

FRANCISCA AFUA OPOKU-BOATENG, Ph.D. (CBFI)

Loma Linda, California

fopokuboaeng@gmail.com | (240) 389-7196

EDUCATION

- Dakota State University
 - Doctor of Philosophy in Cyber Defense
 - Degree Conferred Date: Spring 2022
- University of Michigan–Flint
 - Master’s in Business Administration
 - Expected Degree Conferred Date: Fall 2023
- Dakota State University
 - Master of Science in Cyber Defense
 - Degree Conferred Date: Fall 2020
- University of Michigan–Flint
 - Master of Science in Computer Science & Information Systems
 - Degree Conferred Date: Spring 2015
- Valley View University–Ghana
 - Bachelor of Science in Information Technology
 - Degree Conferred: Summer 2013

ACADEMIC EXPERIENCE

- Adjunct Assistant Professor of Cybersecurity Principles
 - California State University – Fullerton, CA: January 2023 - Present
- Assistant Professor of Computer and Cyber Sciences
 - Dakota State University – Madison, SD: August 2021 – August 2022
- Adjunct Instructor of Graduate Computer Forensics
 - Dakota State University – Madison, SD: January 2021- May 2021
- Adjunct Instructor of Computer Forensics Fundamentals
 - Dakota State University – Madison, SD: May 2019- August 2019
- Graduate Teaching Assistant of Computer Forensics Fundamentals
 - Dakota State University – Madison, SD: August 2018- May 2019
 - Dakota State University – Madison, SD: January 2020- August 2020

PROFESSIONAL/INDUSTRY EXPERIENCE

- Senior Cyber Consultant - Cyber Threat Resilience
 - Ernst & Young US – Remote, Present
- Cyber Academy Pilot Program – Lead Mentor
 - Dakota State University organized a Cyber Academy for Air Force Junior ROTC June 2021 – August 2021
- CybHER Leader & GenCyber Camp Instructor
 - CybHER Security Institute May 2021 – July -2021
- Digital Forensics and OSINT Investigative Analyst
 - Digital Forensics for Cyber Enforcement - Madison, SD January 2019 – May 2021
- Network Security Consulting Intern
 - SBS Cybersecurity - Madison, SD: May 2020 – August 2020
- Information Security Consulting Intern
 - SBS Cybersecurity - Madison, SD: June 2019 – August 2019
- Microsoft Dynamics AX Consulting Associate
 - RSM US LLP - Denver, CO: November 2016 – October 2017

- Technical Support Specialist
 - Luxottica via Real Soft - Cincinnati, OH: February 2016 – November 2016
- IT Support Center Analyst
 - Kroger Tech. via Ascendum Solutions - Cincinnati, OH: August 2015 – January 2016
- Computer Science Research Assistant
 - University of Michigan–Flint, Flint, MI: August 2014 – January 2015

RESEARCH AND PUBLICATIONS:

Peer-Reviewed Publications

- Yeboah-Ofori, A. and **Opoku-Boateng, F.A.** (2023). [Mitigating Cybercrimes in An Evolving Organizational Landscape](#). Proceedings of Continuity & Resilience Review.
- **Opoku-Boateng, Francisca Afua**, Mayer, Cody. The Dark Web and Ransomware: A Review. **[In Review]**
- **Opoku-Boateng, Francisca Afua**, Welu, Cody, Hetherington, Cynthia , Bishop, David, Cronin Kyle, Yeboah-Ofori, Abel "Performing a Digital Forensics investigation using a Dark Web Pharma Framework." (2022). **[In Review]**
- **Opoku-Boateng, Francisca Afua**, "[A Dark Web Pharma Framework for A More Efficient Investigation of Dark Web COVID-19 Vaccine Products](#)." (2022). Masters Theses & Doctoral Dissertations. 373.
- Yeboah-Ofori, Abel, **Opoku-Boateng, Francisca Afua**, Cameron, Cameron and Islam, Shareeful (2022). [Cyber Resilience in Supply Chain System Security Using Machine Learning for Threat Predictions](#).
- Yeboah-Ofori, Abel, **Opoku-Boateng, Francisca Afua**, C. K. Agbodza, I. Darvishi and F. Sbai (2021). [Applied Cryptography in Network Systems Security for Cyberattack Prevention](#). 2021 International Conference on Cyber Security and Internet of Things (ICSIoT), 2021, pp. 43-48, DOI: 10.1109/ICSIoT55070.2021.00017
- Yeboah-Ofori, A. Ismail, M. Umar, Swidurski, T. & **Opoku-Boateng, Francisca** (2021). [Cyber Threat Ontology and Adversarial Machine Learning Attacks: Analysis and Prediction Perturbance](#). Proceedings of 2021 International Conference on Computing, Computational Modelling and Applications (ICCMA)
- Yeboah-Ofori, A. Ismail, M. Umar, Swidurski, T. & **Opoku-Boateng, Francisca** (2021). [Cyberattack Ontology: A Knowledge Representation for Cyber Supply Chain Security](#). Proceedings of 2021 International Conference on Computing, Computational Modelling and Applications (ICCMA)
- Podhradsky, A., **Opoku-Boateng, Francisca**, Kulm, A., & Jones, T. (2020). [DigForCE: Digital Forensics for Cyber Enforcement at Dakota State University Working Towards Public-Private Cybercrime Investigations](#). South Dakota Law Review, 65(3).

