

Adwait Nadkarni

McGlothlin-Street Hall 104C, 251 Jamestown Road, Williamsburg, VA- 23187
+1 (919) 455 3955 • apnadkarni@wm.edu • www.adwaitnadkarni.com

EDUCATION

- North Carolina State University, Raleigh, NC, USA** Spring 2013 - Spring 2017
PhD in Computer Science
Dissertation: *Towards Practical Data Secrecy for Modern Operating Systems*
Advisor: Dr. William Enck
- North Carolina State University, Raleigh, NC, USA** Fall 2011 - Fall 2012
MS in Computer Science
Thesis: *Workflow Based Information Flow Control in Modern Operating Systems*
Advisor: Dr. William Enck
- University of Mumbai, Mumbai, India** Fall 2007 - Spring 2011
BE in Computer Engineering
First Class with Distinction

PROFESSIONAL EXPERIENCE

- The College of William and Mary** Fall 2017 - Present
Assistant Professor, Computer Science (tenure-track)
Williamsburg, VA
- Leading a research group focused on cyber-security.
 - Teaching courses on computer and network security.
- North Carolina State University, Lead Graduate Student** Fall 2015 - Spring 2017
Wolpack Security and Privacy Research (WSPR) Lab
Raleigh, NC
- North Carolina State University, Research Assistant** Spring 2012 - Spring 2017
Advisor: Dr. William Enck
Raleigh, NC
- Samsung Research America, Research Intern** Summer 2014
Mentor: Dr. Michael Grace, KNOX Security Team
Santa Clara, CA
- Technicolor Research, Research Intern** Summer 2013
Mentor: Dr. Almol Sheth
Palo Alto, CA

PUBLICATIONS (Total Citations: 520, h-index: 11, as of June 2022)

Google Scholar: <https://scholar.google.com/citations?user=A12MvLoAAAAJ&hl=en>

Note: Within the domain of computer security, the following conferences are considered *top-tier venues*: the IEEE Symposium on Security & Privacy (S&P), the USENIX Security Symposium (USENIX), the ACM Conference on Computer and Communications Security (CCS), and, the ISOC Network and Distributed Systems Security Symposium (NDSS). Further, the ACM Transactions on Privacy & Security (TOPS), the ACM Transactions on Cyber-physical Systems (TCPS), and the Proceedings on Privacy Enhancing Technologies (PoPETs) are premier journals in security, cyber-physical systems, and privacy, respectively. Finally, my work has also appeared in conferences such as ACM CODASPY and ACM WiSEC. Although these conferences have higher acceptance rates (around 30%), they have consistently attracted top quality researchers. *The names of students advised by me are underlined.*

Conference Publications.....

- [1] Sunil Manandhar, Kaushal Kafle, Benjamin Andow, Kapil Singh, and **Adwait Nadkarni**. Smart Home Privacy Policies Demystified: A Study of Availability, Content, and Coverage. In *The USENIX Security Symposium (USENIX)*, August 2022. *Accepted, to appear.*

