conditional independence testing.
J. Leiner, B. Manzo, A. Ramdas, W. Tansey [long oral](#) CLEAR
66. 2025 Logarithmic Neyman regret for adaptive estimation of the average treatment effect.
O. Neopane, A. Ramdas, A. Singh AISTATS
65. 2025 Sequential Kernelized Stein Discrepancy.
D. Martinez-Taboada, A. Ramdas AISTATS
64. 2024 Bias detection via signaling.
T. Lin, I. Shapira, A. Ramdas, Y. Chen, A. Procaccia NeurIPS
63. 2024 Total variation floodgate for variable importance inference in classification.
W. Wang, L. Janson, L. Lei, A. Ramdas ICML
62. 2024 Reducing sequential change detection to sequential estimation.
S. Shekhar, A. Ramdas ICML
61. 2024 Differentially private conditional independence testing.
I. Kalemaj, S. Kasivishwanathan, A. Ramdas AISTATS
60. 2024 Testing exchangeability by pairwise betting.
A. Saha, A. Ramdas [long oral](#) AISTATS
59. 2024 Online multiple testing with e-values.
Z. Xu, A. Ramdas AISTATS
58. 2024 Graph fission and cross-validation.
J. Leiner, A. Ramdas AISTATS
57. 2024 Deep anytime-valid hypothesis testing.
T. Pandeva, P. Forré, A. Ramdas, S. Shekhar AISTATS
56. 2024 Semiparametric efficient inference for adaptive experiments.
T. Cook, A. Mishler, A. Ramdas CLEAR
55. 2023 An efficient doubly-robust test for the kernel treatment effect.
D. Martinez-Taboada, E. Kennedy, A. Ramdas NeurIPS
54. 2023 Counterfactually comparing abstaining classifiers.
YJ. Choe, A. Gangrade, A. Ramdas NeurIPS
53. 2023 Sequential predictive two-sample and independence testing.
A. Podkopaev, A. Ramdas NeurIPS

52. 2023 Adaptive privacy composition for accuracy-first mechanisms.
R. Rogers, S. Wu, G. Samorodnitsky, A. Ramdas NeurIPS
51. 2023 Auditing fairness by betting.
B. Chugg, S. Cortes-Gomez, B. Wilder, A. Ramdas [spotlight](#) NeurIPS
50. 2023 On the sublinear regret of GP-UCB.
J. Whitehouse, S. Wu, A. Ramdas NeurIPS
49. 2023 Risk-limiting financial audits via weighted sampling without replacement.
S. Shekhar, Z. Xu, Z. Lipton, P. Liang, A. Ramdas UAI
48. 2023 Fully adaptive composition in differential privacy.
J. Whitehouse, A. Ramdas, S. Wu, R. Rogers ICML
47. 2023 Nonparametric extensions of randomized response for private confidence sets.
I. Waudby-Smith, S. Wu, A. Ramdas [oral](#) ICML
46. 2023 Sequential change detection via backward confidence sequences.
S. Shekhar, A. Ramdas ICML
45. 2023 Online Platt scaling with calibrating.
C. Gupta, A. Ramdas ICML
44. 2023 Sequential kernelized independence testing.
A. Podkopaev, P. Bloebaum, S. Kasivishwanathan, A. Ramdas ICML
43. 2023 Anytime-valid confidence sequences in an enterprise A/B testing platform.
A. Maharaj, R. Sinha, D. Arbour, I. Waudby-Smith, S. Liu, M. Sinha, R. Addanki, A. Ramdas, M. Garg, V. Swaminathan The Web Conf (WWW)
42. 2023 Huber-robust confidence sequences.
H. Wang, A. Ramdas [long oral](#) AISTATS
41. 2022 Brownian noise reduction: maximizing privacy subject to accuracy constraints.
J. Whitehouse, A. Ramdas, S. Wu, R. Rogers NeurIPS
40. 2022 A permutation-free kernel two sample test.
S. Shekhar, I. Kim, A. Ramdas [long oral](#) NeurIPS
39. 2022 Faster online calibration without randomization: interval forecasts and power of two choices.
C. Gupta, A. Ramdas COLT
38. 2022 Top-label calibration and multiclass-to-binary reductions.
C. Gupta, A. Ramdas ICLR
37. 2022 Tracking the risk of a deployed model and detecting harmful distribution shifts.
A. Podkopaev, A. Ramdas ICLR
36. 2022 Interactive rank testing by betting.
B. Duan, L. Wasserman, A. Ramdas [long oral](#) CLEAR
35. 2021 A unified framework for bandit multiple testing.
N. Xu, R. Wang, A. Ramdas NeurIPS
34. 2021 RiLACS: risk limiting audits via confidence sequences.
I. Waudby-Smith, P. Stark, A. Ramdas EVoteID
[Best Paper Award](#)
33. 2021 Distribution-free uncertainty quantification for classification under label shift.
A. Podkopaev, A. Ramdas [long oral](#) UAI
32. 2021 Best arm identification in additive transfer bandits.
O. Neopane, A. Singh, A. Ramdas Asilomar
[Best Student Paper Award](#)
31. 2021 Distribution-free calibration guarantees for uniform-mass binning without sample splitting.
C. Gupta, A. Ramdas ICML
30. 2021 Off-policy confidence sequences.
N. Karampatziakis, P. Mineiro, A. Ramdas ICML
29. 2021 Dynamic algorithms for online multiple testing.
N. Xu, A. Ramdas Math and Sci ML
28. 2021 Uncertainty quantification using martingales for misspecified Gaussian processes.
W. Neiswanger, A. Ramdas ALT
27. 2020 Confidence sequences for sampling without replacement.
I. Waudby-Smith, A. Ramdas [spotlight](#) NeurIPS