Peer-Reviewed Conference Abstracts and Posters

- Lisa Raykowski, **Opoku-Boateng, Francisca Afua**, Kennashka DeSilva, Ben Stavola. Annual Cyber at Ernst and Young Virtual Conference (April 2023). Web 3.0 Security.
- **Opoku-Boateng, Francisca Afua**. Annual OSMOSIS Conference (September 2022), Tampa, FL. Exploring & Leveraging the OSINT Dark Web Pharma Framework (DWPF).
- **Opoku-Boateng, Francisca Afua**. Annual CAE in Cybersecurity Community Symposium (June 2022), Atlanta, GA. DWPF: A Dark Web Pharma Framework for A More Efficient Investigation of Dark Web COVID-19 Vaccine Products.
- **Opoku-Boateng, Francisca Afua**. WiCyS (March 2022), Cleveland, OH. DWPF: A Dark Web Pharma Framework for A More Efficient Investigation of Dark Web COVID-19 Vaccine Products.
- Siobhan Day Grady, **Francisca Afua Opoku-Boateng**, Latasha Reid-Daniels, Natalie Tucker, Lilian Muriungi, "[STEM-It-Yourself: Exposing rural adolescents' to STEM through online](#)

[learning](#)" in 2021 Conference on Research in Equitable and Sustained Participation in Engineering, Computing, and Technology (RESPECT), Philadelphia, PA, USA, 2021 pp. 1-3.

- **Opoku-Boateng, Francisca.**, and Podhradsky A. WiCyS (2019), Pittsburgh, PA. Investigating the Dark and Deep Web Crimes - An examination of tracing the Identities of anonymous suspects.
- **Opoku-Boateng, Francisca**, and Podhradsky A. [NRT Event \(2019\), Rapid City, SD](#) Investigating the Dark and Deep Web Crimes. An examination of tracing the Identities of anonymous suspects.
- **Opoku-Boateng, Francisca**, and Podhradsky A. CLEAR Conference (2019), Sioux Falls, SD Smart Home Forensics Investigation - A Google Hub Case Study. Poster presented.
- **Opoku-Boateng, Francisca**. MinneWIC (2019), Duluth, MN "Salaries in Higher Education Systems: A System-wide Perspective on Career Advancement and Gender Equity"

Non-Refereed Publications and Tech Reports

- **Opoku-Boateng Francisca A.** Prairie Business magazine contribution (2019): [Worldwide Business Cooperation needs to Improve Cybersecurity](#).

ACADEMIC TEACHING

- Adjunct Assistant Professor, California State University-Fullerton: Undergraduate Courses
 - CPSC 253: Cybersecurity Foundation and Principles
 - CPSC 552: Cyber Forensics – Upcoming Fall 2023
- Assistant Professor, Dakota State University: Undergraduate Courses
 - CSC 145: Cyber Security Fundamentals
 - CSC 388: Computer Forensics Fundamentals
 - CSC 418: Advanced Computer Forensics
 - CSC 419: Windows Forensics
- Assistant Professor, Dakota State University: Graduate Courses
 - INFA 721: Computer/Digital Forensics

PRESS, FEATURE, AND BLOG MENTIONS:

- Featured on [YouTube](#) - Black Women in Cyber Panel in 2023
- Featured in [Hetherington Group Blog](#) - in January 2022
- Featured in [Hetherington Group National Mentoring Month recognition](#) in January 2022
- Featured in [Dakota State University News](#) in August 2021
- Featured on [YouTube](#) - Black Women in Cyber Panel in 2021
- Featured in [Grace Hopper Celebration Scholars Media Tag](#) in 2019
- Featured on [The KSFY ABC News](#), [Dakota News Now](#), and [DSU News](#):
 - Dakota State University graduate student won two national honors in the same week in 2019.
- Featured on CybHER.org Blog: [CybHER doctoral student experiences Grace Hopper Celebration 2018](#).
- Featured in [Grand Herald](#) - Blog post was written in 2019.
- Featured on [Dakota State News](#) in 2018.
 - Young women seek inspiration at Grace Hopper Conference 2018.

