Gal Arnon

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Education

2020-Present PhD Computer Science, Weizmann Institute of Science.

(Expected Completion: Jan 2025) Advised By: Prof. Moni Naor and Dr. Eylon Yogev

2017–2020 MSc Computer Science, Weizmann Institute of Science.

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

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

2013–2017 BSc Electrical Engineering and Computer Science, Tel Aviv University.

Magna Cum Laude (GPA: 90.68)

- o Final Project (Electrical Engineering) in collaboration with Intel Corporation, Petah Tikva, Israel.
- o Final Project (Computer Science) supervised by Prof. Mooly Sagiv and Dr. Oded Padon.
- o Research Project supervised by Prof. Ran Canetti.

Research Interests

Foundations of cryptography, computational complexity and theory of computation, probabilistic proof systems, the application of theory to practical problems.

Publications

- 1. STIR: Reed-Solomon Proximity Testing with Fewer Queries *G. Arnon, A. Chiesa, G. Fenzi and E. Yogev. (Under submission).*
- 2. Hamming Weight Proofs of Proximity with One-Sided Error G. Arnon, S. Ben-David, and E. Yogev. (Under submission).
- 3. IOPs with Inverse Polynomial Soundness Error
 - G. Arnon, A. Chiesa, and E. Yogev. FOCS 2023.
- 4. A Toolbox for Barriers on Interactive Oracle Proofs
 - G. Arnon, A. Bhangale, A. Chiesa, and E. Yogev. TCC 2022.
- 5. Hardness of Approximation for Stochastic Problems via Interactive Oracle Proofs G. Arnon, A. Chiesa, and E. Yogev. CCC 2022.
- 6. Min-Entropic Optimality
 - G. Arnon and T. Grossman. (Preprint).
- 7. A PCP Theorem for Interactive Proofs and Applications
 - G. Arnon, A. Chiesa, and E. Yogev. EUROCRYPT 2022.
- 8. On Prover-Efficient Public-Coin Emulation of Interactive Proofs G. Arnon and G. N. Rothblum. ITC 2021.

Invited Workshops and Long-Term Visits

Invited • Efficient Probabilistic Proofs Workshops Bertinoro, Italy. July 2022.

Long-Term • Proofs, Consensus, and Decentralizing Society Semester

Visits Visiting Graduate Student at the Simons Institute, UC Berkeley. August-October 2019.

Service

Workshop Organization

o 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

- 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.
- o 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

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

Languages

Native Hebrew, English

Fluent German

Programming Languages

C#, Python, Java, C, C++, Matlab