26. 2020 Distribution-free binary classification: prediction sets, confidence intervals and calibration.
C. Gupta, A. Podkopaev, A. Ramdas [spotlight](#) [NeurIPS](#)
25. 2020 Familywise error rate control by interactive unmasking.
B. Duan, A. Ramdas, L. Wasserman [ICML](#)
24. 2020 Conditional versus marginal bias in multi-armed bandits.
J. Shin, A. Ramdas, A. Rinaldo [ICML](#)
23. 2020 Online control of the false coverage rate and false sign rate.
A. Weinstein*, A. Ramdas* [ICML](#)
22. 2020 The power of batching in multiple hypothesis testing.
T. Zrnic, D. Jiang, A. Ramdas, M. Jordan [AISTATS](#)
21. 2020 Analyzing student strategies in blended courses using clickstream data.
N. Akpinar, A. Ramdas, U. Acar [long oral](#) [Edu. Data Mining](#)
20. 2019 Conformal prediction under covariate shift.
R. Tibshirani, R. Barber, E. Candes, A. Ramdas [NeurIPS](#)
19. 2019 A higher order Kolmogorov-Smirnov test.
V. Sadhanala, Y. Wang, A. Ramdas, R. Tibshirani [long oral](#) [AISTATS](#)
18. 2019 Are sample means in multi-armed bandits positively or negatively biased?.
J. Shin, A. Ramdas, A. Rinaldo [spotlight](#) [NeurIPS](#)
17. 2019 ADDIS: an adaptive discarding alg. for online FDR control with conservative nulls.
J. Tian, A. Ramdas [NeurIPS](#)
16. 2018 SAFFRON: an adaptive algorithm for online FDR control.
A. Ramdas, T. Zrnic, M. Wainwright, M. Jordan [long oral](#) [ICML](#)
15. 2017 Online control of the false discovery rate with decaying memory.
A. Ramdas, F. Yang, M. Wainwright, M. Jordan [long oral](#) [NeurIPS](#)
14. 2017 MAB-FDR: Multi (A)rmed/(B)andit testing with online FDR control.
F. Yang, A. Ramdas, K. Jamieson, M. Wainwright [spotlight](#) [NeurIPS](#)
13. 2017 QuTE: decentralized multiple testing on sensor networks with FDR control.
A. Ramdas, J. Chen, M. Wainwright, M. Jordan [IEEE CDC](#)
12. 2017 Generative models and model criticism via optimized Maximum Mean Discrepancy.
D. Sutherland, H. Tung, H. Strathmann, S. De, A. Ramdas, A. Smola, A. Gretton [ICLR](#)
11. 2016 Sequential nonparametric testing using the law of the iterated logarithm.
A. Balasubramani*, A. Ramdas* [UAI](#)
10. 2016 Minimax lower bounds for linear independence testing.
D. Isenberg*, A. Ramdas*, A. Singh, L. Wasserman [IEEE ISIT](#)
9. 2016 Asymptotic behavior of ℓ_q -based Laplacian regularization in semi-supervised learning.
A. El-Alaoui, X. Cheng, A. Ramdas, M. Wainwright, M. Jordan [COLT](#)
8. 2015 Fast two-sample testing with analytic representations of probability measures.
K. Chwialkowski, A. Ramdas, D. Sejdinovic, A. Gretton [NeurIPS](#)
7. 2015 High-dimensional power of linear-time two-sample tests for mean-shift alternatives.
S. Reddi*, A. Ramdas*, B. Poczos, A. Singh, L. Wasserman [AISTATS](#)
6. 2015 On the decreasing power of kernel- & distance-based hyp. tests in high dimensions.
A. Ramdas*, S. Reddi*, B. Poczos, A. Singh, L. Wasserman [AAAI](#)
5. 2015 Nonparametric independence testing for small sample sizes.
A. Ramdas*, L. Wehbe* [long oral](#) [IJCAI](#)
4. 2014 Margins, kernels and non-linear smoothed perceptrons.
A. Ramdas, J. Peña [long oral](#) [ICML](#)
3. 2014 An analysis of active learning with uniform feature noise.
A. Ramdas, B. Poczos, A. Singh, L. Wasserman [long oral](#) [AISTATS](#)
2. 2013 Optimal rates for stochastic convex optimization under Tsybakov noise condition.
A. Ramdas, A. Singh [long oral](#) [ICML](#)
1. 2013 Algorithmic connections between active learning & stochastic convex optimization.
A. Ramdas, A. Singh [long oral](#) [ALT](#)

Under Review

- (arXiv) On the near-optimality of betting confidence sets for bounded means.
S. Shekhar, A. Ramdas revised, Information & Inference
- (arXiv) Locally minimax optimal confidence sets for the best model.
I. Kim, A. Ramdas submitted, JASA
- (arXiv) Distribution-uniform strong laws of large numbers.
I. Waudby-Smith, M. Larsson, A. Ramdas revised, AoAP
Winner, Statistical Society of Canada, Student Paper Award
- (arXiv) An online generalization of the (e-)Benjamini-Hochberg procedure.
L. Fischer, Z. Xu, A. Ramdas submitted, JMLR
- (arXiv) Mean estimation in smooth Banach spaces under infinite variance & martingale dependence.
J. Whitehouse, B. Chugg, D. Martinez-Taboada, A. Ramdas revised, SPA
- (arXiv) More powerful multiple testing under dependence via randomization.
Z. Xu, A. Ramdas revised, Bernoulli
- (arXiv) Admissible online closed testing must employ e-values.
L. Fischer, A. Ramdas revised, JRSSB
- (arXiv) Post-detection inference for sequential changepoint localization.
A. Saha, A. Ramdas revised, JRSSB
- (arXiv) Asymptotic and compound e-values: multiple testing and empirical Bayes.
N. Ignatiadis, R. Wang, A. Ramdas submitted, Bernoulli
- (arXiv) Conditional independence testing for multivariate nonstationary nonlinear time series.
M. Wieck-Sosa, M. Haddad, A. Ramdas revision, JBES
- (arXiv) Active multiple testing with proxy p-values and e-values.
Z. Xu, C. Wang, L. Wasserman, K. Roeder, A. Ramdas submitted, JASA
- (arXiv) Quantum sequential universal hypothesis testing.
M. Zecchin, O. Simeone, A. Ramdas submitted, NPJQI
- (arXiv) Nonasymptotic and distribution-uniform Komlós-Major-Tusnády approximation.
I. Waudby-Smith, M. Larsson, A. Ramdas submitted, PTRF
- (arXiv) Offline changepoint localization using a matrix of conformal p-values.
S. Dandapanthula, A. Ramdas revised, TMLR
- (arXiv) Optimal transportation and alignment between Gaussian measures.
S. Dandapanthula, A. Podkopaev, S. Kasiviswanathan, A. Ramdas, Z. Goldfeld submitted, MathOR
- (arXiv) Gradient descent for deep equilibrium single-index models.
S. Dandapanthula, A. Ramdas submitted, COLT
- (arXiv) Conformal changepoint localization.
R. Hore, A. Ramdas submitted, Biometrika
- (arXiv) Merging uncertainty sets via majority vote.
M. Gasparin, A. Ramdas submitted, Statistica Sinica
- (arXiv) Bringing closure to FDR control: a general principle for multiple testing.
Z. Xu, A. Solari, L. Fischer, R. de Heide, A. Ramdas, J. Goeman submitted, JRSSB
- (arXiv) Distribution-uniform anytime-valid sequential inference.
I. Waudby-Smith, E. Kennedy, A. Ramdas submitted, Biometrika
- (arXiv) Theoretical guarantees for change localization using conformal p-values.
S. Bhattacharyya, A. Ramdas submitted, COLT
- (arXiv) A variational approach to dimension-free self-normalized concentration.
B. Chugg, A. Ramdas submitted, COLT
- (arXiv) Closed-form empirical Bernstein confidence sequences for scalars and matrices .
B. Chugg, A. Ramdas submitted, COLT
- (arXiv) Operationalizing Stein's method for online linear optimization: CLT-based optimal tradeoffs.
Z. Zhang, A. Ramdas submitted, COLT
- (arXiv) On the almost sure null bankruptcy of betting strategies.
H. Wang, S. Agrawal, A. Ramdas submitted, COLT
- (arXiv) Adaptive off-policy inference for M-estimators under model misspecification .
J. Leiner, R. Dunn, A. Ramdas submitted, OR

- (arXiv) Sharp empirical Bernstein bounds for the variance of bounded random variables.
D. Martinez-Taboada, A. Ramdas submitted, ICML
- (arXiv) Conformal online model aggregation.
M. Gasparin, A. Ramdas submitted, UAI
- (arXiv) Rao-Blackwellized e-variables.
D. de Roos, B. Chugg, P. Grunwald, A. Ramdas submitted, Biometrika
- (arXiv) Intrinsic dimension concentration inequalities for self-adjoint operators.
D. Martinez-Taboada, A. Ramdas submitted, COLT
- (arXiv) Multiple testing in multi-stream sequential change detection.
S. Dandapanthula, A. Ramdas submitted, Bernoulli
- (arXiv) Improving the adjusted BH method using e-values in knockoff-assisted variable selection.
A. Biswas, A. Ramdas submitted, JSPI
- (arXiv) An asymptotic law of the iterated logarithm for KL-inf.
A. Ram, A. Ramdas submitted, COLT
- (arXiv) Online monotone density estimation and log-optimal calibration.
R. Hore, R. Wang, A. Ramdas submitted, COLT
- (arXiv) Asymptotically optimal sequential change-detection for bounded means.
A. Ram, A. Ramdas submitted, COLT
- (arXiv) Tighter confidence intervals for sampling without replacement via empirical rate functions.
S. Shekhar, A. Ramdas submitted, COLT
- (arXiv) A complete characterization of testable hypotheses.
M. Larsson, J. Ruf, A. Ramdas submitted, PNAS
- (pre) Improving online FDR procedures via online analogs of e-closure and compound e-values.
N. Xu, L. Fischer, A. Ramdas submitted, UAI
- (pre) Optimal e-values under constraints.
A. Saha, A. Ramdas submitted, UAI

