Maher Mamah

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Interests

Mathematical cryptology, Isogeny-based post-quantum cryptography, Quantum computing.

Education

2025-present	PhD in Combinatorics & Optimization	University of Waterloo, Canada
2023–2025	Masters in Mathematics	Pennsylvania State University, USA
2020–2023	B.Sc. in Applied Mathematics	American University of Beirut, Lebanon

Teaching Employment

Winter 2026	Teaching Assistant of Applied Cryptography	UWaterloo
Fall 2025	Teaching Assistant of Calculus 1	UWaterloo
Summer 2025	Instructor of Integral Vector Calculus	Penn State
Spring 2025	Instructor of Calculus of several variables (2 sections)	Penn State
Fall 2024	Instructor of Calculus and Vector Analysis	Penn State
Spring 2023	Teaching Assistant of Calculus & Analytic Geometry	Penn State

Publications

1. **Mamah, M. and Jao, David**. *On the Spectral Theory of Isogeny Graphs and Quantum Sampling of Hard Supersingular Elliptic Curves*, *eprint*.
2. **Mamah, M**. *Enhanced Algorithms for the Representation of integers by Binary Quadratic forms: Reduction to Subset Sum*, *eprint*.
3. **Mamah, M.** *Computing Quaternion Embeddings and Endomorphism Rings of Supersingular Oriented Elliptic Curves, eprint*.
4. **Mamah, M.**, *The Supersingular Isogeny Path and Endomorphism Ring Problems: Unconditional Reductions. eprint*
5. **Mamah, M.**, Saraeb, A. *A generalization of Siegel's method to Jacobi's function.* Ramanujan Journal 65, 521–531 (2024). *eprint*
6. **Me'meh, M.**, Saraeb, A. *A Generalization of Iseki's Formula and the Jacobi Theta Function.* Hardy-Ramanujan Journal, Vol. 45, 130–139. *eprint*

Honors and Awards

2025	Graduate Research Studentship Award	University of Waterloo
2025	MASON V conference Travel Grant	University of Maryland
2023	Jack and Eleanor Pettit Scholarship Grant in Science	Penn State
2022-2023	Qatar Foundation Scholarship award	American University of Beirut
2020-2023	USAID Full Scholarship fund (funded by U.S. Embassy in Beirut)	American university of Beirut

Skills

- Programming: Python, MATLAB
- Mathematical Tools: LaTeX, SageMath, Mathematica
- Languages: English (Fluent), Arabic (Native)