

Hongxin Hu

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RESEARCH INTERESTS

- Emerging Network Technologies and Security (NFV, SDN, 5G/Next-G, Edge, etc.)
- Security and Privacy in IoT and CPS
- Machine Learning for Security, Privacy, and Networking
- Security and Privacy in Social Networks
- Usable Privacy and Security
- Security in Cloud and Mobile Computing

ACHIEVEMENT HIGHLIGHTS

- Received **15 NSF** awards (9 as PI and 6 as Co-PI) including an NSF **CAREER** Award, a **\$3M** large-size NSF grant, a **\$2.7M** large-size NSF grant, and a **\$1M** medium-size NSF grant
- Secured grants **\$12.12M** total as PI or Co-PI
- Over 100 publications (citations=**7,000+**, h-index=**43**), some of which appeared in top-tier conferences such as CCS, USENIX Security, NDSS, SIGCOMM, NSDI, NeurIPS, ICML, EMNLP, CHI, and CSCW, and top journals such as IEEE TDSC, IEEE TIFS, IEEE/ACM TON, JSAC, and IEEE TKDE
- **Nine** papers received or nominated for Best Paper Award
- Research received **50+** media coverage
- Advising/co-advising 6 Ph.D. students. They have recently authored top-tier security conference papers (NDSS'21 [2][3], CCS'20 [4], NDSS'20 [9], CCS'18 [13][14], and NDSS'17 [22]), top-tier networking conference papers (SIGCOMM'20 [6], SIGCOMM'17 [20], ICNP'20 [7], INFOCOM'19 [12], and ICNP'18 [16]), and top-tier HCI conference papers (CHI'20 [10], CSCW'18 [15])
- Early promotion to Associate Professor (2019)
- Received NSF CAREER Award (2019)
- Received Dean's Faculty Fellows Award (2017)
- One Ph.D. student received Outstanding Ph.D. Student Award (2019)
- Led the effort to enable Clemson University to be designated as a National Center of Academic Excellence in Research (CAE-R)
- Helped establish a Cybersecurity Minor at Clemson University and make Clemson University to be designated as a National Center of Academic Excellence in Cyber Defense Education (CAE-CDE)
- Founded ACM International Workshop on Security in Software Defined Networks & Network Function Virtualization (SDN-NFV Security), and served as program co-chairs of SDN-NFV Security 2016-2019

- Served in several conference organizing roles, such as program committees of AAAI 2021, WWW 2021, 2019, ACSAC 2018-2021, ASIACCS 2018-2021, WiSec 2020, CODASPY 2018, SACMAT 2013-2015/2018-2021, and CNS 2017-2020, proceedings chairs of SACMAT 2014/2016-2021 and CODASPY 2017, the poster chair of CODASPY 2018-2021, and the web chair and session chair of CCS 2014
- Gave several talks about NFV security research at NFV World Congress

EDUCATION Ph.D. in Computer Science and Engineering, Arizona State University, 2012
 M.S. in Computer Science, China University of Geosciences, 2002
 B.S. in Computer Science, China University of Geosciences, 1997

PROFESSIONAL EXPERIENCE *Associate Professor* January 2021 - Present
 Computer Science and Engineering Department, University at Buffalo, SUNY, NY

Director of Cybersecurity Center August 2020 - January 2021
Associate Professor, School of Computing August 2019 - January 2021
Assistant Professor, School of Computing July 2014 - August 2019
Dean's Faculty Fellow of Computer Science January 2017 - January 2021
 Clemson University, SC

Assistant Professor August 2012 - June 2014
 Department of Computer and Information Sciences, Delaware State University, DE

Graduate Student Researcher & Lead Graduate Student August 2008 - July 2012
 Laboratory of Security Engineering for Future Computing (SEFCOM), Arizona State University, AZ

Graduate Student Researcher January 2006 - July 2008
 Laboratory of Information Integration, Security and Privacy (LIISP), University of North Carolina at Charlotte, NC