Working papers

- (arXiv) On stopping times of power-one sequential tests: tight lower and upper bounds.
S. Agrawal, A. Ramdas
- (arXiv) Anytime-valid inference for double/debiased machine learning of causal parameters.
A. Dalal, P. Blöbaum, S. Kasivishwanathan, A. Ramdas
- (pre) E-values as evidence.
B. Chugg, A. Ramdas, P. Grunwald
- (arXiv) Admissible anytime-valid sequential inference must rely on nonnegative martingales.
A. Ramdas, J. Ruf, M. Larsson, W. Koolen
- (arXiv) Universal sequential changepoint detection of quantum observables via classical shadows.
M. Zecchin, O. Simeone, A. Ramdas
- (psyarXiv) Practical maximally flexible sampling designs for experiments based on e-values.
A. Ly, U. Boehm, P. Grünwald, A. Ramdas, D. van Ravenzwaaij
- (pre) The lady keeps tasting coffee.
A. Ramdas, L. Wehbe
- (arXiv) Testing by betting while borrowing and bargaining.
H. Wang, M. Perez-Ortiz, W. Koolen, A. Ramdas
- (pre) Universality, admissibility and log-optimality of e-detectors.
A. Ram, A. Ramdas
- (pre) Simultaneously optimal sequential tests.
A. Ram, A. Ramdas
- (pre) A LIL lower bound for sequential change detection delay.
A. Ram, A. Ramdas
- (pre) The optimal betting wealth growth rate.
A. Ram, A. Ramdas
- (arXiv) A tiny but uniform improvement to adaptive FDR procedures using compound e-values.
N. Ignatiadis, R. Wang, A. Ramdas

- (arXiv) Besag-Clifford e-values for unnormalized testing.
A. Dombowsky, B. Engelhardt, A. Ramdas
- (arXiv) Post-hoc large sample statistical inference.
B. Chugg, E. Gauthier, M. Jordan, A. Ramdas, I. Waudby-Smith

Miscellaneous articles

- 2025 Matrix concentration: order versus anti-order.
R. Malekian, A. Ramdas [technical report](#)
- 2025 Density estimation with atoms, and functional estimation for mixed discrete-continuous data.
A. Saha, A. Ramdas [technical report](#)
- 2025 Rejoinder for the discussion of “Data Fission”.
J. Leiner, B. Duan, L. Wasserman, A. Ramdas [J Amer Stat Assoc](#)
- 2025 Discussion of “Poisson-focus: An efficient online method for ... gamma ray burst detection”.
A. Saha, A. Ramdas [J Amer Stat Assoc](#)
- 2024 Discussion of “Safe Testing”.
M. Larsson, A. Ramdas, J. Ruf [J Royal Stat Soc B](#)
- 2024 Rejoinder for the discussion of “Estimating means of bounded random variables by betting”.
I. Waudby-Smith, A. Ramdas [J Royal Stat Soc B](#)
- 2023 Discussion of “A note on universal inference”.
L. Wasserman, A. Ramdas, S. Balakrishnan [STAT](#)
- 2022 A sequential test for log-concavity.
A. Gangrade, A. Rinaldo, A. Ramdas [technical report](#)
- 2021 Discussion of “Testing by betting”.
A. Ramdas [J Royal Stat Soc A](#)
- 2019 Discussion of “Covariate-assisted ranking and screening for two-sample inference”.
A. Ramdas [J Royal Stat Soc B](#)
- 2015 Adaptivity & comp.-Stat tradeoffs for high-dimensional two-sample testing.
A. Ramdas, S. Reddi, B. Poczos, A. Singh, L. Wasserman [technical report](#)
- 2015 Computational and Statistical Advances in Testing and Learning.
A. Ramdas [CMU PhD Thesis](#)
[Umesh K. Gavaskar Memorial Thesis Award](#)
- 2011 Algorithms for graph similarity and subgraph matching.
D. Koutra, A. Parikh, A. Ramdas, J. Xiang [technical report](#)

Presentations

Slides and videos to several talks and tutorials are linked from my website. Keynote talks are mentioned under Awards and Honors.

Tutorials, Summer Schools, etc.

- 2025 Game-theoretic statistics: e-values, betting and martingales (2.5hrs) (ICML, Vancouver)
- 2024 Game-theoretic statistics: e-values, betting and martingales (15hrs) (Columbia Univ., USA)
- 2024 Game-theoretic statistics: e-values, betting and martingales (6hrs) (GeorgiaTech, USA)
- 2023 Game-theoretic statistics: e-values, betting and martingales (2hrs) (Lunteren, Netherlands)
- 2022 Anytime-valid inference and game-theoretic statistics (5hrs) (CUSO, Switzerland)
- 2022 Anytime-valid inference and game-theoretic statistics (3hrs) (SAVI, Eindhoven)
- 2022 Distribution-free predictive inference (2.5hrs) (NCC, Bombay)
- 2022 Conformal prediction (2hrs) (Amazon, Berlin)
- 2021 Distribution-free calibration (1.5hrs) (MLCS, Toulouse)
- 2020 Conformal prediction (2hrs) (Learning Theory W'shop, TIFR)
- 2019 Large-scale sequential experimentation (4hrs) (KDD, Alaska)

University Seminars

- 2025 Model confidence sets (Knoxville, Stat)
- Model confidence sets (NCSU, Stat)
- Game-theoretic statistics and safe, anytime-valid inference (UCSF, Biostat)

