Adwait Nadkarni

McGlothlin-Street Hall 104C, 251 Jamestown Road, Williamsburg, VA- 23187
+1 (757) 221 2953 • 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

William & 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
Wolfpack 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: 544, h-index: 12, as of October 2022)

Google Scholar: https://scholar.google.com/citations?user=Al2MvLoAAAAJ&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 well-regarded conferences such as ACM CODASPY and ACM WiSec, which have consistently attracted top quality researchers. *The names of students advised by me are underlined.*

Conference Publications

[1] Xin Jin*, Sunil Manandhar*, Kaushal Kafle, Zhiqiang Lin, and **Adwait Nadkarni**. Understanding IoT Security from a Market-Scale Perspective. In *Proceedings of the 29th ACM Conference on Computer and Communications Security (CCS)*, Los Angeles, CA, USA, November 2022. *Co-first Authors., To appear.
The artifact is available at: https://github.com/Secure-Platforms-Lab-W-M/IoTSpotter.

[2] 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. ***Acceptance rate: 256/1414, 18%***
The artifact is available at: https://github.com/Secure-Platforms-Lab-W-M/smart-home-privacy-policies.

[3] 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 ≈ 14.52%***
The artifact is available at: https://github.com/Secure-Platforms-Lab-W-M/masc-artifact.

[4] 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.

[5] 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 ≈ 12.3%***
The artifact is available at: https://github.com/helion-security/helion.

[6] 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 ≈ 23.5%, [Best Paper Award]***.

[7] 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 ≈ 23.5%***.

[8] 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 ≈ 19%***
The source code is available at: https://muse-security-evaluation.github.io/.

[9] **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 ≈ 15.6%***.
The source code is available at: https://wspr.csc.ncsu.edu/weir/.

[10] 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 ≈ 19.1%***
The source code is available at: http://www.androidsecuritymodules.org.

[11] **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 ≈ 26%***
The source code is available at: https://wspr.csc.ncsu.edu/nativewrap/.

[12] **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 ≈ 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*** $\approx$ ***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. ***Submitted, under review.***

[2] Prianka Mandal, Tu Le, Yuan Tian, and **Adwait Nadkarni**. REDACTED: Under review. ***Submitted, under review.***

[3] Sunil Manandhar, Kapil Singh, and **Adwait Nadkarni**. PrivQuery: Towards an Automated Understanding of Privacy Regulations. ***To be submitted in September 2022***.

[4] Kaushal Kafle, Prianka Mandal, Kapil Singh, and **Adwait Nadkarni**. Understanding the Privacy Practices of Political Campaigns. ***To be submitted in December 2022***.

[5] Amit Seal Ami, Kevin Moran, Denys Poshyvanyk, and **Adwait Nadkarni**. Demystifying *Unsoundness*: Understanding the Mental Models and Design Practices behind unsound and soundy security analyses. ***To be submitted in December 2022***.

[6] Prianka Mandal, Amit Seal Ami, and **Adwait Nadkarni**. Understanding the Security of *Certified* IoT products. ***To be submitted in December 2022***.

[7] Sunil Manandhar, Kapil Singh, and **Adwait Nadkarni**. Automated Privacy Policy Triaging with Regulation Analysis. ***To be submitted in February 2023***.

AWARDED RESEARCH GRANTS (over $1.5 million, $1.4 million as PI)

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: $50,000 (Initially $25,000 up to June 30, 2022, then renewed for another year)
   - Duration: July 01, 2021 to June 30, 2023
   - ***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 Evtyushkin, Co-PI: **Adwait Nadkarni**, Evgenia Smirni, Yifan Sun
7. **W&M Summer Research Award 2019 and 2018 (*Single PI*)** ($8300)

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: $561,542
   - *Submitted in 07/2022*
   - Proposed Duration: January 01, 2023 to December 31, 2027

AWARDS AND ACHIEVEMENTS

- **Top 5 Finalist/Nominee for the 2021 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, Mobile Application Security (CSCI 445), William & Mary, Fall 2022
- 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)*

PROFESSSIONAL 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, 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
  - Artifact Evaluation Committee for 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:**
  - General Chair, the inaugural *W&M CS Symposium for Graduate Studies*, Williamsburg, VA, October 2022
  - 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**
  - Sunil Manandhar, PhD Committee, *Chair*, Summer 2022
  - 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

- PhD Students
  - 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), $50,000***
    - ***Commonwealth of Virginia Engineering & Science (COVES) Fellow, 2022***
  - Prianka Mandal, PhD student, *Expected Graduation: Spring 2024*
  - Victor Olaiya, PhD student, *Expected Graduation: Spring 2027*
- Undergraduate Students
  - Sayyed Razmjo, *Expected Graduation: Spring 2023*

GRADUATED STUDENTS

- Sunil Manandhar, PhD, Summer 2022, *now Research Scientist at the IBM T.J. Watson Research Center*
  - ***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***
- Masters and Undergraduate students
  - Brian Burns, MS, *Completed Masters Project and Graduated in Spring 2019*
  - 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)
  - Tricia Camaya, Norfolk State University, COVA CCI Undergraduate Mentee, Fall 2022
  - Raymond Herve Geistel, Old Dominion University, COVA CCI Undergraduate Mentee, Summer 2021
  - Andrew Piazza, Old Dominion University, COVA CCI Undergraduate Mentee, Summer 2020
  - Nii-kwartei Quartey, Christopher Newport University, COVA CCI 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.