

Sam Gunn

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Education

The University of California at Berkeley

Ph.D. in Computer Science

Advised by **Umesh Vazirani**

Fall 2020–

The University of Texas at Austin

B.S. in Math (GPA: 3.9)

2016–2020

Papers

All author orderings are alphabetical.

1. **Pseudorandom Error-Correcting Codes.** Miranda Christ and Sam Gunn. *In submission.*
ePrint: <https://eprint.iacr.org/2024/235.pdf>
2. **Undetectable Watermarks for Language Models.** Miranda Christ, Sam Gunn, and Or Zamir. *To be presented at RWC 2024.*
ePrint: <https://eprint.iacr.org/2023/763.pdf>
3. **How to Use Quantum Indistinguishability Obfuscation.** Andrea Coladangelo and Sam Gunn. *To be presented at STOC 2024.*
ePrint: <https://eprint.iacr.org/2023/1756.pdf>
4. **Approaching the Quantum Singleton Bound with Approximate Error Correction.** Thiago Bergamaschi, Louis Golowich, and Sam Gunn. *QIP 2024, to be presented at STOC 2024.*
arXiv: <https://arxiv.org/pdf/2212.09935.pdf>
5. **Commitments to Quantum States.** Sam Gunn, Nathan Ju, Fermi Ma, Mark Zhandry. *STOC 2023 (Invited to the SICOMP Special Issue), QIP 2023.*
ePrint: <https://eprint.iacr.org/2022/1358.pdf>
6. **Adversarial Poisoning Attacks on Reinforcement Learning-Driven Energy Pricing.** Sam Gunn, Doseok Jang, Orr Paradise, Lucas Spangher, and Costas J. Spanos. *BuildSys 2022, MLSafety at NeurIPS 2022, RLDM 2022, CEMA 2022.*
ACM: <https://dl.acm.org/doi/pdf/10.1145/3563357.3564075>
7. **Certified Entropy from Random Circuit Sampling.** Roozbeh Bassirian, Adam Bouland, Sam Gunn, Bill Fefferman, and Avishay Tal. *QIP 2022.*
arXiv: <https://arxiv.org/pdf/2111.14846.pdf>
8. **On the Classical Hardness of Spoofing Linear Cross-Entropy Benchmarking.** Scott Aaronson and Sam Gunn. *Plenary at SQInT 2020.*
Published in Theory of Computing: <https://theoryofcomputing.org/articles/v016a011>
9. **Review of a Quantum Algorithm for Betti Numbers.** Sam Gunn and Niels Kornerup.
arXiv: <https://arxiv.org/pdf/1906.07673v3.pdf>

Talks

1. **Undetectable Watermarks for Language Models:**
 - Google Algorithms Seminar in Mountain View, July 2023.

- MIT Cryptography Group, August 2023.
 - NYU Cryptography Seminar, September 2023. Video [here](#).
 - UC Berkeley Machine Learning Theory Seminar, September 2023.
2. **Approaching the Quantum Singleton Bound with Approximate Error Correction** at the Simons Institute Quantum Colloquium, December 2022. Video [here](#).
 3. **Commitments to Quantum States** regular talk at STOC 2023. Video [here](#).
 4. **Unclonable Cryptography** guest lecture for John Wright's graduate quantum complexity course at UC Berkeley, December 2022.
 5. **Certified Entropy from Random Circuit Sampling** at the UC Berkeley Theory Lunch, March 2022.
 6. **On the Classical Hardness of Spoofing Linear Cross-Entropy Benchmarking** plenary talk at SQulnT 2020.