	Model confidence sets	(Wharton, Stat)
	Model confidence sets	(Yale, Stat)
	Model confidence sets	(Berkeley, CLIMB)
	Model confidence sets	(Chicago, Stat)
	Sequential causal inference	(NISS Webinar)
	Game-theoretic statistics and safe, anytime-valid inference	(IISA Webinar)
	Sequential causal inference	(ENAR Webinar)
2024	Game-theoretic statistics and safe, anytime-valid inference	(Stanford, Stat)
	Merging uncertainty sets via majority vote	(CMU, AI-SDM)
	Game-theoretic statistics and safe, anytime-valid inference	(Berkeley, Stat)
	The numeraire e-variable and reverse information projection	(Yale, Data Science)
	The numeraire e-variable and reverse information projection	(UPitt, OR)
	Game-theoretic statistics and safe, anytime-valid inference	(UF, Stat)
	A martingale theory of evidence	(WashU, Stat)
	Game-theoretic statistics and safe, anytime-valid inference	(JHU, Stat)
	Game-theoretic statistics and safe, anytime-valid inference	(UTAustin, Stat)
2023	Game-theoretic statistics and safe, anytime-valid inference	(EPFL, Stat)
	Game-theoretic statistics and safe, anytime-valid inference	(MIT, EECS)
	Randomized improvements to Markov's inequality	(PennState, Stat)
	Estimating means of bounded random variables by betting	(NTU Athens, CS)
	Conformal prediction under distribution shift	(UAmsterdam, CS)
	Distribution-free inference under distribution shift	(McWilliams, Cosmology)
	Randomized improvements to Markov's inequality	(Cambridge, Stat)
2022	Conformal prediction beyond exchangeability	(ETH Zurich, CS)
	Estimating means of bounded random variables by betting	(Rutgers, Stat)
	Game-theoretic statistics	(Geneva, Stat)
	Conformal prediction beyond exchangeability	(Ecole Poly, Stat)
2021	Universal inference, e-values and multiple testing	(Mich State U, Stat)
	Universal inference, e-values and multiple testing	(Duke, BioStat)
	Comparing sequential forecasters	(USC, Marshall)
	Comparing sequential forecasters	(UC Boulder, CS)
	Universal inference, e-values and multiple testing	(UC Riverside, Stat)
	Sequential, interactive, dimension-agnostic inference	(CERN, Stat/Phy)
	Estimating means of bounded random variables by betting	(ETH, Stat)
	Estimating means of bounded random variables by betting	(Iowa, Stat)
	Distribution-free uncertainty quantification: conformal and calibration	(MBZUAI, CS)
	Distribution-free multi-class calibration	(UFSCAR, Stat)
2020	Dimension-agnostic inference	(Ecole Poly., Stat/Prob)
	Distribution-free inference: conformal prediction and calibration	(UToulouse, Stat/ML)
	The lady keeps tasting coffee	(UGA, Stat)
	Betting scores, e-values and martingales	(Rutgers, Prob)
	Online multiple testing	(UNC, Biostat)
	Election auditing via confidence sequences for sampling w/o replacement	(UWaterloo, Stat)
	Election auditing via confidence sequences for sampling w/o replacement	(CMU, Theory)
	Assumption-free prediction intervals for black-box regression algorithms	(Princeton, IAS)
2019	Uniform, nonasymptotic, nonparametric confidence sequences	(Columbia, Prob)
	Bias, risk and consistency of sample means in multi-armed bandits	(Rice, ECE)
	Uniform, nonasymptotic, nonparametric confidence sequences	(McGill, Stat)
	Exponential line-crossing inequalities	(MIT, IDSS)
	Bias, risk and consistency of sample means in multi-armed bandits	(Berkeley, EE)
	Quantiles for bandits and RL	(Mila, CS)
	Doubly-sequential experimentation	(IU, Psych)

2018	Sequential estimation of coin bias and nonparametric generalizations	(Oxford, CSML)
	A new framework for large-scale sequential A/B testing	(IIT Delhi, CS)
	Interactive algorithms for multiple hypothesis testing	(USC, Marshall)
	Exponential line-crossing inequalities	(USC, Math)
	Uniform, nonasymptotic, nonparametric confidence sequences	(Bocconi Milan, DS)
	Interactive algorithms for multiple hypothesis testing	(UCSD, Math)
	Interactive algorithms for multiple hypothesis testing	(UC Davis, Stat)
	Interactive algorithms for multiple hypothesis testing	(UIUC, Stat)
	Interactive algorithms for multiple hypothesis testing	(GaTech, ISyE)
	From stopping times to spotting times in multiple testing	(Stanford, Stat)
	Towards “simultaneous selective inference”	(Berkeley, Stat)
	From stopping times to spotting times in multiple testing	(Princeton, ORFE)
	From stopping times to spotting times in multiple testing	(Cambridge, Stat)
	Towards “simultaneous selective inference”	(UMich., Stat)
	Interactive algorithms for multiple hypothesis testing	(CMU, Stat)
	Towards “simultaneous selective inference”	(Wharton, Stat)
	Towards “simultaneous selective inference”	(EPFL, Math.)
	A new framework for large-scale sequential A/B testing	(EPFL, CS)
	A new framework for large-scale sequential A/B testing	(ETH Zurich, CS)
	Interactive algorithms for multiple hypothesis testing	(Caltech, CMS)
	Interactive algorithms for multiple hypothesis testing	(Duke, Stat)
	A new framework for large-scale sequential A/B testing	(UCL, Gatsby)
	Interactive algorithms for multiple hypothesis testing	(Columbia, Stat)
	Interactive algorithms for multiple hypothesis testing	(UChicago, Stat+Booth)
	Interactive algorithms for multiple hypothesis testing	(UWash., Stat)
	Interactive algorithms for multiple hypothesis testing	(Harvard, Stat)
	Interactive algorithms for multiple hypothesis testing	(Yale, Stat)
	Interactive algorithms for multiple hypothesis testing	(Cornell, Stat)
	A new framework for large-scale sequential A/B testing	(UIUC, CS)
	A new framework for large-scale sequential A/B testing	(Columbia, CS)
2017	DAGGER: A sequential algorithm for FDR control on DAGs	(Stanford, BioStat)
	DAGGER: A sequential algorithm for FDR control on DAGs	(UCB, BioStat seminar)
	STAR: Interactive multiple testing for structured FDR control	(Temple Univ., Stat)
	STAR: Interactive multiple testing for structured FDR control	(UTSW, Biomed.)
	Is reproducibility a problem in the tech industry?	(UCB, BAIR seminar)
	Multi (A)rmed/(B)andit testing with online FDR control	(UTSW, Biomed.)
	Multi (A)rmed/(B)andit testing with online FDR control	(CMU, ML/AI)
	Multi (A)rmed/(B)andit testing with online FDR control	(Stanford, MS&E)
	Multi (A)rmed/(B)andit testing with online FDR control	(UT Austin, ECE)
	QuTE: Decentralized FDR control on sensor networks	(UCB, BLISS seminar)
2016	False Discovery Rate: a tutorial and new directions	(IIT Bombay, EE)
	p-Filter: FDR control for grouped hypotheses	(Wharton, Stat)
	p-Filter: FDR control for grouped hypotheses	(Stanford, Stat)
	p-Filter: FDR control for grouped hypotheses	(UC Davis, Stat)
	Asymptotics of Laplacian regularization in semi-supervised learning	(CMU, ML)
2015	Adaptivity in high-dimensional two sample testing	(UC Berkeley, CS)
2014	Adaptivity in high-dimensional two sample testing	(Kyoto University, Stat)
	Adaptivity in high-dimensional two sample testing	(ISM Tachikawa, Stat)
	Fast & flexible algorithms for trend filtering	(Gatsby, Neuro.)
2013	Connecting active learning and stochastic optimization	(CMI Chennai, Math.)
	Connecting active learning and stochastic optimization	(IIT Madras, CS)

Industry Research Labs

2025	Sequential causal inference in experimental and observational settings	(Pfizer)
	Sequential causal inference in experimental and observational settings	(TGS, LA)
2024	Interactive identification of individuals with positive treatment effect	(Novartis)
	Merging uncertainty sets via majority vote	(Amazon, Berlin)
	A martingale theory of evidence	(NIAID, DC)
	Hypothesis testing with e-values	(Amazon, Berlin)
2023	Sequential change detection with e-processes	(Amazon, Berlin)
2022	Conformal prediction	(Bain, NY)
	Auditing elections: why and how?	(Amazon, Berlin)
	Conditional independence testing	(Amazon, Bay Area)
	Fully adaptive composition in differential privacy	(Google, NY)
	Doubly-sequential experimentation	(Google, Mountain View)
	Asymptotic confidence sequences	(Adobe, Bay Area)
2021	Auditing elections: why and how?	(MSR, NY)
	Doubly sequential experimentation	(Vinted, Lithuania)
	Universal inference, e-values and multiple testing	(Novartis)
2020	Interactive, sequential experimentation	(Berry Consultants, NY)
2019	A framework for asynchronous large-scale sequential testing	(Two Sigma, NY)
	A framework for asynchronous large-scale sequential testing	(MSR, Montreal)
	Sequential estimation of quantiles for A/B testing and bandits	(MSR, Redmond)
	Are bandit sample means positively or negatively biased?	(Google, Pittsburgh)
	A gentle introduction to conformal prediction	(MSR, Montreal)
2018	A new framework for large-scale sequential A/B testing	(MSR, New England)
2017	Is reproducibility a problem in the tech industry?	(Uber Research, SF)
	Is reproducibility a problem in the tech industry?	(AirBnB Research, SF)
2016	Sequential and multiple testing in modern ML	(Groupon Research, Palo Alto)
	p-Filter: FDR control for grouped hypotheses	(Lawrence National Labs, Livermore)
	Multiple testing issues in industry	(AmpLab industry retreat)
2015	Sequential nonparametric testing	(Alibaba Research, Seattle)
	Sequential nonparametric testing	(Google Research, Pittsburgh)
2014	Fast & flexible algorithms for trend filtering	(MSR, Cambridge)
2013	Active learning & stochastic optimization	(IBM Research, Bangalore)
2012	Connecting statistical & logical inference	(MSR, Cambridge)