- [2] Amit Seal Ami, Nathan Cooper, Kaushal Kafle, Kevin Moran, Denys Poshyvanyk, and **Adwait Nadkarni**. Why Crypto-detectors Fail: A Systematic Evaluation of Cryptographic Misuse Detection Techniques. In *IEEE Symposium on Security and Privacy (S&P)*, May 2022. **Acceptance rate: 147/1012 \approx 14.52%**
The artifact is available at: <https://github.com/Secure-Platforms-Lab-W-M/masc-artifact>.
- [3] Amit Seal Ami, Kaushal Kafle, Kevin Moran, **Adwait Nadkarni**, and Denys Poshyvanyk. Demo: Mutation-based Evaluation of Security-focused Static Analysis Tools for Android. In *Proceedings of the 43rd IEEE/ACM International Conference on Software Engineering (ICSE'21), Formal Tool Demonstration Track*, May 2021.
- [4] Sunil Manandhar, Kevin Moran, Kaushal Kafle, Ruhao Tang, Denys Poshyvanyk, and **Adwait Nadkarni**. Towards a Natural Perspective of Smart Homes for Practical Security and Safety Analyses. In *Proceedings of the IEEE Symposium on Security & Privacy (S&P)*, May 2020. **Acceptance rate: 104/841 \approx 12.3%**
The artifact is available at: <https://github.com/helion-security/helion>.
- [5] Kaushal Kafle, Kevin Moran, Sunil Manandhar, **Adwait Nadkarni**, and Denys Poshyvanyk. A Study of Data Store-based Home Automation. In *Proceedings of the 9th ACM Conference on Data and Application Security and Privacy (CODASPY)*, pages 73–84, Dallas, TX, USA, March 2019. **Acceptance rate: 28/119 \approx 23.5%, [Best Paper Award]**.
- [6] Sigmund A Gorski III, Benjamin Andow, **Adwait Nadkarni**, Sunil Manandhar, William Enck, Eric Bodden, and Alexandre Bartel. ACMiner: Extraction and Analysis of Authorization Checks in Android’s Middleware. In *Proceedings of the 9th ACM Conference on Data and Application Security and Privacy (CODASPY)*, pages 25–36, Dallas, TX, USA, March 2019. **Acceptance rate: 28/119 \approx 23.5%**.
- [7] Richard Bonett, Kaushal Kafle, Kevin Moran, **Adwait Nadkarni**, and Denys Poshyvanyk. Discovering Vulnerabilities in Security-Focused Static Analysis Tools for Android using Systematic Mutation. In *Proceedings of the 27th USENIX Security Symposium (USENIX)*, pages 1263–1280, Baltimore, MD, USA, August 2018. **Acceptance rate: 100/524 \approx 19%**
The source code is available at: <https://muse-security-evaluation.github.io/>.
- [8] **Adwait Nadkarni**, Benjamin Andow, William Enck, and Somesh Jha. Practical DIFC Enforcement on Android. In *Proceedings of the 25th USENIX Security Symposium (USENIX)*, pages 1119–1136, Austin, TX, USA, August 2016. **Acceptance rate: 72/463 \approx 15.6%**
The source code is available at: <https://wspr.csc.ncsu.edu/weir/>.
- [9] Stephan Heuser*, **Adwait Nadkarni***, William Enck, and Ahmad-Reza Sadeghi. ASM: A Programmable Interface for Extending Android Security. In *Proceedings of the 23rd USENIX Security Symposium (USENIX)*, pages 1005–1019, San Diego, CA, USA, August 2014. ***Co-first Authors. Acceptance rate: 67/350 \approx 19.1%**
The source code is available at: <http://www.androidsecuritymodules.org>.
- [10] **Adwait Nadkarni**, Vasant Tendulkar, and William Enck. NativeWrap: Ad Hoc Smartphone Application Creation for End Users. In *Proceedings of the 7th ACM Conference on Security and Privacy in Wireless and Mobile Networks (WiSec)*, pages 13–24, Oxford, UK, July 2014. **Acceptance rate: 25/96 \approx 26%**
The source code is available at: <https://wspr.csc.ncsu.edu/nativewrap/>.
- [11] **Adwait Nadkarni** and William Enck. Preventing accidental data disclosure in modern operating systems. In *Proceedings of the 2013 ACM Conference on Computer & Communications Security (CCS)*, pages 1029–1042, Berlin, Germany, November 2013. **Acceptance rate: 105/530 \approx 19.8%**
The source code is available at: <https://wspr.csc.ncsu.edu/aquifer/>.

Journal Publications.....

- [1] Amit Seal Ami, Kaushal Kafle, Kevin Moran, **Adwait Nadkarni**, and Denys Poshyvanyk. Systematic Mutation-based Evaluation of the Soundness of Security-focused Android Static Analysis Techniques. *ACM Transactions on Privacy and Security (TOPS)*, 24(15), February 2021.

- [2] [Kaushal Kafle](#), Kevin Moran, [Sunil Manandhar](#), **Adwait Nadkarni**, and Denys Poshyvanyk. Security in Centralized Data Store-based Home Automation Platforms: A Systematic Analysis of Nest and Hue. *ACM Transactions on Cyber-Physical Systems (TCPS)*, 5(1), December 2020.
- [3] Rui Shu, Peipei Wang, Sigmund A Gorski III, Benjamin Andow, **Adwait Nadkarni**, Luke Deshotels, Jason Gionta, William Enck, and Xiaohui Gu. A Study of Security Isolation Techniques. *ACM Computing Surveys (CSUR)*, 49(3), October 2016.

