

Jessica Sorrell

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- RESEARCH INTERESTS Theory of machine learning, differential privacy, algorithmic fairness, replicability, lattice-based cryptography
- EMPLOYMENT **Assistant Professor, Department of Computer Science** 2024 - Present
Johns Hopkins University, Baltimore, MD
- Postdoctoral Researcher, Computer and Information Science** 2022-2024
University of Pennsylvania, Philadelphia, PA
Advisors: Aaron Roth, Michael Kearns
- EDUCATION **Doctor of Philosophy, Computer Science**
University of California, San Diego, 2022
Advisors: Daniele Micciancio, Russell Impagliazzo
- Master of Science, Computer Science**
University of California, San Diego, 2020
- Bachelor of Science, Applied Mathematics**
Rochester Institute of Technology, Rochester, NY, May 2015
- PUBLICATIONS Marcel Hussing, Michael Kearns, Aaron Roth, Sikata Sengupta, Jessica Sorrell. *Oracle Efficient Reinforcement Learning for Max-Value Ensembles*. NeurIPS 2024.
- Eric Eaton, Marcel Hussing, Michael Kearns, Jessica Sorrell. *Replicable Reinforcement Learning*. NeurIPS 2023.
- Ira Globus-Harris, Declan Harrison, Michael Kearns, Aaron Roth, Jessica Sorrell. *Multicalibration as Boosting for Regression*. ICML 2023.
- Mark Bun, Marco Gaboardi, Max Hopkins, Russell Impagliazzo, Rex Lei, Toniann Pitassi, Satchit Sivakumar, Jessica Sorrell. *Stability is Stable: Connections between Replicability, Privacy, and Adaptive Generalization*. STOC 2023.
- Baiyu Li, Daniele Micciancio, Mark Schultz, Jessica Sorrell. *Securing Approximate Homomorphic Encryption Using Differential Privacy*. Crypto 2022.
- Russell Impagliazzo, Rex Lei, Toniann Pitassi, Jessica Sorrell. *Reproducibility in Learning*. STOC 2022.
- Ilias Diakonikolas, Russell Impagliazzo, Daniel Kane, Rex Lei, Jessica Sorrell, Christos Tzamos. *Boosting in the Presence of Massart Noise*. COLT 2021.

Daniele Micciancio, Jessica Sorrell. *Simpler, Statistically Sender Private Oblivious Transfer from Ideals of Cyclotomic Integers*. Asiacrypt 2020.

Mark Bun, Marco Carmosino, Jessica Sorrell. *Efficient, Noise-tolerant, and Private Learning via Boosting*. COLT 2020.

Matilda Backendal, Mihir Bellare, Jessica Sorrell, Jiahao Sun. *The Fiat-Shamir Zoo: Relating the Security of Different Signature Variants*. NordSec 2018.

Daniele Micciancio, Jessica Sorrell. *Ring Packing and Amortized FHEW Bootstrapping*. ICALP 2018.

SELECTED
TALKS

Stability is Stable.

- Charles River Privacy Days, May 2023
- Simons Institute Workshop on Lower Bounds, Learning, and Average-Case Complexity, February 2023

Reproducibility in Learning.

- Chicago Junior Theorists Workshop, January 2023
- INFORMS, October 2022
- Workshop on Learning and Economics, June 2022
- ToC4Fairness Seminar, April 2022
- TCS+, April 2022
- IAS CSDM Seminar, January 2022

Ring Packing and Amortized FHEW Bootstrapping. Simons Institute workshop on Lattices: From Theory to Practice, May 2020

TEACHING
EXPERIENCE

Completed the Inclusive and Equitable Teaching mini-course (University of Pennsylvania) Spring 2023

Teaching Assistant for *Design and Analysis of Algorithms* (University of California, San Diego, CSE 101) Spring 2022

Teaching Assistant for *Computability and Complexity* (University of California, San Diego, CSE 200) Fall 2021

Teaching Assistant for *New Horizons in Theoretical Computer Science* June 2021

Teaching Assistant for *Advanced Cryptography* (University of California, San Diego, CSE 208) Fall 2020

Teaching Assistant for *Lattice Algorithms and Applications* (University of California, San Diego, CSE 206A) Fall 2019

Teaching Assistant for *Introduction to Modern Cryptography* (University of California, San Diego, CSE 107) Spring, Fall 2019

Instructor for *Algorithmic Problem Solving* (University of California, San Diego, Summer Program for Incoming Students) Summer 2018

Teaching Assistant for *Design and Analysis of Algorithms* Fall 2017
(University of California, San Diego, CSE 202)

Teaching Assistant for *Intro Statistics II* Spring 2015
(Rochester Institute of Technology, STAT 146)

Teaching Assistant for *Calculus B* Fall 2014
(Rochester Institute of Technology, MATH 172)

PROFESSIONAL
ACTIVITIES

Organizer:

- Women in Machine Learning Workshop @NeurIPS 2023
- Women in Machine Learning Theory 2020

Program Committee:

- IEEE Secure and Trustworthy Machine Learning 2025
- IEEE Secure and Trustworthy Machine Learning 2024
- Foundations of Responsible Computing 2023
- IEEE Global Internet Symposium 2017

Reviewer:

- JMLR
- NeurIPS 2024
- NeurIPS ethics reviewer 2024
- FOCS 2024
- STOC 2024
- ECAI 2024
- NeurIPS 2023
- NeurIPS ethics reviewer 2023
- AISTATS 2023
- AISTATS 2023 reviewer
- FOCS 2022