Conference and Workshop Talks

2025	A martingale theory of evidence	(Vienna Cong. Math. Fin. keynote)
	Responding to erroneous criticisms about e-values	(BIRS)
	Conformal changepoint localization	(JSM)
	Private evolution converges	(IFDS)
	Discussant: multiple testing with p-values and e-values	(JSM)
	Sequential causal inference in experimental and observational settings	(NISS)
	Sequential causal inference in experimental and observational settings	(ENAR)
	Conformal changepoint localization	(HiTec)
	E-values for testing and decision making	(Symp. AI+Pharma plenary)
	Data fission	(Best of Stat Sci, TAMU Deely award)
	Conformal online model aggregation	(LNE UQ Day, Paris)
2024	Conformal online model aggregation	(AISTATS keynote)
	Hypothesis testing with e-values	(UWaterloo Stud Conf, keynote)
	Data fission: splitting a single sample	(JSM JASA discussion paper talk)
	Discussion: conditional permutation test	(JRSS webinar)
	Three new directions for game-theoretic statistics	(Oberwolfach)

	E-processes and e-detectors	(Allerton)
	E is the new P	(NAS Kavli)
2023	A nonparametric extension of Warner's randomized response	(JSM award talk)
	Estimating means of bounded random variables by betting	(JRSS discussion paper talk)
	Advances in multiple testing: negative dependence and randomization	(ISSI)
	E-detectors and backward confidence sequences	(Warwick)
	Distribution-free uncertainty quantification under distribution shift	(UAI)
	A unified recipe for deriving (time-uniform) PAC-Bayes bounds	(ICML)
	Randomized improvements to Markov's inequality	(ASA)
2022	Online nonparametric changepoint detection with e-detectors	(CISS)
	E-values as unnormalized weights in multiple testing	(ISSI)
	Interactive rank testing by betting	(CLEAR)
	Safe anytime-valid inference in bandit data analysis	(OneWorld)
	Universal inference	(BFF)
2021	Interactive and online multiple testing	(JRSS Webinar)
	A semiparametric approach to variable importance	(JSM)
	Distribution-free uncertainty quantification	(IFDS Madison)
	Martingales, e-values and betting	(IMS World Stat Congress award talk)
	Estimating means of bounded random variables by betting	(ICON-STARF)
	Online multiple testing	(MCP)
	Interactive multiple testing	(MRC Cambridge)
2020	Universal inference using the split likelihood ratio test	(ITA)
	Confidence sequences and nonparametric supermartingales	(ISSI)
	UQ using martingales for misspecified Gaussian processes	(ICML Active Learning Wshop)
	Universal inference using the split likelihood ratio test	(Marseille Luminy)
	Betting scores, e-values and martingales	(JRSS discussion)
2019	Interactive FDR control with a human-in-the-loop	(ISI-YSM)
	Theoretical guarantees for doubly sequential experimentation	(UCSD Data Science)
	A unified framework for martingale concentration inequalities	(ITA)
	Online control of the false coverage rate	(WHOA-PSI4)
	The state-of-the-art in online multiple testing	(MCP)
	Simultaneous inference in sequential analysis	(ICSA)
	A tutorial on conformal prediction	(IPAM)
	Are sample means in multi-armed bandits positively or negatively biased?	(Asilomar)
2018	Towards "simultaneous selective inference"	(WHOA-PSI3)
	Towards "simultaneous selective inference"	(CMStat)
	SAFFRON: an adaptive algorithm for online FDR control	(ICML)
	Towards "simultaneous selective inference"	(CiMi)
	Uniform nonasymptotic confidence sequences for sequential estimation	(INI)
2017	On kernel methods for covariates that are rankings	(CNA)
	Online FDR control with decaying memory	(NeurIPS)
	QuTE: decentralized multiple testing on sensor networks with FDR control	(CDC)
	A unified treatment of multiple testing with prior knowledge	(MCP)
	Optimal rates and tradeoffs in multiple testing	(MCP)
	Optimal rates and tradeoffs in multiple testing	(ICSA)
	Sequential nonparametric testing using the law of the iterated logarithm	(ITA)
	The power of online thinning in reducing discrepancy	(MCM)
	The power of online thinning in reducing discrepancy	(IISA)
	STAR: Interactive multiple testing for structured FDR control	(WHOA-PSI2)
2016	A unified framework for multiple testing with prior knowledge	(NeurIPS WADAPT)
	Sequential nonparametric testing using the law of the iterated logarithm	(Lorentz)
	Function-specific mixing times and concentration away from equilibrium	(MCQMC)

	Minimax bounds for linear independence testing	(ISIT)
	Function-specific mixing times and concentration away from equilibrium	(ISBA)
	Beyond worst-case mixing times for markov chains	(ITA)
2015	Nonparametric independence testing for small sample sizes	(IJCAI)
	Adaptivity in high-dimensional two-sample testing	(JSM)
	Sequential nonparametric testing using the law of the iterated logarithm	(IWSM)
2014	Margins, kernels and nonlinear smoothed perceptrons	(ICML)
	Active learning with uniform feature noise	(AISTATS)
2013	Connecting convex optimization and active learning	(NeurIPS OPT)
	Algorithmic connections between convex optimization and active learning	(ALT)
	Optimal convex optimization under Tsybakov noise condition	(ICML)

Teaching

Courses taught

Designed and offered 10 new semester-long courses. Syllabi, lecture notes, etc, are all linked from my website.

2026 (S)	Optimization in ML (PhD),	<i>Co-Instructor + B. Póczos.</i>
2024 (F)	Corporate Capstone (UG),	<i>Co-Instructor + G. Mena.</i>
2024 (S)	Game-theoretic probability, statistics and learning (PhD),	<i>Instructor.</i>
2023 (S)	The ABCDE of Statistical Methods in Machine Learning (PhD),	<i>Instructor.</i>
2022 (F)	Voting (UG),	<i>Co-instructor + L. Tetrault (Hist.).</i>
2022 (S)	The ABCDE of Statistical Methods in Machine Learning (PhD),	<i>Instructor.</i>
2021 (F)	Historical advances in machine learning (PhD),	<i>Instructor.</i>
2021 (S)	Game-theoretic statistics (PhD),	<i>Co-instructor + G. Shafer (Rutgers), R. Wang (Waterloo).</i>
2021 (S)	The ABCDE of Statistical Methods in Machine Learning (PhD),	<i>Instructor.</i>
2020 (F)	Voting (UG),	<i>Co-instructor + T. Seidenfeld (Phil.), L. Tetrault (Hist.).</i>
2020 (S)	The ABCDE of Statistical Methods in Machine Learning (PhD),	<i>Instructor.</i>
2019 (F)	Statistical methods for reproducibility (PhD),	<i>Instructor.</i>
2019 (S)	Introduction to Machine Learning (PhD),	<i>Co-instructor + L. Wehbe (ML).</i>
2018 (F)	Martingales and sequential analysis (PhD),	<i>Instructor.</i>

