Jessica Sorrell

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University of Pennsylvania
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RESEARCH INTERESTS	Responsible computing, algorithmic fairness, learning theory, differential privacy, lattice-based cryptography

EDUCATION

Doctor of Philosophy, Computer Science
University of California, San Diego, 2022
Advisors: Daniele Micciancio, Russell Impagliazzo

Bachelor of Science, Applied Mathematics
Rochester Institute of Technology, Rochester, NY, May 2015

PUBLICATIONS

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.* To appear, 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

Ira Globus-Harris, Declan Harrison, Michael Kearns, Aaron Roth, Jessica Sorrell. *Multicalibration as Boosting for Regression.* In submission.

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

SELECTED TALKS	*Stability is Stable.* Simons Institute Workshop on Lower Bounds, Learning, and Average-Case Complexity, February 2023
	Reproducibility in Learning. INFORMS, October 2022
	Reproducibility in Learning. Workshop on Learning and Economics, June 2022
	Simpler Statistically Sender Private Oblivious Transfer from Ideals of Cyclotomic Integers. UCSD CSE Theory Seminar, May 2020
	Ring Packing and Amortized FHEW Bootstrapping. Simons Institute Lattices: From Theory to Practice, May 2020
	Efficient, Noise-tolerant, and Private Learning via Boosting. UCSD CSE Theory Seminar, November 2019
	Ring Packing and Amortized FHEW Bootstrapping. UCSD CSE Theory Seminar, November 2018

RESEARCH EXPERIENCE

University of California, San Diego, San Diego, CA, USA   2016 - 2022
Lattice-based cryptography, learning theory, complexity
Research Assistant: Advised by Russell Impagliazzo and Daniele Micciancio

FACT Center, IDC, Herzliyah, Israel   Aug 2019
Complexity of lattice problems
Research Intern: Advised by Alon Rosen

Rochester Institute of Technology, Rochester, NY, USA   Spring 2015
Automated grading of computer science theory assignments
Undergraduate Researcher: Advised by Ivona Bezáková and Edith Hemaspaandra

Rochester Institute of Technology, Rochester, NY, USA   Spring 2014
Bayesian statistical analysis of block ciphers and MACs
Undergraduate Researcher: Advised by Alan Kaminsky

TEACHING EXPERIENCE

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

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

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

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

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

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

Instructor for *Algorithmic Problem Solving*   Summer 2018

(University of California, San Diego, Summer Program for Incoming Students)

	Teaching Assistant for *Design and Analysis of Algorithms* (University of California, San Diego, CSE 202)	Fall 2017
	Teaching Assistant for *Intro Statistics II* (Rochester Institute of Technology, STAT 146)	Spring 2015
	Teaching Assistant for *Calculus B* (Rochester Institute of Technology, MATH 172)	Fall 2014
INDUSTRY EXPERIENCE	**Dell-EMC (formerly EMC^2)**, Hopkinton, MA, USA Software Engineer	2015 - 2016
OTHER EXPERIENCE	**Recurse Center**, New York, NY, USA Programming retreat participant	Summer 2015
PROFESSIONAL ACTIVITIES	Program Committee: Foundations of Responsible Computing	2023
	Reviewer: AISTATS	2023
	Organizer: Women in Machine Learning Theory	2020
	Program Committee: IEEE Global Internet Symposium (GI 2017)	2017
UNIVERSITY SERVICE	Graduate Women in Computing Mentor University of California, San Diego	2019
	PhD Visit Weekend Coordinator - Theory Group University of California, San Diego	2018, 2019
	Faculty Candidate Student Panel University of California, San Diego	2018