











Cyrus Cousins: A Complete Bibliography



Academic Publications

- All authors are listed in contribution-order unless otherwise noted.
 - Asterisks denote equal contributions (order alphabetical, random, or otherwise arbitrary).
- Primary topics are specified in the margin.
 - FA  ▪ Fair Algorithmics
 - ML  ▪ Machine Learning
 - DS  ▪ Data Science
 - AGT  ▪ Algorithmic Game Theory




Selected Publications






- FA  1. Cousins, Cyrus. *An Axiomatic Theory of Provably-Fair Welfare-Centric Machine Learning in Advances in Neural Information Processing Systems* (2021).
- FA  2. Cousins, Cyrus. *Revisiting Fair-PAC Learning and the Axioms of Cardinal Welfare in Artificial Intelligence and Statistics (AISTATS)* (2023).
- AGT  3. Cousins, Cyrus, Mishra, Bhaskar, Viqueira, Enrique Areyan, Greenwald, Amy, *Learning Properties in Simulation-Based Games in Proceedings of the 22nd International Conference on Autonomous Agents and MultiAgent Systems (AAMAS)* (2023).
- DS  4. Cousins, Cyrus, Wohlgemuth, Chloe, Riondato, Matteo, BAVarian: Betweenness Centrality Approximation with Variance-Aware Rademacher Averages. *ACM Transactions on Knowledge Discovery from Data (TKDD)* **17**, 1–47. ISSN: 1556-4681 (2023).
- ML  5. Mazzetto*, Alessio, Cousins*, Cyrus, Sam, Dylan, Bach, Stephen H. Upfal, Eli, *Adversarial Multiclass Learning under Weak Supervision with Performance Guarantees in International Conference on Machine Learning (ICML)* (2021).
- ML  6. Cousins, Cyrus, Riondato, Matteo, *Sharp uniform convergence bounds through empirical centralization in Advances in Neural Information Processing Systems* (2020).

Other Journal Publications






- DS  1. Pellegrina, Leonardo, Cousins, Cyrus, Vandin, Fabio, Riondato, Matteo, MCRapper: Monte-Carlo Rademacher Averages for POSET Families and Approximate Pattern Mining. *ACM Transactions on Knowledge Discovery from Data (TKDD)* **16** (2022).
- ML  2. Cousins, Cyrus, Riondato, Matteo, CaDET: Interpretable parametric conditional density estimation with decision trees and forests. *Machine Learning* **108**, 1613–1634 (2019).


Other Conference Publications

- FA  1. Cousins, Cyrus, Kumar, Indra Elizabeth, Venkatasubramanian, Suresh, *To Pool or Not To Pool: Analyzing the Regularizing Effects of Group-Fair Training on Shared Models in Artificial Intelligence and Statistics (AISTATS)* (2024).
- ML  2. Cousins*, Cyrus, Lobo*, Elita, Petrik*, Marek, Zick*, Yair, *Percentile Criterion Optimization in Offline Reinforcement Learning in Advances in Neural Information Processing Systems* (2023).
- FA  3. Cousins*, Cyrus, Viswanathan*, Vignesh, Zick*, Yair, *Dividing Good and Better Items Among Agents with Submodular Valuations in International Conference on Web and Internet Economics* (2023).