Workshop Publications.....

- [1] Benjamin Andow, **Adwait Nadkarni**, Blake Bassett, William Enck, and Tao Xie. A Study of Grayware on Google Play. In *Proceedings of the IEEE Mobile Security Technologies workshop (MoST)*, pages 224–233, San Jose, CA, USA, May 2016. **Acceptance rate: 10/35 ≈ 28.6%.**

Book Chapters.....

- [1] William Enck and **Adwait Nadkarni**. Android’s Security Framework-Understanding the Security of Mobile Phone Platforms. In *Encyclopedia of Cryptography, Security and Privacy*. Springer. **To appear**; Section Editor: Reza Curtmola.
- [2] **Adwait Nadkarni**, Akash Verma, Vasant Tendulkar, and William Enck. Reliable Ad Hoc Smartphone Application Creation for End Users. In *Intrusion Detection and Prevention for Mobile Ecosystems*. CRC Press, July 2017. Editor: George Kambourakis and Asaf Shabtai and Konstantinos Kolias and Dimitrios Damopoulos.

Technical Reports.....

- [1] **Adwait Nadkarni**, William Enck, Somesh Jha, and Jessica Staddon. Policy by Example: An Approach for Security Policy Specification. arxiv preprint arxiv:1707.03967, July 2017.
- [2] **Adwait Nadkarni**, Anmol Sheth, Udi Weinsberg, Nina Taft, and William Enck. GraphAudit: Privacy Auditing for Massive Graph Mining. Technical Report tr-2014-10, North Carolina State University, Department of Computer Science, Raleigh, NC, August 2014.

Columns.....

- [1] William Enck and **Adwait Nadkarni**. What if the FBI tried to crack an Android phone? We attacked one to find out, March 2016.

Patents.....

- [1] William Harold Enck, **Adwait Nadkarni**, Ahmad-reza Sadeghi, and Stephan Heuser. Programmable interface for extending security of application-based operating system, such as android, March 13 2018. US Patent US 9,916 ,475 B2.

Publications under review /targeted for submission.....

- [1] [Kaushal Kafle](#), Kirti Jagtap, Mansoor Ahmed-Rengers, Trent Jaeger, and **Adwait Nadkarni**. REDACTED: Under review. In *The USENIX Security Symposium (USENIX)*, August 2023. **Major Revision under review at USENIX Security’23.**
- [2] [Sunil Manandhar](#), Xin Jin, [Kaushal Kafle](#), Zhiqiang Lin, and **Adwait Nadkarni**. REDACTED: Under review. In *The ACM Conference on Computer and Communications Security (CCS)*, November 2022. ***Co-first authors. Submitted, under review.**
- [3] [Kaushal Kafle](#), Prianka Mandal, Kapil Singh, and **Adwait Nadkarni**. REDACTED: Under review. In *The USENIX Security Symposium (USENIX)*, August 2023. **Submitted, under review.**
- [4] [Sunil Manandhar](#), Kapil Singh, and **Adwait Nadkarni**. REDACTED: Under review. In *The USENIX Security Symposium (USENIX)*, August 2023. **Submitted, under review.**

- [5] Amit Seal Ami, Kevin Moran, Denys Poshyvanyk, and **Adwait Nadkarni**. Demystifying *Unsoundness*: Understanding the Mental Models and Design Practices behind unsound and sound security analyses. In *The IEEE Symposium on Security & Privacy (S&P)*, May 2023. *To be submitted in August 2022*.
- [6] Prianka Mandal, Tu Le, Yuan Tian, and **Adwait Nadkarni**. Understanding the Privacy Implications of City-wide Wifi services. In *The 23rd Privacy Enhancing Technologies Symposium (PETS/PoPETS)*, August 2023. *To be submitted in August 2022*.
- [7] Sunil Manandhar, Kapil Singh, and **Adwait Nadkarni**. Automated Privacy Policy Triaging with Regulation Analysis. In *IEEE Symposium on Security and Privacy (S&P)*, May 2023. *To be submitted in August 2022*.

