Jessica Sorrell

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RESEARCH INTERESTS

Foundations of responsible computing, algorithmic fairness, learning theory, differential privacy, lattice-based cryptography

CURRENT POSITION

Postdoctoral Researcher, Computer and Information Science
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

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.

PREPRINTS & MANUSCRIPTS

Eric Eaton, Marcel Hussing, Michael Kearns, Jessica Sorrell. *Replicable Reinforcement Learning.* In submission.

Alan Kaminsky, Jessica Sorrell. *CryptoStat: a Bayesian Statistical Testing Framework for Block Ciphers and MACs.*

SELECTED TALKS

Multicalibration as Boosting for Regression. NSF TRIPODS Workshop, August 2023

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 2024, Foundations of Responsible Computing 2023, IEEE Global Internet Symposium 2017

Reviewer: NeurIPS 2023, AISTATS 2023