Teacher Training

- 2013-15 Completed "Future Faculty" training program by CMU's Eberly Center (transcript available).
- 2014-20 Training Seminars: Course & syllabus design, Promoting peer learning, Planning & delivering effective lectures, Leveraging diversity & promoting equity, Conducting productive discussions, Engaging students in active learning, Good assessment practices, Bias-busters

Grants (or awards/gifts)

- 2024-26 Sloan Fellowship in Mathematics (FG-2024-22012). "Foundations of Game-Theoretic Statistics". Sole PI, \$75,000 over 2 years (awarded 05/03/2024).
- 2023-28 NSF IIS-2229881. "AI Institute for Societal Decision Making". Multi-PI (+Aarti Singh, Ariel Procaccia, Sham Kakade, etc.), \$20,000,000 over 5 years (awarded 04/25/2023).
- 2023-26 NSF DMS-2310718. "Game theoretic statistics and safe anytime-valid inference". Sole PI. \$160,000 over 3 years (awarded 05/17/2023).
- 2022-27 NSF CSSI 2209819. "Frameworks for Intelligent Adaptive Experimentation: Enhancing and Tailoring Digital Education". Multi-PI (+Joseph Williams, John Stamper, Norman Bier, Jeff Carver, Steve Ritter), \$3,000,000 over 5 years (awarded 08/01/2022).
- 2024-25 PricewaterhouseCoopers Research Grant. "Extensions and Applications of Efficient AI-Enhanced Auditing". Multi-PI (+Pierre Liang, Zachary Lipton), \$442,250 over 1 year (awarded 04/29/2024).
- 2023-24 Dietrich Seed Grant. "Forecasting military coups" (+John Chin), \$25,000.

- 2022 Google [Research Scholar Award](#). "Structured uncertainty quantification for machine learning" Sole PI, \$60,000.
- 2022 Citadel Gift (+ YJ Choe's Citadel PhD summit award). Sole PI, \$10,000.
- 2021 Bloomberg Gift (+ Chirag Gupta's Bloomberg PhD student fellowship). Sole PI, \$15,000.
- 2021-22 PricewaterhouseCoopers Research Grant. "Efficient AI-Enhanced Financial Statement Auditing with Statistical Guarantees". Multi-PI (+Pierre Liang, Zachary Lipton), \$407,500 over 1 year (awarded 10/01/2021).
- 2021-23 Army Research Lab Grant W911NF-17-2-0196 (IoBT CRA). "Enabling the Safe and Responsible Use of RL". Multi-PI (+Philip Thomas, Emma Brunskill, Nan Jiang), \$760,000 over 18 months (awarded 02/01/2021).
- 2021-24 NSF DMS (CDS&E-MSS) 2053804. "Statistical Procedures and Performance Measures for Simulator-Based Frequentist Inference". Multi-PI (+Ann Lee, Mikael Kuusela), \$425,000 over 3 years (awarded 07/01/2021).
- 2020-25 NSF DMS 1945266 ([CAREER award](#)). "Online multiple hypothesis testing: a comprehensive treatment". Sole PI, \$400,000 over 5 years (awarded 11/15/2019).
- 2020-22 Block Center Grant. "Developing and deploying risk-limiting election audits with continuous monitoring". Sole PI, \$40,000 over two years.
- 2019 Adobe [Faculty Research Award](#). "Quantile-based A/B testing and multi-armed bandits". Sole PI, \$80,000.
- 2019-21 Berkman Faculty Fellowship. Sole PI, \$5,000 over two years.
- 2019-22 NSF DMS 1916320. "Nonparametric confidence sequences and their applications". Sole PI, \$160,000 over 3 years (awarded 7/30/2019).

Mentorship

- 2020 Completed active listening training session by CMU's Counseling and Psychological Services.

Postdoctoral researchers

- 2025-26 Rohan Hore (StatDS).
- 2024-25 Shubhada Agrawal (StatDS).
Next position: Assistant Professor in ECE, IISc
- 2021-24 Shubhanshu Shekhar (StatDS).
Next position: Assistant Professor in EECS, Univ. Michigan
- 2022-23 Aditya Gangrade (StatDS, joint with A. Rinaldo).
Next position: Postdoctoral researcher, Univ. Michigan
- 2019-20 Eugene Katsevich (StatDS, joint with K. Roeder).
Next position: Assistant Professor, Wharton (UPenn) Statistics
- 2018-19 Asaf Weinstein (StatDS, joint with M. Gavish).
Next position: Assistant Professor, HUJI Statistics

Graduated PhD students

- 2025 Ojash Neopane (MLD, joint with Aarti Singh),
Topic: Advances in adaptive causal inference [NSF Fellowship](#).
Next position: TBD
- 2024 Justin Whitehouse (CSD, joint with Steven Wu),
Topic: Modern martingale methods for sequential estimation [NSF Fellowship](#).
Next position: Postdoctoral researcher, Stanford
- 2024 Ian Waudby-Smith (StatDS; externals: S. Murphy, S. Wager),
Topic: Anytime-valid sequential inference [Amazon Fellowship](#).
Next position: Postdoctoral researcher, UC Berkeley
- 2023 Aleksandr Podkopaev (StatDS+MLD; externals: R. Barber, S. Kasivishwanathan),
Topic: Uncertainty quantification under distribution shifts.
Next position: Data Scientist, Walmart
- 2023 Chirag Gupta (MLD; externals: D. Foster, V. Perchet),
Topic: Post-hoc calibration without distributional assumptions [Bloomberg Fellowship](#).
Next position: Data Scientist, Bloomberg

- 2023 YJ Choe (StatDS+MLD; externals: J. Ziegel, A. d'Amour),
Topic: Comparing sequential forecasters and abstaining classifiers.
 Current position: Faculty, INSEAD, Singapore
- 2021 Boyan Duan (StatDS, joint with L. Wasserman; externals: P. Grunwald, W. Fithian),
Thesis: Advances in interactive testing.
 Next position: Data Scientist, Google
- 2021 Robin Dunn (StatDS, joint with L. Wasserman; externals: S. Murphy, R. Martin),
Thesis: Advances in universal inference [NSF Fellowship](#).
 Next position: Data Scientist, Novartis
- 2020 Jaehyeok Shin (StatDS, joint with A. Rinaldo; externals: G. Lugosi, S. Rakhlin),
Thesis: Bias of the sample mean in multi-armed bandits.
 Next position: Data Scientist, Google

Soon-to-graduate PhD student advisees

- 2026 Neil Xu (StatDS),
Topic: Advances in post-selection inference with e-values.
 Next position: Researcher, Meta
- 2026 James Leiner (StatDS),
Topic: Selective inference with a human-in-the-loop.
- 2026 Hongjian Wang (StatDS),
Topic: Point estimation with e-statistics.
 Next position: Quant, Citadel
- 2026 Diego Martinez-Taboada (StatDS),
Topic: Anytime-valid sequential inference.
 Next position: Quant, G-Research

Pre-proposal PhD student advisees

- 2027 Ben Chugg (MLD),
Topic: Anytime-valid sequential inference [NSERC Fellowship](#).
- 2027 Michael Wieck-Sosa (StatDS),
Topic: High-dimensional inference for time series.
- 2028 Tomas Gonzalez Lara (MLD, joint with Giulia Fanti),
Topic: Private generative AI [JPMC Fellowship](#).
- 2029 Ashwin Ram (ECE),
Topic: Sequential testing and changepoint detection .