AWARDED RESEARCH GRANTS

- 1. Collaborative Research: CPS: Medium: Enabling Data-Driven Security and Safety Analyses for Cyber-Physical Systems:**
 - Sponsor: National Science Foundation (NSF), Cyber-Physical Systems (CPS) Program
 - Total Award: \$1,200,000 (W&M share: \$799,839)
 - Duration: January 01,2022 to December 31,2025
 - *PI: Adwait Nadkarni*, Co-PIs: Denys Poshyvanyk, Kevin Moran (George Mason University)
- 2. A Systematic Evaluation of Smart City Security and Privacy:**
 - Sponsor: Coastal Virginia (COVA) node, Commonwealth Cyber Initiative (CCI)
 - Total Award: \$194,850 (W&M Share: \$95,460)
 - Duration: January 01, 2021 to December 31, 2021
 - *PI: Adwait Nadkarni*, Co-PI: Yuan Tian (University of Virginia)
- 3. SaTC: CORE: Small: Enabling Systematic Evaluation of the Soundness of Android Security Analysis Techniques:**
 - Sponsor: National Science Foundation (NSF), Secure and Trustworthy Cyberspace (SaTC) Program
 - Total Award: \$500,000
 - Duration: September 01, 2018 to August 31, 2021
 - *PI: Adwait Nadkarni*, Co-PI: Denys Poshyvanyk
- 4. Practical and Secure Software Assurance in IoT (Cybersecurity Dissertation Fellowship, Amit Seal Ami):**
 - Sponsor: Coastal Virginia (COVA) center, Commonwealth Cyber Initiative (CCI)
 - Total Award: \$25,000
 - Duration: July 01, 2021 to June 30, 2022
 - *Administering as PI, on behalf of Amit Seal Ami*
- 5. Improving Privacy, Security, Safety in Emerging Platforms (Cybersecurity Dissertation Fellowship, Sunil Manandhar):**
 - Sponsor: Coastal Virginia (COVA) center, Commonwealth Cyber Initiative (CCI)
 - Total Award: \$25,000
 - Duration: July 01, 2021 to June 30, 2022
 - *Administering as PI, on behalf of Sunil Manandhar*
- 6. Developing Infrastructure for Advancing Research and Teaching in Security and Reliability:**

- Sponsor: Coastal Virginia (COVA) center, Commonwealth Cyber Initiative (CCI)
- Total Award: \$79,670
- Duration: January 01, 2022 to December 31, 2022
- PI: Dmitry Evtuyshkin, Co-PI: **Adwait Nadkarni**, Evgenia Smirni, Yifan Sun

7. **W&M Summer Research Award 2019 (Single PI)** (\$4300):

8. **W&M Summer Research Award 2018 (Single PI)** (\$4000):

PLANNED/SUBMITTED RESEARCH PROPOSALS

1. **CAREER: Integrating Trust and Accountability into Compliance Enforcement for a Secure Internet of Things**

- Sponsor: National Science Foundation (NSF), Secure and Trustworthy Cyberspace (SaTC) Program
- Requested Award: \$550,000
- *To be submitted on 07/26/2022*
- Proposed Duration: January 01, 2023 to December 31, 2027

2. **Collaborative Research: SaTC: CORE: Medium: Decentralized User-Aware Access Control for IoT:**

- Sponsor: National Science Foundation (NSF), Secure and Trustworthy Cyberspace (SaTC) Program
- Requested Award: \$1,200,000 (W&M share: \$299,999), with University of Washington (Lead) and Penn State.
- *To be submitted on 11/15/2022*
- Proposed Duration: January 01, 2023 to December 31, 2026
- *W&M PI: Adwait Nadkarni, UW PI: Franziska Roesner, PSU PI: Trent Jaeger, Co-PI: Syed Rafiul Hussain*

