

Education

Ph.D. Computer Science

Weizmann Institute of Science

(GPA: 97) Advised By: Prof. Moni Naor and Dr. Eylon Yogev

2020–Present

(Expected Completion: Jan 2025)

M.Sc. Computer Science

Weizmann Institute of Science

(GPA: 93) Advised By: Prof. Guy N. Rothblum

Thesis: On Prover-Efficient Public-Coin Emulation of Interactive Proofs

2017–2020

B.Sc. Electrical Engineering and Computer Science

Tel Aviv University

(GPA: 90.68) *Magna Cum Laude*

2013–2017

Research Interests

Foundations of cryptography, computational complexity and theory of computation, probabilistic proof systems in both theory and practice.

Publications

1. **Hamming Weight Proofs of Proximity with One-Sided Error.** Gal Arnon, Shany Ben-David, and Eylon Yogev. (*Under submission.*)
2. **STIR: Reed–Solomon Proximity Testing with Fewer Queries.** Gal Arnon, Alessandro Chiesa, Giacomo Fenzi, and Eylon Yogev. *To appear in proceedings of Advances in Cryptology, the 44th Annual International Cryptology Conference (CRYPTO 2024), Best paper award.* Additionally appeared in ZKSummit 11 and ZKProof 6.
3. **IOPs with Inverse Polynomial Soundness Error.** Gal Arnon, Alessandro Chiesa, and Eylon Yogev. *In proceedings of the 64th IEEE Annual Symposium on Foundations of Computer Science (FOCS 2023), pp. 752–761.*
4. **A Toolbox for Barriers on Interactive Oracle Proofs.** Gal Arnon, Amey Bhangale, Alessandro Chiesa, and Eylon Yogev. *In proceedings of the 20th Theory of Cryptography Conference (TCC 2022), pp. 447–466*
5. **Hardness of Approximation for Stochastic Problems via Interactive Oracle Proofs.** Gal Arnon, Alessandro Chiesa, and Eylon Yogev. *In proceedings of the 37th Annual IEEE Conference on Computational Complexity. CCC 2022. pp. 24:1–24:16.*
6. **Min-Entropic Optimality.** Gal Arnon and Tomer Grossman. (*Manuscript.*)
7. **A PCP Theorem for Interactive Proofs and Applications.** Gal Arnon, Alessandro Chiesa, and Eylon Yogev. *In proceedings of the 41st Annual International Conference on Theory and Application of Cryptographic Techniques (EUROCRYPT 2022), pp. 64–94.*
8. **On Prover-Efficient Public-Coin Emulation of Interactive Proofs.** Gal Arnon and Guy N. Rothblum. *In proceedings of the 2nd Conference on Information-Theoretic Cryptography (ITC 2021), volume 199 of LIPIcs, pp. 3:1–3:15.*

Invited Talks

- IOPs with Inverse Polynomial Soundness Error. *To be presented in ITC 2024 Highlights Track, Stanford University, United States. August 2024.*
- How to convince someone who's barely listening (even to themselves). *At Efficient Probabilistic Proofs Workshop, Bertinoro, Italy. July 2022.*

Long-Term Visits

- Proofs, Consensus, and Decentralizing Society Semester at the Simons Institute, UC Berkeley. August-October 2019.

Service

Workshop Organization: Lattices Meet Hashes: Recent Advances in Post-Quantum Zero-Knowledge Proofs. *Postdoctoral Workshop at the Bernoulli Center, EPFL, Lausanne, Switzerland. Organized together with Ngoc Khanh Nguyen. May 2023.*

Sub-reviewer: CRYPTO (2019, 2022, 2023, 2024), ITCS (2022), TCC (2021, 2023), SODA (2024), CCC (2024)

Talks

- STIR: Reed–Solomon Proximity Testing with Fewer Queries
 - *Interuniversity TCS Student Seminar, Tel Aviv University, Tel Aviv, Israel. May 2024.*
 - *Theory Lunch at the Weizmann Institute of Science, Rehovot, Israel. May 2024.*
 - *HUJI TCS Seminar, Jerusalem, Israel. May 2024.*
 - *StarkWare Industries, Netanya, Israel. April 2024.*
 - *ZKSummit 11, Athens, Greece. April 2024.*
- IOPs with Inverse Polynomial Soundness Error
 - *Technion TCS Seminar, Haifa, Israel. February 2024.*
 - *ZK Study Club, Virtual. October 2023.*
 - *StarkWare Industries, Netanya, Israel. September 2023.*
 - *Interuniversity TCS Student Seminar, Tel Aviv University, Tel Aviv, Israel. July 2023.*
 - *IST Austria TCS Seminar, Vienna, Austria. June 2023.*
- A Toolbox for Barriers on Interactive Oracle Proofs
 - *TCC 2022, Chicago, USA. November 2022.*
- How To Be Convinced While Barely Listening (Even to Yourself)
 - *EPFL CS Theory Reading Group, Lausanne, Switzerland. May 2023.*
 - *Efficient Probabilistic Proofs Workshop, Bertinoro, Italy. July 2022. (Talk given under alternate title.)*
- Hardness of Approximation for Stochastic Problems via Interactive Oracle Proofs
 - *CCC 2022, Philadelphia, USA. July 2022. (Talk given virtually.)*
- A PCP Theorem for Interactive Proofs and Applications
 - *EUROCRYPT 2022, Trondheim, Norway. May-June 2022.*
 - *Theory Lunch at the Weizmann Institute of Science, Rehovot, Israel. July 2021.*
- On Prover-Efficient Public-Coin Emulation of Interactive Proofs
 - *ITC 2021, Virtual. July 2021.*
 - *“Proofs, Consensus, and Decentralizing Society” Program Seminar at Simons Institute, Berkeley, USA. October 2019.*

Teaching

Teaching Assistant:

- Foundations and Frontiers of Probabilistic Proofs. *MSRI (SLMath) summer graduate school. Zurich, Switzerland. July 2023.*
- Foundations and Frontiers of Probabilistic Proofs. *MSRI summer graduate school. Held virtually. July-August 2021.*

Instructor: Mini-Course on Zero-Knowledge Proofs. *Amos de-Shalit Summer School, Weizmann Institute of Science. September 2018.*