

Noemi Glaeser

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LinkedIn, GitHub: [@nglaeser](#)

Education

University of Maryland (UMD), College Park, MD *estimated May 2024*

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

Ph.D., Computer Science • *Maryland-Max Planck joint program*

Advisors: Jonathan Katz (UMD) and Giulio Malavolta (MPI-SP)

University of Maryland, College Park, MD

May 2021

M.S., Computer Science (GPA 3.9/4.0)

University of South Carolina Honors College, Columbia, SC

May 2019

B.S., Mathematics • B.S.C.S., Computer Science • *summa cum laude* (GPA: 4.0/4.0)

Minor, Music • Flute performance certificate

Selected Publications

*authors listed in alphabetical order

In Submission

P2.* B. Abdolmaleki, [N. Glaeser](#), S. Ramacher, D. Slamanig. (2022). Composable and Simulation-Extractable Compact NIZKs with Updatable Common Reference Strings.

P1. R. De Viti, B. Dinis, [N. Glaeser](#), et al. (2022). CoVault: Secure High-Stakes Analytics.

Conference Papers

C2.* [N. Glaeser](#), M. Maffei, G. Malavolta, P. Moreno-Sanchez, E. Tairi, S.A.K. Thyagarajan. (2022). Foundations of Coin Mixing Services. *ACM CCS 2022*. <https://eprint.iacr.org/2022/942>.

C1. [N. Glaeser](#) and A. Wang. (2016). Access control for a database-defined network. *Proceedings of IEEE 37th Sarnoff Symposium*. <http://dx.doi.org/10.1109/SARNOF.2016.7846728>.

Journal Papers

J1. K. Herner [et al.](#) (2020). Optical follow-up of gravitational wave triggers with DECAM during the first two LIGO/VIRGO observing runs. *Astronomy & Computing*, 33, 100425. <https://doi.org/10.1016/j.ascom.2020.100425>.

Other

O1. [N. Glaeser](#). (2021). Cryptographic secret sharing packet. *UMD Girls Talk Math summer camp*. <https://github.com/nglaeser/gtm2021/tree/main/packet>.

Awards

NSF Graduate Research Fellowship, *National Science Foundation (NSF)* 2019-2024

Dean's Fellowship, *UMD Computer Science Department* 2019

Phi Beta Kappa Honor Society 2019

Oldest and most prestigious academic honor society in the U.S.

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

Goldwater Scholarship (Honorable Mention) 2018

Service

External Reviewer

ACM CCS (2020), PETS (2022.1, 2022.4), PKC (2022)

Organizer

UMD CS GradCo Peer Mentoring Program (founder) *fall 2021-present*

UMD Cryptography Reading Group *fall 2020-spring 2021*

Mentor

UMD CS GradCo Peer Mentoring Program *fall 2021-present*

UMD Iribe Initiative for Inclusion & Diversity in Computing (I4C) *fall 2020*

Selected Talks & Posters

T3. Mathematically Sharing Secrets. (2021). Invited talk, *UMD Girls Talk Math Spring Event*, Virtual.

T2. Improving bounds on entropy of odd cycle graphs. (2019). (work with Joshua Cooper.) Poster, *UofSC Discovery Day*, Columbia, SC.

T1. Access control for a database-defined network. (2016). (work with Anduo Wang.) Poster, *IEEE Sarnoff Symposium*, Newark, NJ.
*3rd place Poster Award

Research Positions

University of Maryland and MPI-SP *2020-present*

NSF Graduate Research Fellow

Constructing provably secure cryptographic protocols with reduced trust assumptions for decentralized settings, including coin mixing (paper P2) and zero-knowledge proof systems (P3).

University of Maryland *2019-2020*

Research Assistant

Developed multiparty computation (MPC) protocols in novel threat models & deployments (paper P1); studied bounds on query-pattern leakage attacks on encrypted databases.

University of South Carolina Mathematics Department

2018-2019

Science Undergraduate Research Fellowship (SURF)

Investigated tightness of stochastic bounds on cycle graph entropy (poster T2); released an open-source package with cycle graph utilities.

GitHub: [nglaeser/graph_cyclone](https://github.com/nglaeser/graph_cyclone) (Python) • PyPI: [graph-cyclone](https://pypi.org/project/graph-cyclone/)

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 average 5-8 hrs to 30 min (10-16x speedup).

Published in two papers (including J1).

GitHub: [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. Work presented in C1 & T1.

GitHub: [rael-net/REU-access-control](https://github.com/ravel-net/REU-access-control) (Python, PostgreSQL) • Web: rael-net.org/

Technical Skills

Strong: Python • LaTeX • HTML/CSS/Javascript

Average: Bash • C++

Beginner: Rust

Languages

Native proficiency: English, German, Italian

Conversational proficiency: French, American Sign Language (ASL)