AWARDS AND ACHIEVEMENTS

- **Finalist/Nominee for the 2022 CCI Impact Award**, Commonwealth Cyber Initiative (CCI), VA
- **2021 Graduate Faculty Mentoring Award**, Arts & Sciences, William & Mary
- **Best Paper Award, ACM CODASPY 2019:** For “A Study of Data Store-based Home Automation”.
- **Fellowship Finalist (in the top 10):** 2016 Symantec Research Labs Graduate Fellowship Award.
- **Travel Awards from top-tier conferences:** IEEE S&P Student PC 2017 (by NSF), USENIX Security Symposium 2016, ACM CCS 2013, IEEE S&P 2013
- **Common Vulnerabilities and Exposures (CVEs) Awarded:** [CVE-2019-9438](#), [CVE-2019-9351](#) and [CVE-2019-9377](#)
- Contributions recognized in Google’s [Android Release Security Acknowledgements](#)
- **Recent Press Coverage:** Our investigation of smart home routines received significant press coverage: [Daily Press](#), [NBC News](#), [Quartz](#), [The Ambient](#), [Daily Mail UK](#), [Insurance Journal](#), [Claims Journal](#)
- The ASM Framework source code was used by 71 security researchers from 41 universities and 10 companies, and was covered by popular technology news sites such as [ZDNet](#) and [The Register](#)
- The [NativeWrap](#) security application was downloaded over 10,000 times on the Google Play store, and received coverage on popular technology news sites such as [ArsTechnica](#)

TEACHING

- Instructor, Concepts of Computer Security (CSCI 677), William & Mary, Spring 2022
- Instructor, Mobile Application Security (CSCI 445), William & Mary, Fall 2021
- Instructor, IoT Security & Safety (CSCI 680), William & Mary, Spring 2021
- Instructor, Mobile Application Security (CSCI 445), William & Mary, Fall 2020
- Instructor, Mobile Application Security (CSCI 420), William & Mary, Spring 2020
- Instructor, IoT Security & Safety (CSCI 680), William & Mary, Fall 2019
- Instructor, Concepts of Computer Security (CSCI 677), William & Mary, Spring 2019
- Instructor, Mobile Application Security (CSCI 420), William & Mary, Fall 2018
- Instructor, Mobile Application Security (CSCI 420), William & Mary, Spring 2018
- Instructor, Computer and Network Security (CSCI 680), William & Mary, Fall 2017
- Guest Lecturer, Computer and Network Security (CSC 574), NCSU, Spring 2016
 - Topics Taught: *Authentication Protocols, Transport Layer Security, and Smartphone Security*
- Guest Lecturer, Operating Systems Security (CSC 705), NCSU, Spring 2015 and Spring 2014
 - Topics Taught: *Capability Systems and Decentralized Information Flow Control (DIFC)*

PROFESSIONAL SERVICE

External Service.....

- **Proposal Review:**
 - National Science Foundation (NSF) Small Business Innovation Research (SBIR) Panel, 2020
 - Node proposal reviewer for the Virginia Commonwealth Cyber Initiative (CCI), May 2019
 - National Science Foundation (NSF) Secure and Trustworthy Cyberspace (SaTC) Panel, 2018
- **Conference Organization:**
 - Co-lead, BoF Session on “Sustainable Security Tools”, NSF SaTC PI Meeting, 2022
 - Poster Chair, ISOC Network and Distributed System Security Symposium (NDSS), 2021 [**Top-tier Venue**]
 - Poster Chair, ISOC Network and Distributed System Security Symposium (NDSS), 2020 [**Top-tier Venue**]
 - Publications/Registration Chair for ACM Conference on Security and Privacy in Wireless and Mobile Networks (WiSec), 2016.
- **Conference Technical Program Committees:**
 - USENIX Security Symposium (USENIX): 2023, 2021, 2019, 2018 [**Top-tier in Security**]
 - IEEE Symposium on Security and Privacy (S&P): 2023 [**Top-tier in Security**]
 - ISOC Network and Distributed System Security Symposium (NDSS): 2022, 2021, 2020 [**Top-tier in Security**]
 - ACM Conference on Computer and Communications Security (CCS): 2018 [**Top-tier in Security**]
 - Symposium on Privacy Enhancing Technologies (PETS/PoPETS): 2023 [**Top-tier in Privacy**]
 - IEEE/ACM International Conference on Automated Software Engineering (ASE): 2021 [**Top-tier in SE**]
 - Annual Computer Security Applications Conference (ACSAC): 2022, 2021