CERTIFICATIONS

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| • Foundation Level Threat Intelligence Analyst | 2023 – Present |
| • Certified in Cybersecurity | 2023 -2025 |
| • Certified Banking Forensics Investigator | 2020-2025 |
| • Certificate in Banking Security | 2019 - Present |
| • MCPS: Microsoft Certified Professional | 2016 - Present |
| • MS: Microsoft Dynamics AX 2012 R3 CU8 Development Introduction | 2016 – Present |

PROFESSIONAL DEVELOPMENT and BADGES

- Foundation Level Threat Intelligence Analyst – arcX March 2023
- CrowdStrike Academy Ongoing
- ISC² Academy
 - Certified in Cybersecurity February 2023
 - CISSP Boot Camp November 2022
- Attack IQ Academy
 - Foundations of Operationalizing MITRE ATT&CK June 2022
 - Top ATT&CK Techniques June 2022
 - Delivering Value with the ATT&CK Sightings Report June 2022
 - AttackIQ Foundational Blueprint June 2022
- CAEFacDev - Florida international University (Cybersecurity Training for Faculty)
 - Mobile Forensics Tools/Image and Video Forensics Bootcamp April 2022
 - Teaching Techniques in Digital Forensics Workshop March – April 2022
 - Introduction to Digital Forensics developmental course Sept. 2021-Dec. 2021
- University of South Florida
 - Inclusive and Ethical Leadership Certificate Sept. 2021 – Nov. 2021
- BASIS Technology
 - Introduction to DFRI: The Divide and Conquer Process 2020

ADDITIONAL ACTIVITIES

Professional Services

- **GenCyber Teachers Camp Instructor**
 - Served as a Digital Forensics Instructor for the past GenCyber Teachers camp hosted at DSU. The Camp hosted 50 middle and high school STEM teachers from June 6th - 10th for a week-long camp to introduce and integrate cybersecurity topics into your classroom.
- **The Beacom Collage of Computer and Cyber Sciences Committee Member**
 - *Faculty search Committee* - Served on a 7-member search committee to recruit new faculty for the department.
 - *Associate Dean Search Committee* - Served on a 7-member search committee to recruit new Associate Deans faculty for the department.
- **Student Advising**
 - My role as an Assistant Professor exposed me to working closely with all my students, both online and on-campus taking classes in the forensic space. Additionally, I did serve as a thesis advisor for an honors student, where I work with them as they explore research areas in mobile forensics. Also, I served as a Student Research Initiative Supervisor (SRI) for an SRI awardee who worked in research areas of Open-Source Intelligence (OSINT) and Digital Forensics investigation, working on forensics investigations.
 - Dakota State University organized a Cyber Academy for Air Force Junior Reserve Officer Training Corps (JROTC) students during the summer of 2021. As a student lead and mentor, I assisted in teaching and mentoring the Air Force JROTC (students) to allow them to jump-start a career in cyber security.
- **Research Volunteer**
 - The LAIER (Laboratory for Artificial Intelligence and Equity Research).
- **Reviewer**
 - Scholarship - CMD-IT Tapia Conference 2022
 - Research Poster - RESPECT Conference 2022
 - Research Paper – IEEE Wireless Communication 2021
 - Research Poster - RESPECT Conference 2021
 - Research Project - NCWIT Awards 2019

- **Mentoring**
 - Women in Cybersecurity (WiCyS) April 2023 – January 2024
 - NPower February-June 2023
 - The Washington Center February – April 2023
 - Blacks in Cybersecurity – 3rd Cohort Mentor February – June 2023
 - [Cybersecurity Mentoring HUB](#) October 2021 - Present
 - Blacks in Cybersecurity – 2nd Cohort Mentor February 2022 – April 2022
- **Ambassadorship**
 - NPower Command Shift November 2022 - Present
 - Google Women TechMaker 2021 - Present
 - Blacks in Cybersecurity, Ambassador for South Dakota 2021

