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Education

Ph.D., Computer Science

December 2024

University of Maryland (UMD), *College Park, MD*

✂ Max Planck Institute for Security and Privacy (MPI-SP), *Bochum, Germany*

Dissertation: “Practical Cryptography for Blockchains: Secure Cryptographic Protocols with Minimal Trust”

M.S., Computer Science

May 2021

University of Maryland, *College Park, MD*

B.S., Mathematics & B.S.C.S., Computer Science • *summa cum laude*

May 2019

Minor, Music & Flute performance certificate

University of South Carolina Honors College, *Columbia, SC*

Selected Publications

* = authors listed in alphabetical order

In submission.....

[-] **How to Back Up High-Value Secret Keys**

*S Garg, N Glaeser, A Jain, M Lodder, H Montgomery

Workshop Papers.....

[6] **Cicada: A framework for private, non-interactive on-chain auctions and voting**

N Glaeser, I Seres, M Zhu, J Bonneau

Workshop on Cryptographic Tools for Blockchains (CTB 2024) at Eurocrypt 2024

Conference Papers.....

[5] **Naysayer Proofs**

I Seres[†], N Glaeser[†], J Bonneau (*†equal contribution*)

FC 2024; CTB Workshop 2024

[4] **Universally Composable NIZKs: Circuit-Succinct, Non-Malleable and CRS-Updatable**

*B Abdolmaleki, N Glaeser, S Ramacher, D Slamanig

IEEE CSF 2024

[3] **Efficient Registration-Based Encryption**

*N Glaeser, D Kolonelos, G Malavolta, A Rahimi

ACM CCS 2023

[2] **Foundations of Coin Mixing Services**

*N Glaeser, M Maffei, G Malavolta, P Moreno-Sanchez, E Tairi, SAK Thyagarajan

ACM CCS 2022

[1] **Access control for a database-defined network**

N Glaeser, A Wang

IEEE Sarnoff Symposium 2016

Other.....

[B] **Key distribution on blockchains: the case for registration-based encryption**

N Glaeser

a16zcrypto blog post

[A] **Packet: Cryptographic secret sharing**

N Glaeser

UMD Girls Talk Math summer camp

Service

Program Committee

FC (2025, 2024), ISC (2024), IEEE S&P Poster PC (2023), NDSS Student Support Committee (2023)

External Reviewer

CANS (2024), ACISP (2024), IEEE S&P (2024), IACR Crypto (2023), ACM CCS (2023, 2020), PETS (2023.3, 2022.4, 2022.1), PKC (2022)

Founder & Organizer

UMD CS Graduate Peer Mentoring Program

fall 2021-fall 2024

Mentor

UMD CS Graduate Peer Mentoring Program

fall 2021-spring 2024

UMD Iribe Initiative for Inclusion & Diversity in Computing (I4C)

fall 2020

Research Positions

a16z crypto

summer 2023

Research Intern, supervised by Joseph Bonneau

Conducted fundamental research in cryptographic protocols for blockchains [5,6] and helped portfolio companies with technical research problems. Also wrote an informational post [B] for the company's blog.

NTT Research, Inc.

summer 2022

Research Intern, supervised by Sanjam Garg

Working on a scheme and formal framework for threshold cryptocurrency wallets in the hot-cold paradigm with strong trust and recovery guarantees (with Linux Foundation & LIT Protocol).

Fermi National Accelerator Laboratory, Particle Astrophysics

summer 2018

Grace Hopper Computing Intern

Improved efficiency of the Dark Energy Survey's image processing pipeline for optical counterparts of gravitational wave events from avg. 5-8 hrs to 30 min (10-16x). Published two papers. Code available on GitHub at [SSantosLab/gw_workflow](https://github.com/SSantosLab/gw_workflow) (Python, Bash).

Temple University Computer Science Department

summer 2016

NSF Research Experience for Undergraduates (REU)

Implemented an access-control security application for the database-defined software-defined network (SDN) controller Ravel (ravel-net.org/). Work published in [2]. Code available on GitHub at [ravel-net/REU-access-control](https://github.com/ravel-net/REU-access-control) (Python, PostgreSQL).

Funding & Awards

NSF Graduate Research Fellowship, *US National Science Foundation (NSF)* 2020-2023

Phi Beta Kappa Honor Society 2019

Oldest and most prestigious academic honor society in the US

Computational Science Fellowship (Math & Computing), *US Dept of Energy* 2019, declined

Goldwater Scholarship (Honorable Mention) 2018

Technical Skills

Strong: *Python • LaTeX • HTML/CSS/Javascript*

Proficient: *Bash • C++ • Rust*

Languages

Native (C2): English, German, Italian

Conversational (A2-B1): French, Spanish

Beginner (A1): American Sign Language (ASL)