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- AGT  5. **Cousins***, **Cyrus**, Payan*, Justin, Zick*, Yair, *Into the Unknown: Assigning Reviewers to Papers with Uncertain Affinities in Proceedings of the 16th International Symposium on Algorithmic Game Theory* (2023).
- FA  6. **Cousins**, **Cyrus**. *Uncertainty and the Social Planner’s Problem: Why Sample Complexity Matters in Proceedings of the 2022 ACM Conference on Fairness, Accountability, and Transparency* (2022).
- ML  7. **Cousins***, **Cyrus**, Haddadan*, Shahrzad, Zhuang*, Yue, Upfal, Eli, *Fast Doubly-Adaptive MCMC to Estimate the Gibbs Partition Function with Weak Mixing Time Bounds in Advances in Neural Information Processing Systems* (2021).
- DS  8. **Cousins**, **Cyrus**, Wohlgemuth, Chloe, Riondato, Matteo, *BAVarian: Betweenness Centrality Approximation with Variance-Aware Rademacher Averages in Proceedings of the 27th ACM SIGKDD International Conference on Knowledge Discovery & Data Mining* (2021).
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- AGT  11. Viqueira, Enrique Areyan, **Cousins**, **Cyrus**, Mohammad, Yasser, Greenwald, Amy, *Empirical mechanism design: Designing mechanisms from data in Uncertainty in Artificial Intelligence* (2020), 1094–1104.
- AGT  12. Viqueira, Enrique Areyan, **Cousins**, **Cyrus**, Greenwald, Amy, *Learning Simulation-Based Games from Data in 18th International Conference on Autonomous Agents and MultiAgent Systems* (2019).
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- FA  1. Navarrete*, Paula, **Cousins***, **Cyrus**, Zick*, Yair, Viswanathan*, Vignesh, *Efficient Yankee Swap for Fairly Allocating Courses to Students in Columbia Workshop on Fairness in Operations and AI* (2023).
- FA  2. **Cousins***, **Cyrus**, Lobo*, Elita, Payan*, Justin, Zick*, Yair, *Fair Resource Allocation under Uncertainty in Columbia Workshop on Fairness in Operations and AI* (2023).
- FA  3. **Cousins**, **Cyrus**. *Algorithms and Analysis for Optimizing Robust Objectives in Fair Machine Learning in Columbia Workshop on Fairness in Operations and AI* (2023).
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- FA  5. Dong, Evan, **Cousins**, **Cyrus**, *Decentering Imputation: Fair Learning at the Margins of Demographics in Queer in AI Workshop @ ICML* (2022).
- FA  6. **Cousins**, **Cyrus**, Asadi, Kavosh, Littman, Michael L. *Fair E^3 : Efficient Welfare-Centric Fair Reinforcement Learning in 5th Multidisciplinary Conference on Reinforcement Learning and Decision Making (RLDM)* (2022).

- AGT  7. Viqueira, Enrique Areyan, **Cousins, Cyrus**, Greenwald, Amy, *Learning Competitive Equilibria in Noisy Combinatorial Markets* in *Proceedings of the 20th International Conference on Autonomous Agents and MultiAgent Systems (AAMAS)* (2021).
- ML  8. Binnig*, Carsten, Buratti*, Benedetto, Chung*, Yeounoh, **Cousins*, Cyrus**, Kraska*, Tim, Shang*, Zeyuan, Upfal*, Eli, Zeleznik*, Robert, Zraggen*, Emanuel, *Towards interactive curation & automatic tuning of ML pipelines* in *Proceedings of the Second Workshop on Data Management for End-To-End Machine Learning* (2018).
- DS ⁰¹⁰⁰⁰¹⁰⁰₀₁₁₁₀₀₁₁ 9. Binnig, Carsten, Basik, Fuat, Buratti, Benedetto, Cetintemel, Ugur, Chung, Yeounoh, Crotty, Andrew, **Cousins, Cyrus**, Ebert, Dylan, Eichmann, Philipp, Galakatos, Alex, Hättasch, Benjamin, Ilkhechi, Amir, Kraska, Tim, Shang, Zeyuan, Tromba, Isabella, Usta, Arif, Utama, Prasetya, Upfal, Eli, Wang, Linnan, Weir, Nathaniel, Zeleznik, Robert, Zraggen, Emanuel, *Towards interactive data exploration in Real-Time Business Intelligence and Analytics* (2017), 177–190.
- DS ⁰¹⁰⁰⁰¹⁰⁰₀₁₁₁₀₀₁₁ 10. **Cousins, Cyrus**, Pietras, Christopher M, Slonim, Donna K, *Scalable FRaC Variants: Anomaly Detection for Precision Medicine* in *International Parallel and Distributed Processing Symposium Workshops* (2017).

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- AGT  2. **Cousins, Cyrus**, Mishra, Bhaskar, Viqueira, Enrique Areyan, Greenwald, Amy, *Computational and Data Requirements for Learning Generic Properties of Simulation-Based Games*. *arXiv:2208.06400* (2022).
- DS ⁰¹⁰⁰⁰¹⁰⁰₀₁₁₁₀₀₁₁ 3. **Cousins, Cyrus**, Haddadan, Shahrzad, Upfal, Eli, *Making mean-estimation more efficient using an MCMC trace variance approach: DynaMITE*. *arXiv:2011.11129* (2020).
- DS ⁰¹⁰⁰⁰¹⁰⁰₀₁₁₁₀₀₁₁ 4. Sanford, Clayton, **Cousins, Cyrus**, Upfal, Eli, *Uniform Convergence Bounds for Codec Selection*. *arXiv:1812.07568* (2018).