Fellowships and Affiliations

- **Cultural Competence in Computing (3C) Fellowship Program - Fellow**
 - Currently a participating in the 3rd cohort-based professional development (PD) program that helps computing educators, administrators, staff, postdoctoral researchers, and graduate students:
 - learn more about social science topics, such as identity, intersectionality, racism, bias, and discrimination; how these topics impact computing environments (as well as the developed technologies); and
 - develop computing deliverables at their organizations that leverage these topics to foster more inclusive and equitable cultures.
- **National Research Traineeship (NRT) Program - Affiliate**
 - Served as an affiliate awardee to the National Science Foundation Research Traineeship (NRT) program under the Center for Security Printing and Anti-Counterfeiting Technology ([SPACT](#)). A collaborative award to four South Dakota universities that provided graduate students with the scientific knowledge, professional skills, and training needed to become next-generation leaders in the fight against counterfeiting. During this period, I received professional and leadership training within the framework of a unique cyber-physical-social model. This model took a comprehensive approach that factored in the technical aspects of the cyber strategies and physical methods used to combat counterfeiting and whether these strategies and methods were compatible with human behavior. Ultimately allowing us to solve complex problems, with solutions tightly integrating cyber, physical, and social interactions in real-time.
- **Anita B.Org – Member**
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- **Google Women TechMaker – Scholarship Fellow**
 - Through Google, I participated as a Women TechMaker fellow. The program aimed to build a world where all women could thrive in Tech. As part of this initiative, I was awarded a 10K scholarship and continued resources as a woman in Tech. The TechMaker program provided visibility, community, and resources for me as a woman in technology.
 - Participated in WTM speaker certification program (Cohort D) February 2023. This program was an interactive engaging 4-weeks program that aimed to lead participants through speechless POINT curriculum to help individuals present more confidently, authentically, and effectively.
 - Upcoming participation in Google I/O 2023 in Mountain View, California to learn about Google's latest innovations and developer solutions that help you work smarter and improve productivity. Participants will have access to access to the live keynotes starting at 10am PT, followed by exclusive programming with Women TechMakers.

- **BlackComputeHER – Fellow**
 - Participated in the BlackComputeHER Fellows Program - a cohort-based leadership development program designed to cultivate black women leaders in computing and Tech, offering me 12 months of intensive development for selected fellows.
- **Women in Cybersecurity (WiCyS) San Diego, CA Affiliate – Member**
 - Recently joined the WiCyS SD affiliate in California.
- **Women in Cybersecurity (WiCyS) West Africa (Ghana) Affiliate – Founder**
 - Partnered with Noreen Njoroge to start the Ghana Affiliate.

Invited Panels and Presentations

- **Invited Panelist:** Opoku-Boateng, Francisca A. (March 2023) [Black Women in Cyber Panel \(BWIC\)](#)
- **Invited Panelist:** Opoku-Boateng, Francisca A. (November 2022) NPower Communities and Confidence Virtual Panel Mentorship Event
- **Invited Panelist:** Opoku-Boateng, Francisca A. (November 2022) Ernst & Young Connect Day - NPower virtual IT career development event.
- **Invited Guest Speaker:** Opoku-Boateng, Francisca A. (November 2022) Fresno Ghanaian Adventures Club - Obtaining Computer Skills Honors
- **Invited Guest Speaker:** Opoku-Boateng, Francisca A. (June 2022) Minnesota High Technology Crime Investigation Association (HTCIA) - IoT Forensics.
- **Invited Panelist:** Opoku-Boateng, Francisca A. (April 2022) [State of South Dakota Week of Work - IT Cyber Security Panel.](#)
- **Invited Panelist:** Opoku-Boateng, Francisca A. (March 2022) Technology Leaders Association: Women Providing Healing, Promoting Hope.
- **Invited Guest Speaker:** Opoku-Boateng, Francisca A. [CybHER Conversations](#) (March 2022).
- **Invited Panelist:** Opoku-Boateng, Francisca A. (March 2022) [Black in Cybersecurity Mentorship - Women in Cyber Panel.](#)
- **Invited Guest Speaker:** Opoku-Boateng, Francisca A. (October 2021) Virtual Cybersecurity Awareness Month Digital Health Webinar, [Digital Alor](#) (Ghana, West Africa) - How safe are you on Instagram and Facebook.
- **Invited Guest Panelist:** Opoku-Boateng, Francisca A. (October 2021) Virtual Cybersecurity Awareness Month Career Panel, Jefferson State Community College (Birmingham, AL) - Journey into Cybersecurity.
- **Invited Guest Speaker:** Opoku-Boateng, Francisca A. (June 2021) North Carolina Central University LSIS 5810 - Utilizing Zotero in Research
- **Invited Panelist:** Opoku-Boateng, Francisca A. (March 2021) [Black Women in Cyber Panel \(BWIC\)](#)
- **Invited Guest Speaker:** Opoku-Boateng, Francisca A. (February 2021) North Carolina Central University LSIS 5010 - A Journey into STEM
- **Invited Speaker:** Opoku-Boateng, Francisca A. (September 2019) 3rd Annual Ladies' Day Out – presented on Identity Theft.
- **Invited Speakers:** Opoku-Boateng, Francisca A, Katie Shuck (September 2018) CybHER Security – Making a Difference through the Cyber Sciences.