PhD Thesis Committees

- 2024 Margaux Zaffran (Stat, Ecole Poly., Paris)
- 2023-24 Weichen Wu (StatDS)
- 2022-23 Wanshan Li (StatDS)
- 2021-23 David Zhao (StatDS+MLD)
- 2021-22 Costin Bădescu (CSD)
- 2021-22 Heejong Bong (StatDS+Neuro)
- 2021-22 Ben LeRoy (StatDS)
- 2021-22 Ron Yurko (StatDS)
- 2020-22 Natalia Lombardi De Oliveira (StatDS)
- 2020-21 Ciaran Evans (StatDS)
- 2020-21 Alan Mishler (StatDS)
- 2020-21 Danijel Kivaranovic (Stat, University of Vienna)
- 2019-20 Rianne de Heide (CS, CWI Amsterdam)
- 2018-20 Ilmun Kim (StatDS)
- 2018-20 Kevin Tran (ChemE)

PhD Advanced Data Analysis Projects

- 2024 Hongjian Wang (StatDS, joint with Barbara Engelhardt),
Area: CRISPR screening.

- 2023 Ben Chugg (MLD, joint with John Chin),
Area: *Coup forecasting*.
- 2023 Michael Wieck-Sosa (StatDS, joint with Michel Haddad),
Area: *Covid forecasting*.
- 2022 Neil Xu (StatDS, joint with John Silvestri, Barbara Stern),
Area: *Real-estate auditing*.
- 2022 James Leiner (StatDS, joint with Wesley Tansey),
Area: *Causal DAGs and multiple testing*.
- 2020 Ian Waudby-Smith (StatDS, joint with Philip Stark),
Area: *Post-election auditing*.
- 2019 Nil-jana Akpinar (StatDS, joint with Umut Acar),
Area: *Educational data mining*.

Masters Capstone Projects

- 2020 Radhika Khandelwal, Surya Sindwani, Xiaofan Xu, Muhammad Yafi, Zhe Fei (Heinz),
Area: *Election auditing*.

Undergraduate Capstone Projects

- 2024 Eric Shau, Elliot Buera, Patrick Zhu, Michael Zheng (StatDS),
Area: *Creation of the genre of children's books*.
- 2024 Idris Wardere, Elizabeth Fu, Lufei Yang, Amanda Hioe (StatDS),
Area: *Fashion image classification*.

Service

Organization: full- or multi-day workshops and conferences

- 2025 [5-day Workshop on safe anytime-valid inference \(BIRS, Chennai\)](#), *Organizer*.
+ Ruodu Wang, Johanna Ziegel, Peter Grunwald.
- 2024 [5-day Workshop on safe anytime-valid inference \(Oberwolfach, Germany\)](#), *Organizer*.
+ Ruodu Wang, Johanna Ziegel, Peter Grunwald.
- 2022 [1-day Workshop on Distribution-free Uncertainty Quantification \(ICML\)](#), *Organizer*.
+ Anastasios Angelopoulos, Stephen Bates, Sharon Li, Ryan Tibshirani.
- 2022 [3-day Workshop on probabilistic calibration \(CMU\)](#), *Lead organizer*.
+ Dean Foster.
- 2022 [5-day Workshop on safe anytime-valid inference \(EuRandom, Eindhoven\)](#), *Organizer*.
+ Peter Grunwald.
- 2021 [1-day Workshop on Distribution-free Uncertainty Quantification \(ICML\)](#), *Organizer*.
+ Anastasios Angelopoulos, Stephen Bates, Sharon Li, Ryan Tibshirani.
- 2020 [2-day Workshop on statistical learning theory \(TIFR, Mumbai\)](#), *Organizer*.
+ Sandeep Juneja, Devavrat Shah.
- 2018-22 [3-week working group on conformal prediction \(AIM Square\)](#), *Organizer*.
+ Ryan Tibshirani, Rina Barber, Emmanuel Candes.
- 2016 [1-day Workshop on Adaptive Data Analysis \(NeurIPS\)](#), *Organizer*.
+ Adam Smith, Aaron Roth, Vitaly Feldman.
- 2016 [1-day Workshop on Modern Nonparametrics \(NeurIPS\)](#), *Organizer*.
+ Zoltan Szabo, Han Liu, Mladen Kolar, Samory Kpotufe, Bharath Sriperumbudur, John Lafferty.
- 2015 [1-day Workshop on Active Learning: Theory & Practice \(ICML\)](#), *Organizer*.
+ Akshay Krishnamurthy, Aarti Singh, Nina Balcan.
- 2014 [1-day Workshop on Optimization in Machine Learning \(NeurIPS\)](#), *Organizer*.
+ Alekh Agarwal, Suvrit Sra, Miro Dudik, Zaid Harchaoui, Martin Jaggi.

Organization: individual sessions at meetings

- 2026 Invited session: e-Values: local, compound and conditional (IMS Annual), *Organizer*.
- 2025 Invited session: dimension-agnostic inference (ICSDS), *Organizer*.
- 2024 Invited session: e-values and p-values; contrasts and synergies (ICSDS), *Organizer*.

- 2024 Invited session: statistical challenges for adaptive experimentation (JSM), *Organizer*.
- 2023 Invited session: algorithms+analysis of adaptively randomized experiments (JSM), *Organizer*.
- 2023 Invited session: advances in anytime-valid inference (IISA), *Organizer*.
- 2023 Invited session: martingale methods in modern statistics (CLAPEM), *Organizer*.
- 2022 Invited session: game-theoretic statistics (IMS Annual), *Organizer*.
- 2021 Invited session: statistical inference by betting (JSM, IMS), *Organizer*.
- 2019 Invited session: sequential analysis (Asilomar), *Organizer*.

Senior Program Committee

- 2026 [29th Intl. Conf. on AI and Statistics \(AISTATS\)](#), *Program Chair*.
- 2025 36th Intl. Conf. on Algorithmic Learning Theory (ALT), *Area Chair*.
- 2024 11th Intl. Conf. on Learning Representations (ICLR), *Emergency Area Chair*.
- 2023 [39th Conf. on Uncertainty in Artificial Intelligence \(UAI\)](#), *Inclusivity Chair*.
- 2022 [38th Conf. on Uncertainty in Artificial Intelligence \(UAI\)](#), *Sponsorship Chair*.
- 2022 9th Intl. Conf. on Learning Representations (ICLR), *Area Chair*.
- 2022 33rd Intl. Conf. on Algorithmic Learning Theory (ALT), *Meta-Reviewer*.
- 2021 34th Annual Conf. on Learning Theory (COLT), *Meta-Reviewer*.
- 2021 37th Conf. on Uncertainty in Artificial Intelligence (UAI), *Area Chair*.
- 2020 34th Conf. on Neural Information Processing Systems (NeurIPS), *Area Chair*.
- 2020 33rd Annual Conf. on Learning Theory (COLT), *Meta-Reviewer*.
- 2020 37th Intl. Conf. on Machine Learning (ICML), *Area Chair*.
- 2020 31st Intl. Conf. on Algorithmic Learning Theory (ALT), *Meta-Reviewer*.
- 2020 36th Conf. on Uncertainty in Artificial Intelligence (UAI), *Area Chair*.
- 2019 33rd Conf. on Neural Information Processing Systems (NeurIPS), *Area Chair*.
- 2019 22nd Conf. on AI & Statistics (AISTATS), *Area Chair*.
- 2019 36th Intl. Conf. on Machine Learning (ICML), *Area Chair*.
- 2019 32nd Annual Conf. on Learning Theory (COLT), *Meta-Reviewer*.
- 2017 [20th Conf. on AI & Statistics \(AISTATS\)](#), *Publicity Chair*.

