

Sam A. Markelon

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Education

2020–	PhD in Computer Science, University of Florida Florida Institute for Cybersecurity Research Advisor: Thomas Shrimpton
2016–2020	BS in Computer Science, University of Connecticut Minor in Mathematics Summa Cum Laude Honors Scholar Upsilon Pi Epsilon

Professional Experience

Summer 2023	NCC Group (New York, NY) Cryptography Services Intern
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Awards and Grants

2023	ThinkSwiss Research Scholarship Academic Guest for Fall 2023 with Prof. Kenneth Paterson's Applied Cryptography Group at ETH Zürich.
2023	Gartner Group Graduate Fellowship
2020	University of Florida Graduate School Preeminence Award
2019	Barry M. Goldwater Scholarship
2018	University of Connecticut IDEA Grant NTRUEncrypt implementation and usage research.
2016	University of Connecticut STEM Scholar

Teaching Experience

All as undergraduate teaching assistant at the University of Connecticut.

Spring 2020	CSE 3400: Introduction to Computer and Network Security
Fall 2019	
Spring 2019	CSE 3150: C++ Essentials
Fall 2018	CSE 2050: Data Structures and Object Oriented Programming

Publications

Journal and Conference Papers

1. Sam A. Markelon, Mia Filić, and Thomas Shrimpton. **Compact Frequency Estimators in Adversarial Environments**. In *Proceedings of the 2023 ACM SIGSAC Conference on Computer and Communications Security, CCS '23*, New York, NY, USA, 2023. Association for Computing Machinery
2. Sam A. Markelon and John True. **The DecCert PKI: A Solution to Decentralized Identity Attestation and Zooko’s Triangle**. In *2022 IEEE International Conference on Decentralized Applications and Infrastructures (DAPPS)*, pages 74–82, 2022. *Best Paper Award*.
3. Walter O. Krawec and Sam A. Markelon. **A semi-quantum extended B92 protocol and its analysis**. In Eric Donkor and Michael Hayduk, editors, *Quantum Information Science, Sensing, and Computation XII*, volume 11391, page 113910G. International Society for Optics and Photonics, SPIE, 2020
4. Walter O. Krawec and Sam A. Markelon. **Genetic Algorithm to Study Practical Quantum Adversaries**. In *Proceedings of the Genetic and Evolutionary Computation Conference, GECCO '18*, page 1270–1277, New York, NY, USA, 2018. Association for Computing Machinery

Posters and Poster Papers

5. Walter O. Krawec and Sam A. Markelon. **Discovery of Robust Protocols for Secure Quantum Cryptography**. In *Proceedings of the Genetic and Evolutionary Computation Conference Companion, GECCO '19*, page 379–380, New York, NY, USA, 2019. Association for Computing Machinery
6. Sam A. Markelon. **gemcWeb: A Cloud Based Nuclear Physics Simulation Software**. *Bulletin of the American Physical Society*, 2017, 2017

Preprints

7. Luke A. Bauer, James K. Howes IV, Sam A. Markelon, Vincent Bindschaedler, and Thomas Shrimpton. **Covert Message Passing over Public Internet Platforms Using Model-Based Format-Transforming Encryption**, 2022