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Education

University of Maryland*, *College Park, MD* *July 2019 –*

Max Planck Institute for Security and Privacy†, *Bochum, Germany*

Ph.D., Computer Science

Advisors: Jonathan Katz* and Gilles Barthes†

University of South Carolina Honors College, *Columbia, SC* *May 2019*

B.S., Mathematics • B.S.C.S., Computer Science

Minor, Music • Flute performance certificate

GPA: 4.0/4.0 • *summa cum laude*

Thomas Jefferson High School for Science & Technology, *Alexandria, VA* *Jun 2015*

#1 public U.S. high school according to Newsweek (2014-2016)

Advanced Studies Diploma

GPA: 4.46/4.0

Research Experience

4. **Improving bounds on entropy of odd cycle graphs** *Jan 2018 – April 2019*
   UofSC Mathematics Department, *Columbia, SC*
   Director: Joshua Cooper
3. **Improvements to image processing in the DES-GW pipeline** *May – Aug 2018*
   Fermi National Accelerator Laboratory, Particle Astrophysics, *Batavia, IL*
   Director: Kenneth Herner
2. **Access control for a database-defined network** *May – Jul 2016*
   Temple University Computer Science Department, *Philadelphia, PA*
   Director: Anduo Wang
1. **Generating geographic and temporal heat maps of aflatoxin incidence using regularized linear models** *Jan 2016 – Dec 2017*
   UofSC Computer Science Department, *Columbia, SC*
   Director: Gabriel Terejanu

Publications

3. K. Herner et al. Optical follow-up of gravitational wave triggers with DECam: the Details Paper. In review.
2. K. Abdelfatah, J. Senn, N. Glaeser, and G. Terejanu. (2019). Prediction and Measurement Update of Fungal Toxin Geospatial Uncertainty using a Stacked Gaussian Process. *Agricultural Systems*, *176*, 102669. https://doi.org/10.1016%2Fj.agsy.2019.102662.
1. 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.

Funding

Graduate Research Fellowship, *National Science Foundation (NSF)* *2019 – 2024*
$34,000 annually for doctorate study and research

Science Undergraduate Research Fellowship (SURF), *UofSC Honors College* *Fall 2018*
$1,060 for work with Dr. Cooper

Magellan Scholar Award, *UofSC* *2016*
$2,500 for work with Dr. Terejanu

Selected Projects

Graph cyclone • *Python* • University of South Carolina *2018 – 2019*
https://github.com/nglaeser/graph_cyclone
https://pypi.org/project/graph-cyclone/
Cycle graph calculation utilities for work with Dr. Cooper

Open vLab • *Django, OpenFlow, Javascript* • University of South Carolina *2018 – 2019*
https://github.com/SCCapstone/OpenVLab
Educational network virtualization framework

GW workflow • *Python, Bash* • Fermilab *2018*
https://github.com/SSantosLab/gw_workflow
Optimization of pipeline for optical counterparts of gravitational waves (10x speed increase)

Access control for a database-defined network • *Python, PostgreSQL* • Temple Univ *2016*
https://github.com/ravel-net/REU-access-control
http://ravel-net.org/
Implementation of an access-control security application in the software-defined network controller Ravel

Conferences

Security BSides Charleston, *Charleston, SC* *2017, 2018*

Grace Hopper Celebration of Women in Computing, *Orlando, FL & Houston, TX* *2017, 2018*

MAA Southeastern Conference, *Various locations* *2016, 2018*

IEEE Sarnoff Symposium, *Newark, NJ* *2016*

Memberships

Phi Beta Kappa Society *2019*

Association for Computing Machinery *2018*

Leadership & Involvement

UofSC Cybersecurity Club *Jan 2016 – April 2019*

Webmaster (Spring 2018 – Spring 2019)

Gamecock Math Club/Pi Mu Epsilon Math Honor Society *Mar 2016 – April 2019*

Treasurer (Fall 2017 – Spring 2019)

McNair Scholar Buddy *Aug 2016 – April 2019*

Association for Women in Mathematics at UofSC *Jan 2017 – April 2018*

Founding member, Treasurer & Secretary (Spring 2017 – Spring 2018)

Visual & Musical Technician for River Bluff High School Marching Band *Aug 2017 – Nov 2018*

Awards

NSF Graduate Research Fellowship, *2019*

DOE Computational Science Fellowship (Math & Computing track), *2019, declined*

UofSC McNair Scholar, *2015-19*

Highest out-of-state merit-based scholarship

Goldwater Scholarship (Honorable Mention), *2018*

Outstanding Senior in Mathematics, *Spring 2019*

Pi Mu Epsilon Award, *Spring 2019*

Thomas Markham Math Scholarship, *2017-18*

Jeong S. Yang Award for Excellence in Undergraduate Mathematics, *2016-17, 2017-18*

Anita Borg Institute Grace Hopper Scholar, *2017*

Lovelace Family Endowed Scholarship, *2016-17*

Achievements

2018 BSides Charleston Capture the Flag (cybersecurity competition), *2nd place*

2017 BSides Charleston Cryptography Challenge, *1st place*

2016 IEEE Sarnoff Symposium Poster, *3rd place*

2016 MAA Southeastern Math Jeopardy, *3rd place*

Technical Skills

Python ●●●●●●○○

Java/C++ ●●●●●●○○

Linux/UNIX ●●●●●●○○

Bash ●●●●○○○○

LaTeX ●●●●○○○○

HTML/CSS ●●●●○○○○

PostgreSQL ●●●○○○○○

Languages

Native proficiency: English, German, Italian

Conversational proficiency: American Sign Language

Elementary proficiency: Latin, French

Selected Coursework

(* denotes honors course; † denotes graduate course.)

Mathematics

Linear Algebra

Ordinary Differential Equations

Analysis I*

Analysis II*

Algebraic Structures I

Algebraic Structures II*

Discrete Mathematics I

Computational Number Theory†

Computer Science

Introduction to Cryptography*

Computer Architecture*

Operating Systems

Data Structures & Algorithms

Introduction to Computer Networks

Theory of Computation

Programming Language Structures

Ethical Hacking

Information Security Principles

Text Processing*

July 2019