Noemi Glaeser

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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

P3.* B. Abdolmaleki, <u>N. Glaeser</u>, S. Ramacher, D. Slamanig. (2022). Composable and Simulation-Extractable Compact NIZKs with Updatable Common Reference Strings.

P2. <u>N. Glaeser</u>, S.A.K. Thyagarajan, G. Malavolta, P. Moreno-Sanchez. (2022) Coin Mixing Services: New Constructions and Cryptanalysis.

P1. R. De Viti, B. Dinis, <u>N. Glaeser</u>, et al. (2022). CoVault: Secure High-Stakes Analytics.

Conference Papers

C1. <u>N. Glaeser</u> 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 <u>et al.</u> (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. <u>N. Glaeser.</u> (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 *(Python)* • PyPI: 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 *(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: ravel-net/REU-access-control *(Python, PostgreSQL)* • Web: ravel-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)