Dalton A. Brucker-Hahn

School Address
Information & Telecommunication Technology Center
University of Kansas
247N Nichols Hall
2335 Irving Hill Road
Lawrence, KS 66045

EDUCATION

Ph.D. in Computer Science, Computer Science,   *Fall 2018 - Present*
University of Kansas, Lawrence, KS
- Advisor: Alexandru Bardas
- Area of Study: Cybersecurity (Systems and Network Security)

Master's of Science, Computer Science,   *Fall 2020*
University of Kansas, Lawrence, KS
GPA 3.91
Thesis Title:
  - *Delving Into DevOps: Examining the Security*
    Posture of State-of-Art Service Mesh Tools

RELEVANT COURSEWORK
  - Network Security, Internet-of-Things Security, Advanced Operating Systems, Communication Networks, Mobile Security, Machine Learning, Introduction to Data Science

Bachelor's of Science, Computer Science,   *Spring 2018*
Kansas State University, Manhattan, KS
GPA 3.79

RELEVANT COURSEWORK
  - Applied Cryptography, Operating Systems, Information Security, Security and Reliability of Hardware Systems, Computer Networks, Algorithm Analysis, Computer Architecture

APPOINTMENTS

Graduate Research Assistant   *Summer 2018 - Present*
University of Kansas, Lawrence, KS
  - Involved in multiple, security-related, research efforts with the goal of submissions to peer-reviewed conferences and journals

  - Exploring security research in areas of critical infrastructure such as power systems, networking, and cyber-physical systems

Undergraduate Research Assistant (Multiple Projects)   *Fall 2016 - Spring 2018*
Kansas State University, Manhattan, KS
  - Participated in multiple publication efforts resulting in an accepted conference publication and two accepted journal publications

  - Reconfigured the structure and networking of the Kansas State University Smart Grid Laboratory

- Combined open-source software in order to create a platform for Smart Grid management, security, and operations
- Assisted in the development of a framework for viewing and analyzing nearly 700 million Domain Name System (DNS) response packets recorded over a 15 month period
- Conducted a literature review of current practices of DNS analysis and coauthored a paper accepted to a research conference

Cyber Operations, Analysis and Research Intern   *Summer 2017*
Argonne National Laboratory, Lemont, IL
- Developed a testing environment for exploring the benefits provided by the "Security Onion" GNU/Linux distribution according to the "Cyber Kill Chain" model
- Prototyped a system for aggregating, storing, and presenting sensor data from cyber-physical systems
- Created a literature review relating to Moving Target Defense

Cyber Security Systems Research Intern   *Summer 2016*
Pacific Northwest National Laboratory, Richland, WA
- Created a virtualized environment for large-scale data collection, analysis and reporting systems
- Networked closely with leading researchers designing solutions to meet the security and analytics needs of a National Laboratory

PUBLICATIONS

1. **Hahn, Dalton A**, Drew Davidson, and Alexandru G Bardas. Mismesh: Security issues and challenges in service meshes. In *International Conference on Security and Privacy in Communication Systems*, pages 140–151. Springer, 2020

2. **Hahn, Dalton A**, Drew Davidson, and Alexandru G Bardas. Security issues and challenges in service meshes–an extended study. *arXiv preprint arXiv:2010.11079*, 2020

3. Yousif Dafalla, Bo Liu, **Hahn, Dalton A**, Hongyu Wu, Reza Ahmadi, and Alexandru G Bardas. Prosumer nanogrids: A cybersecurity assessment. *IEEE Access*, 8:131150–131164, 2020

4. Ron Andrews, **Hahn, Dalton A**, and Alexandru G Bardas. Measuring the prevalence of the password authentication vulnerability in ssh. In *ICC 2020-2020 IEEE International Conference on Communications (ICC)*, pages 1–7. IEEE, 2020

5. **Hahn, Dalton A**, Arslan Munir, and Vahid Behzadan. Security and privacy issues in intelligent transportation systems: Classification and challenges. *IEEE Intelligent Transportation Systems Magazine*, 2019

6. **Hahn, Dalton A**, Arslan Munir, and Saraju P Mohanty. Security and privacy issues in contemporary consumer electronics [energy and security]. *IEEE Consumer Electronics Magazine*, 8(1):95–99, 2018

7. Chandan Chowdhury, **Hahn, Dalton A**, Matthew R French, Eugene Y Vassermann, Pratyusa K Manadhata, and Alexandru G Bardas. eyedns: Monitoring a university campus network. In *2018 IEEE International Conference on Communications (ICC)*, pages 1–7. IEEE, 2018

TEACHING EXPERIENCE

Lab Manager and Teaching Assistant - EECS 465   *Spring 2019 - Present*
University of Kansas Electrical Engineering and Computer Science Department, Lawrence, KS
- Designed and constructed a protected network environment for students to perform live experimentation upon intentionally vulnerable target hosts
- Created and presented lecture material relating to cyber defense tools and practices to more than 25 undergraduate students
- Conducted weekly office hours and assisted undergraduate students in learning course material
- Graded written and programming assignments developed by students in the course

Teaching Assistant and Grader - EECS 765   *Fall 2018*
University of Kansas Electrical Engineering and Computer Science Department, Lawrence, KS
- Conducted weekly office hours and assisted graduate students in learning course material
- Graded written and programming assignments developed by students in the course

Undergraduate Instructor   *Fall 2017 - Spring 2018*
Kansas State University Department of Computer Science, Manhattan, KS
- Taught over 50 undergraduates and graduates an introduction to the Python programming language
- Prepared bi-weekly lectures and weekly homework assignments
- Graded homework assignments developed by students in the course

PROFESSIONAL SERVICE

External Sub-Reviewer
- ACM Conference on Computer and Communications Security (*CCS*) – 2021
- IEEE Transactions on Information Forensics and Security (*TIFS*) – 2021, 2020
- IEEE International Performance Computing and Communications Conference (*IPCCC*) – 2021
- IEEE Access – 2020

UNIVERSITY INVOLVEMENT

Undergraduate Involvement
- Kansas State University Cyber Defense Club Member
- Kansas State University College of Engineering Ambassador (Social Committee Chair)
- Hack K-State (Kansas State's yearly, student-led hackathon) Organizer
- Association of Computing Machinery - Kansas State University Chapter Member

Dalton A. Brucker-Hahn – Curriculum Vitae

HONORS / AWARDS

- Self Graduate Fellowship Recipient, Fall 2019
- 2nd place award at University of Kansas Science of Security Workshop Poster Competition
- Graduated Cum Laude from Kansas State University, Spring 2018
- CyberCorps Scholarship for Service (SFS) Recipient
- Gladys Lichty Scholarship Recipient (Kansas State University)
- Smoll Scholarship Recipient (Kansas State University)
- Rogers Memorial Scholarship Recipient (Kansas State University)
- Kansas State University Foundation Plus Scholarship Recipient