- ACM Conference on Security and Privacy in Wireless and Mobile Networks (WiSec): 2022, 2020, 2019, 2018
 - International Conference on Information Systems Security (ICISS): 2022, 2021, 2020, 2019, 2018
 - IEEE Conference on Communications and Network Security (CNS): 2022
 - IEEE Workshop on the Internet of Safe Things (SafeThings): 2021, 2020 (co-located with S&P)
 - USENIX Workshop on Cyber Security Experimentation and Test (CSET): 2021, 2020 (co-located with USENIX Security)
 - USENIX Workshop on Offensive Technologies (WOOT): 2017
 - EAI International Conference on Security and Privacy in Communication Networks (SecureComm): 2020
 - IEEE Conference on Dependable and Secure Computing (DSC): 2019, 2018
 - Mobile Security Technologies (MoST): 2017, 2016
 - International Workshop on Online Privacy and Data Security (OPDS): 2018
 - International Conference on Mobile Services, Resources, and Users (Mobility): 2016, 2015
- **Journal Reviewer:**
 - ACM Transactions on Privacy and Security (TOPS): 2021, 2019 [**Top journal**]
 - IEEE Security & Privacy Magazine: 2021, 2018
 - Empirical Software Engineering (EMSE): 2020
 - ACM Transactions on the Web (TWEB): 2020
 - IEEE Transactions on Dependable and Secure Computing (TDSC): 2019, 2018, 2013
 - IEEE Transactions on Software Engineering (TSE): 2018 [**Top journal**]
 - IEEE Transactions on Information Forensics and Security (T-IFS): 2018, 2017, 2015
 - IEEE Transactions on Parallel and Distributed Systems (TPDS): 2017
 - ACM Transactions on Internet Technology (TOIT), 2016
 - Computers & Security (COSE), 2015
 - Security and Communication Networks (SCN), 2014
- **Shadow/Student Program Committee:**
 - IEEE Symposium on Security and Privacy (S&P), 2017 [**Top-tier in Security**]
 - ACM Asia Conference on Computer and Communications Security (ASIACCS), 2017
 - USENIX Security Symposium (USENIX), 2014 [**Top-tier in Security**]
- **Sub-reviewer, conferences and workshops (on-behalf reviews, by invitation)**
 - USENIX Security Symposium (USENIX), 2017
 - ISOC Network and Distributed System Security Symposium (NDSS), 2017
 - ISOC Network and Distributed System Security Symposium (NDSS), 2016
 - ACM Conference on Data and Application Security and Privacy (CODASPY), 2016
 - ISOC Network and Distributed System Security Symposium (NDSS), 2015
 - ACM Conference on Computer and Communications Security (CCS), 2015
 - The International Symposium on Research in Attacks, Intrusions and Defenses (RAID), 2015
 - Mobile Security Technologies (MoST), 2015
 - ACM Conference on Security and Privacy in Wireless and Mobile Networks (WiSec), 2013

Service at William & Mary.....

• **Computer Science Department Committees:**

- Graduate Outreach/Recruiting Committee: AY 2022 [**Chair**], 2021, 2020, 2019, 2018 (*founding member*)
- Faculty Hiring Committee: AY 2022, 2021, 2020, 2019
- Graduate Admissions Committee: AY 2022, 2019, 2018, 2017
- Web Presence Committee: AY 2021

• **College of Arts & Sciences Committees**

- Thesis/Dissertation Awards Committee (Natural & Computational Sciences), 2017-2019
- Sanderson Undergraduate Mentoring Awards Committee, 2020
- Thomas Jefferson Prize in Natural Philosophy Selection Committee, 2021
- Freshman Advising (6-8 students each year), 2019-present

• **Doctoral, MS, and Honors Committees**

- Kunyang Li, Honors Thesis Committee, Fall 2021
- Carlos Bernal-Cardenas, PhD Committee, Summer 2021
- Ruhao Tang, Honors Thesis Committee, Spring 2019
- Brian Burns, MS Project Committee (Chair), Spring 2019
- Yutao Tang, PhD Committee, Fall 2018
- Kevin Moran, PhD Committee, Spring 2018

Teaching/Mentoring Activities and Outreach.....

• **Policy Outreach:** Member, Philadelphia Smart City (SmartCityPHL) Task Force, July 2021 - present

• **Developer Outreach:** Research Talk on *Enabling Safe and Secure Home Automation: Problems, Best Practices, and Future Opportunities*, Williamsburg Developers Group, Williamsburg, VA, July 2019

• **Outside-W&M Undergraduate Mentoring:** Mentor for COVA CCI undergraduate summer research, Summer 2020-present (3 mentees).