Visiting Scholar January 2005 - December 2005
 Laboratory of Information Integration, Security and Privacy (LIISP), University of North Carolina at Charlotte, NC

Lecturer August 2002 - December 2004
 College of Computing, China University of Geosciences, China

HONORS AND AWARDS

- **Best Paper Award**, ACM ASIA Conference on Computer and Communications Security (ASIACCS), 2022
- **Amazon Faculty Research Award**, 2022
- **Distinguished Paper Award**, Annual Computer Security Applications Conference (ACSAC), 2020
- **Distinguished Paper Award**, Annual Computer Security Applications Conference (ACSAC), 2020
- **Best Paper Award**, IEEE International Conference on Communications (ICC), 2020
- **NSF CAREER Award**, 2019
- **First Place**, Student Research Competition (SRC) in ACM SIGCOMM, 2018

- **Best Paper Award**, ACM Technical Symposium on Computer Science Education (SIGCSE), 2018
- **Dean’s Faculty Fellows Award**, College of Engineering, Computing and Applied Sciences, Clemson University, 2017
- **Best Paper Honorable Mention Award**, ACM Symposium on Access Control Models and Technologies (SACMAT), 2016
- **Best Paper Award Nominee**, IEEE International Conference on Network Protocols (ICNP), 2015
- **Top-10 Finalist for Best Applied Security Paper Award**, New York University Cyber Security Awareness Week (CSAW), 2015
- **Spotlight Paper**, IEEE Transactions on Dependable and Secure Computing (TDSC), 2015
- **Front Page News**, Post and Courier, 2015
- **Third Place Award**, Extreme SDN Innovation Challenge, 2015
- **Best Paper Award**, ACM Conference on Data and Application Security and Privacy (CODASPY), 2014
- **Spotlight Paper**, IEEE Transactions on Dependable and Secure Computing (TDSC), 2014
- **Featured Research Paper**, IEEE Special Technical Community on Social Networking (STCSN), 2013
- **First Place Award**, Delaware U.S. Cyber Challenge Competition, “My Little Pwnies” (60% of female students), 2013
- Applied Security Research Best Paper Award Nominee, New York University Cyber Security Awareness Week (CSAW), 2013
- **Outstanding Ph.D. Student Finalist** in Computer Science, Arizona State University, 2012
- **Best Paper Award Nominee**, ACM Symposium on Access Control Models and Technologies (SACMAT), 2011
- **Best Paper Award Nominee**, International Conference on Collaborative Computing: Networking, Applications and Worksharing (CollaborateCom), 2011
- Applied Security Research Best Paper Award Nominee, New York University Cyber Security Awareness Week (CSAW), 2011
- NSF Travel Grant, NSF CAREER Proposal Writing Workshop, 2013
- ACSAC Conferenceship Award, Annual Computer Security Applications Conference (ACSAC), 2011
- NSF Travel Grant, ACM Conference on Computer and Communications Security (CCS), 2010
- IBM PhD Fellowship Nominee, UNCC, 2008
- **Outstanding Teaching Award**, China University of Geosciences, 2004

GRANTS

Funding Summary:

- **Fifteen** NSF grants (including an NSF **CAREER** award, a **\$3M** large-size NSF grant, a **\$2.7M** large-size NSF grant, and a **\$1M** medium-size NSF grant)
- Total funding: **\$12,120,718** (\$3,872,583 as PI)
- Grants from NSF (SaTC, CNS, IIS, OAC, SOC, and DGE), NSA, USDOT, U.S. Army, VMware, Google, Amazon, Dell, etc

External Grants:

1. **Co-PI, NSA**, “HAC: Building High Assurance Containers Using FPGA”, \$750,000, 10/1/2022- 9/30/2025.
2. **Co-PI, NSF**, “NSF Convergence Accelerator Track G: PETS: Programmable Zero-Trust Security for Operating Through 5G Infrastructure”, \$90,000 (total: \$750,000), 07/15/2022 - 06/30/2023.
3. **PI, NSF**, “Collaborative Research: SAI-R: Integrative Cyberinfrastructure for Enhancing and Accelerating Online Abuse Research”, \$375,000 (total: \$750,000), 12/1/2022 - 11/30/2025.
4. **PI, Amazon Research Award**, “Explaining Learning-based Intrusion Detection Systems for Active Intrusion Responses”, \$100,000, 06/01/2022 - 05/31/2023.
5. **Co-PI, NSF**, “Collaborative Research: CCRI: New: Medium: A Development and Experimental Environment for Privacy-preserving and Secure (DEEPSECURE) Machine Learning”, \$520,000 (total: \$1.3M), 10/01/2021 - 09/30/2024.
6. **PI, NSF**, “Collaborative Research: EAGER: SaTC-EDU: Learning Platform and Education Curriculum for Artificial Intelligence-Driven Socially-Relevant Cybersecurity”, \$70,000, 06/01/2021 - 05/31/2023.
7. **Co-PI, NSF**, “RAPID: Cyber-Hostility and COVID-19”, (PI: Matthew Costello; other Co-PIs: Feng Luo, Yin Yang, Long Cheng), \$199,996, 06/15/2020 - 05/31/2022.
8. **Co-PI, NSF**, “CloudLab Phase III: Expanding the Frontiers of Cloud Computing Through World-Class Community Infrastructure”, (Clemson PI: Kuang-Ching Wang; other Co-PI: Amy Apon), \$2,699,985 (total: \$10M), subcontracting from University of Utah, 10/01/2020 - 09/30/2024.
9. **Co-PI, U.S. Army**, “Cross Cutting Autonomy Enablers”, (PI: Richard Brooks; other Co-PIs: Pierluigi Pisu, Linke Guo, Jerome McLendon), \$860,488, subcontracting from Army GVSC, 09/01/2020 - 08/31/2022.
10. **PI, NSF**, “CAREER: Towards Elastic Security with Safe and Efficient Network Security Function Virtualization”, \$500,000, 10/01/2019 - 09/30/2024.
11. **PI, NSF & VMware**, “SDI-CSCS: Collaborative Research: S²OS: Enabling Infrastructure-Wide Programmable Security with SDI”, \$600,000 (total: \$2,999,489), collaborative project with Guifei Gu (Texas A&M University), Donald Porter (University of North Carolina at Chapel Hill), Eric Keller (University of Colorado at Boulder), and Zhiqiang Lin (Ohio State University), 09/01/2017 - 08/31/2021.
12. **Lead PI, NSF**, “Collaborative Research: CICI: Secure and Resilient Architecture: SciGuard: Building a Security Architecture for Science DMZ based on SDN and NFV Technologies”, \$499,805 (total: \$999,189), collaborative project with Gail-Joon Ahn (Arizona State University), 01/01/2017 - 12/31/2020.