Guest Editor

- 2023-24 [Special Issue on Game-Theoretic Statistics and Safe Anytime-Valid Inference](#).
+Peter Grunwald, for New England Journal of Statistics in Data Science
- 2024-25 [Special Issue on Conformal Prediction and Distribution-free Uncertainty Quantification](#).
+Henrik Boström, Ulf Johansson, Khuong An Nguyen, for Machine Learning Journal

Associate Editor

- 2023-25 ACM/IMS Journal on Data Science
- 2023-25 Sankhya, the Indian Journal of Statistics
- 2024-25 Foundations and Trends in Machine Learning
- 2025- Foundations and Trends in Statistics

Book Reviewer

- Stat Cambridge University Press
- ML Foundations and Trends in Machine Learning

Miscellaneous

- 2025 NSF DMS Grant Review Panel
- 2020 NSF DMS Grant Review Panel
- 2020-23 arXiv StatML moderator

Journal Reviewer

- Stat Annals of Statistics, Journal of the Royal Statistical Society Series B (JRSSB), Biometrika, Bernoulli, Statistics and Probability Letters, Annals of Applied Statistics, Journal of the American Statistical Association, Statistica Sinica, Statistical Science, Scandinavian Journal of Statistics, Electronic Journal of Statistics, Annals of the Institute of Statistical Mathematics, The American Statistician.
- ML/AI Journal of Machine Learning Research, Machine Learning Journal, Journal of Artificial Intelligence Research, Data Mining and Knowledge Discovery.
- EE IEEE Transactions on Information Theory, IEEE Signal Processing Letters, IEEE Transactions on Pattern Analysis and Machine Intelligence.
- Opt. BIT Numerical Algorithms, Optimization Methods and Software, Numerical Mathematics, SIAM Journal on Matrix Analysis.
- Other Bioinformatics, Discrete and Computational Geometry, Entropy.

Conference Reviewer

- ML Conference on Learning Theory (COLT), Conference on AI & Statistics (AISTATS), International Conference on Machine Learning (ICML), Neural Information Processing Systems (NeurIPS), European Conference on Machine Learning (ECML).
- AI Conference on Artificial Intelligence (AAAI), Conference on Uncertainty in Artificial Intelligence (UAI), International Joint Conference on Artificial Intelligence (IJCAI).
- Other Intl. Symp. on Information Theory (ISIT), Math. and Scientific Machine Learning (MSML).

Department Service

- 2024-25 StatDS hiring committee
- 2021-24 StatDS faculty senator
- 2020-24 MLD department review committee
- 2019-24 MLD speaking skills committee
 - 2022 StatDS research workshop organizer (Dean Foster)
 - 2022 MLD extended hiring committee
- 2020- StatML faculty advisor and course review committee
- 2021- StatDS research committee
- 2020- SCS distinguished speaker seminar committee
- 2018-22 StatDS department seminar organizer
- 2019-23 Trained social host for events with alcohol (StatDS+MLD)
 - 2018- Wellness network (StatDS+MLD)
- 2018-21 Miscellaneous: judge, Meeting of the Minds (2019), first day StatDS retreat organizer (2018)
- 2015-16 Graduate admissions committee, CS Department (UCB)
 - 2014 Lead Organizer, ML Department Student Research Symposium (CMU)
- 2012-15 Organizer, weekly lunch seminar series on ML (CMU)
- 2014-15 Teaching Faculty Hiring Committee, ML Department (CMU)
- 2014-15 Graduate Student Assembly Rep. (CMU), [Outstanding Representative Award](#)
- 2013-14 Graduate Admissions Committee, ML Department (CMU)
- 2013-14 Education Review Committee Founder, ML Department (CMU)

University Service

- 2022 Panel Discussant on Voting and Elections for Alumni Outreach (CMU)
- 2020 Panel Discussant on Voting and Elections for Alumni Outreach (CMU)
- 2015-17 Steward for Postdoctoral Union (UCB)
- 2014-15 SafeZone Allies for LGBTQ Safety, Trained Member (CMU)
- 2014-15 Campus Smoking Policy Review Committee, Member (CMU)
- 2012-13 Explorer's Club Core Officer (CMU)
- 2011-12 Indian Graduate Students Association Treasurer (CMU)

Outreach (University)

2024	Panel on the academic job market (120 mins, IMS New Researchers Group)	
2024	Panel on academic time management (60 mins, LET-ALL)	
2024	Podcast interview on sequential experimentation (50 mins, Casual Inference podcast)	
2023-	COPSS Emerging Leader Award Committee	
2022-	IMS Outreach Committee	
2022	AISTATS Diversity and Inclusion mentoring (how to read papers)	(1 hour, online)
2022	Learning Theory Alliance mentoring (how to read papers)	(1 hour, online)
2021	Ask-me-anything mentoring sessions	(1 hour x 3 times, online)
2021	Grad-school application mentoring session	(1 hour, online)
2021	Learning Theory Alliance mentoring (discussion moderator)	(1 hour, online)

Outreach (Schools)

2023	Introduction to ML and data science (60 mins, high school, Shanti Bhavan, Bangalore)	
2022	Podcast interview on data science (30 mins, high school, NC School of Science and Math.)	
2020	Election polling: bias and variance (40 mins, grade twelve, Winchester Thurston, Pittsburgh)	
2019	Introduction to ML	(40 mins, grade twelve, Vidya Mandir Mylapore, Chennai)
2017	Introduction to AI	(40 mins, grade eleven, Vidya Mandir Mylapore, Chennai)
	Trash-free Living	(60 mins, full school, Paathashaala, Chennai)
2016	Robots that run	(60 mins, grade three, Stege Elementary, Richmond)
2015	SVD, Random Graphs and Random Walks	(90x3 mins, high school, PACT, Princeton)
	Introduction to CS	(90x2 mins, middle school girls, Technights, CMU)
	Introduction to ML	(30x2 mins, high school, Indian School Al-Ghubra, Muscat)
2014	Mechanism Design: Auctions & Voting	(80 mins, high school, Andrew's Leap, CMU)
2013	Multi-armed Bandits	(80 mins, high school, Andrew's Leap, CMU)

Distractions

- **Endurance sports.** Completed Ironman triathlon (2.4mi swim, 112mi bike, 26.2mi run) at Louisville, Kentucky (Aug 25, '13). Completed half-ironman in Grafham ('12), olympic triathlons in Marlow ('12), Pittsburgh ('13), Tahoe ('16), and marathons in Columbus ('12) and Pittsburgh ('12, '13, '14), and half-marathons in Wales ('12), Philadelphia ('13), Chicago ('13), Ealing ('14), Berkeley ('15), Napa ('17), Pittsburgh ('22, '23, '24).
- **Team sports.** Represented the Oman cricket team in the U-13 Gulf Cup (silver medal), and in the U-15 Asia Cup (ranked 5/14). Also played several years for the IIT Bombay Inter-IIT (silver medal) and Carnegie Mellon cricket teams. Awarded several Hostel-3 Sports Colors for winning top-3 spots in table-tennis, badminton, cricket, basketball and water-polo.
- **Adventure sports.** Finished a 26-day Basic Mountaineering Course in the Himalayas (Jul 1-26, '06), a 10-day backpacking school ('13) and 15-day climbing school by the Explorer's Club of Pittsburgh ('15). Also completed a 7-day PADI scuba openwater diving course ('11), and a 2-day Advanced Free Fall Skydiving course ('10), and a 2-day wilderness first aid course ('12).
- **Community service.** Raised funds in '18 for organizations fighting AIDS and empowering women in Zambia (340 mile bike ride from Lusaka to Livingstone). Fundraising in '16 and '17 for the San Francisco AIDS Foundation and the Los Angeles LGBT Center (545 mile bike ride in California from SF to LA, also training ride leader in '17). Also fundraised for the National Multiple Sclerosis Society (150 mile bike ride in Pennsylvania, '13, and in '21) and the Pittsburgh Animal Rescue League and Wildlife Center (Pittsburgh marathon, '12). Regular volunteer for beach cleaning and daily school traffic warden for 3 years (2001-03).