• **Outreach Talks at primarily undergraduate/HBCU institutions:**

- W&M Computer Science Graduate Outreach talk, Longwood University, VA, February 2022.
- W&M Computer Science Graduate Outreach talk, Randolph Macon College, VA, November 2019.
- W&M Computer Science Graduate Outreach talk, Randolph Macon College, VA, November 2018.
- W&M Computer Science Graduate Outreach talk, Virginia Union University, VA, October 2018.

CURRENT STUDENTS

• Graduate Students

- Sunil Manandhar, PhD candidate, *Expected Graduation: Summer 2022*
 - *S. Laurie Sanderson Award for Excellence in Undergraduate Mentoring, 2021*
 - *Commonwealth of Virginia Engineering & Science (COVES) Fellow, 2021*
 - *Dissertation Fellowship, Coastal Virginia Center for Cyber Innovation (COVA CCI), \$25,000*
- Kaushal Kafle, PhD candidate, *Expected Graduation: Spring 2023*
- Amit Seal Ami, PhD student *co-advised with Denys Poshyvanyk, Expected Graduation: Spring 2024*

- *Dissertation Fellowship, Coastal Virginia Center for Cyber Innovation (COVA CCI), \$25,000*
- *Commonwealth of Virginia Engineering & Science (COVES) Fellow, 2022*
- Prianka Mandal, PhD student, *Expected Graduation: Spring 2024*
- Undergraduate Students
 - Sayyed Razmjoo, *Expected Graduation: Spring 2023*
 - Raymond Herve Geistel, BS at ODU, Undergraduate mentee (Fall 2021-present)

GRADUATED STUDENTS

- Graduate Students
 - Brian Burns, Masters, *Completed Masters Project and Graduated in Spring 2019*
- Undergraduate Students
 - Kunyang (Ella) Li, *Charles Center Scholar 2020, Honors thesis, Graduated Fall 2021*
 - Caleb Atkins, *Independent study, Graduated in Spring 2020*
 - Hanqiu Peng, *Independent study, Graduated in Spring 2020*
 - Rozda Askari, *Independent study, Graduated in Spring 2019*
 - Ruhao (Tony) Tang, *Charles Center Scholar 2018, Undergraduate Park Award 2019, Honors Thesis, Graduated Spring 2019*
- Undergraduate mentees (non-W&M)
 - Raymond Herve Geistel, Old Dominion University, COVA CCA Undergraduate Mentee, Summer 2021
 - Andrew Piazza, Old Dominion University, COVA CCA Undergraduate Mentee, Summer 2020
 - Nii-kwartei Quartey, Christopher Newport University, COVA CCA Undergraduate Mentee, Summer 2020

INVITED TALKS

- *Building Practical Security Systems for the Post-app Smart Home*
 - Chalmers University, Host: Andrei Sabelfeld, December 2021
 - William & Mary, CS Graduate Seminar, October 2021
 - Purdue University, CERIAS Seminar, Host: Berkay Celik, January 2021
 - Georgetown University, CS Colloquium, Host: Benjamin Ujcich, November 2020
 - Pennsylvania State University, CSE Colloquium, Host: Gang Tan, October 2020
- *Computer Security (10000 ft View)*
 - IIT Bombay, Mumbai, India, December 2017
 - William & Mary, CS Graduate Seminar, October 2017
- *Data Secrecy in Emerging Computing Platforms*
 - Texas State University, April 2017
 - William & Mary, February 2017
- *Data secrecy using Smart Isolation*, at the Science of Security Community Day, NC State University, Oct. 2016.
- *Practical DIFC Enforcement for Android*, at the 25th USENIX Security Symposium, Austin, Texas, August 2016.

- *Data Secrecy for Smartphones*, at the Science of Security Community Day, NC State University, October 2015.
- *Preventing Accidental Data Disclosure in Modern Operating Systems*, at the 20th ACM Conference on Computer and Communications Security, Berlin, Germany, November 2013.
- *Information Provenance*, at the Science of Security Lablet Hard Problems, NC State University, March 2013.
- *IFC in Android*, at the NSA Science of Security Lablet Quarterly Visit, NC State University, February 2013.