13. **PI, NSF**, “SaTC: EDU: Collaborative: Enhancing Security Education through Transiting Research on Security in Emerging Network Technologies”, \$79,999 (total: \$299,998), collaborative project with Younghee Park (San Jose State University) and Xiaohong Yuan (North Carolina A&T State University), 09/01/2017 - 08/31/2020.
14. **Lead PI, NSF**, “III: Small: Collaborative Research: Privacy-aware Collaborative Data Sharing in Human-centered Social Networks”, \$299,767 (total: \$523,767), collaborative project with Gail-Joon Ahn (Arizona State University), 09/01/2015 - 08/31/2019.
 - Additional \$16,000 awarded May 2017 for Research Experiences for Undergraduates (REU) supplement.
 - Additional \$8,000 awarded May 2016 for Research Experiences for Undergraduates (REU) supplement.
15. **PI, NSF**, “EAGER: Defending Against Visual Cyberbullying Attacks in Emerging Mobile Social Networks”, \$239,680, 09/01/2015 - 08/31/2018.
 - Additional \$16,000 awarded May 2016 for Research Experiences for Undergraduates (REU) supplement.
16. **PI, NSF**, “NSF Student Travel Grant for 2018 ACM International Workshop on Security in Software Defined Networks and Network Function Virtualization (SDN-NFV Security)”, \$5,600, 03/01/2018 - 02/28/2020.
17. **Co-PI, NSF**, “Collaborative Research: CICI: Regional: SouthEast SciEntific Cybersecurity for University Research (SouthEast SECURE)”, (PI: Jill Gemmill; other Co-PIs: Jan Holmevik, Nuyun Zhang), \$158,004 (total: \$452,464), 10/01/2016 - 09/30/2019.
18. **Co-PI, NSF**, “US Ignite: Track 1: Enabling Connected Vehicle Applications through Advanced Network Technology”, (PI: James Martin; other Co-PIs: Mashrur Chowdhury, Kuang-Ching Wang), \$614,582, 09/01/2015 - 08/31/2020.
19. **Co-PI, USDOT** (U.S. Department of Transportation), “University Transportation Center - Center for Connected Multimodal Mobility (C²M²)”, (PI: Mashrur Chowdhury; other Co-PIs: Amy Apon, Jim Martin, etc.), \$1,402,200, 11/30/2016 - 09/30/2022.
20. **Co-PI, USDOT** (through University of Tennessee/Southeastern Transportation Center), “Development of a Security Platform for Vehicle to Infrastructure Network”, (PI: Mashrur Chowdhury), \$77,287, 05/02/2016 - 08/31/2017.
21. **PI, Google**, “Cyber-Hostility and COVID-19”, \$4,637, 08/27/2020 - 08/26/2021.
22. **PI, Amazon**, “Secure Sharing of Electronic Health Records with AWS”, \$5,000, 07/07/2015 - 07/06/2016.
23. **Co-PI, Dell**, “Dasein Connector - NFV Extensions”, (PI: Amy W. Apon), \$107,843, 09/01/2014 - 12/31/2015.

Internal Grants:

18. **Co-PI**, Clemson University CBSHS/IMPACT grant, “Understanding and Combatting Cyberhate on Social Media”, (PI: Matthew John Costello; other Co-PIs: Joseph P Maer, Feng Luo, Long Cheng), \$20,000, 09/01/2019 - 08/30/2020.
19. **Co-PI**, Clemson University SUCCEEDS, “Next Generation IoT Hardware Security for Resilient Smart Grid and ICT Infrastructures”, (PI: Kumar Venayagamoorthy; other Co-PIs: Yingjie Lao, Kuangching Wang, Michal Jermanowski), \$37,036, 07/01/2018 - 06/30/2019.

20. **Co-PI**, Clemson University/One-Year Accelerate (OYA) Grant, “Alleviating the Negative Consequences of Habitual Trust on Collaborative Privacy Control in Online Social Networks”, (PI: Heshan Sun), \$20,000, 09/01/2016 - 08/31/2018.
21. **PI**, NSF-funded HBCU-UP SMILE Minigrant, “Security-Enhanced Mobile Platforms”, \$5,487, 09/01/2013 - 06/30/2014.
22. **PI**, DSU/Academic Enrichment Program Award, “Secure Data Sharing in Online Social Networks”, \$5,990, 12/15/2012 - 06/15/2013.

PUBLICATIONS *Publication Summary:*

- Given the inter-disciplinary nature of my work, I have published across a wide range of conferences, including **security** (CCS, USENIX Security, NDSS, ACSAC, ESORICS, ASIACCS), **networking** (SIGCOMM, NSDI, INFOCOM, ICNP, HotSDN, IWQoS), **machine learning** (NeurIPS, ICML, and EMNLP), and **human-computer interaction** (CHI, CSCW, HFES)..
- My work has been cited a total of **7,029** times with an h-index of **43** and an i10-index of **107** (according to Google Scholar as of October 2022).
- I have **8** papers received or nominated for Best Paper Award, as well as **2** spotlight papers and **1** featured paper.

Representative Conference/Workshop Publications:

1. Dian Chen, Hongxin Hu, Qian Wang, Yinli Li, Cong Wang, Chao Shen and Qi Li, “CARTL: Cooperative Adversarially-Robust Transfer Learning”, In *Proceedings of the 38th International Conference on Machine Learning (ICML 2021)*, July 18-24, 2021. [**Long presentation: top 3%** (166/5513)]
2. Nishant Vishwamitra, Hongxin Hu, Feng Luo and Long Cheng, “Towards Understanding and Detecting Cyberbullying in Real-world Images”, In *Proceedings of the 28th Network and Distributed System Security Symposium (NDSS 2021)*, February 21-24, 2021. [Acceptance rate: 87/573 = 15.2%]
3. Wenbo Ding, Hongxin Hu and Long Cheng, “IoTSafe: Enforcing Safety and Security Policy with Real IoT Physical Interaction Discovery”, In *Proceedings of the 28th Network and Distributed System Security Symposium (NDSS 2021)*, February 21-24, 2021. [Acceptance rate: 87/573 = 15.2%]
4. Long Cheng, Christin Wilson, Song Liao, Jeffrey Young, Daniel Dong, Hongxin Hu, “Dangerous Skills Got Certified: Measuring the Trustworthiness of Skill Certification in Voice Personal Assistant Platforms”, In *Proceedings of the ACM Conference on Computer and Communications Security (CCS 2020)*, November 9-13, 2020. [Acceptance rate: 121/715 = 16.9%]
5. Song Liao, Christin Wilson, Long Cheng, Hongxin Hu and Huixing Deng, “Measuring the Effectiveness of Privacy Policies for Voice Assistant Applications”, In *Proceedings of the 2020 Annual Computer Security Applications Conference (ACSAC 2020)*, December 7-11, 2020. [Acceptance rate: 70/302 = 23.2%] (**Distinguished Paper Award**)
6. Zili Meng, Minhu Wang, Jiasong Bai, Mingwei Xu, Hongzi Mao and Hongxin Hu, “Interpreting Deep Learning-Based Networking Systems”, In *Proceedings of the ACM SIGCOMM Conference (SIGCOMM 2020)*, August 10-14, 2020. [Acceptance rate: 54/250 = 21.6%]
7. Shuhe Wang, Chen Sun, Zili Meng, Minhu Wang, Jiamin Cao, Mingwei Xu, Jun Bi, Qun Huang, Masoud Moshref, Tong Yang, Hongxin Hu and Gong Zhang,

- “Martini: Bridging the Gap between Network Measurement and Control Using Switching ASICs”, In *Proceedings of the 26th IEEE International Conference on Network Protocols (ICNP 2020)*, Madrid, Spain, October 13-16, 2020. [Acceptance rate: 16.84%]
8. Fei Ding, Hongda Li, Feng Luo, Hongxin Hu, ong Cheng, Hai Xiao and Rong Ge, “DeepPower: Early Detection of IoT Malware through Fine-grained Activity Recognition using Power Side Channels”, In *Proceedings of the 15th ACM ASIA Conference on Computer and Communications Security (ASIACCS 2020)*, Taipei, Taiwan, June 1-5, 2020. [Acceptance rate: 67/308 = 21.7%]
 9. Menghao Zhang, Guanyu Li, Shicheng Wang, Chang Liu, Ang Chen, Hongxin Hu, Guofei Gu, Qi Li, Mingwei Xu and Jianping Wu, “Poseidon: Enabling Cost-efficient and Agile DDoS Defense with Programmable Switches”, In *Proceedings of the 27th Network and Distributed System Security Symposium (NDSS 2020)*, San Diego, CA, USA, February 23-26, 2020. [Acceptance rate: 88/506 = 17.4%]
 10. Yifang Li, Nishant Vishwamitra, Hongxin Hu and Kelly Caine, “Towards A Taxonomy of Content Sensitivity and Sharing Preferences for Photos”, In *Proceedings of the 2020 ACM Conference on Human Factors in Computing Systems (CHI 2020)*, Honolulu, Hawaii, USA, April 25-30, 2020. [Acceptance rate: 760/3126 = 24.3%]
 11. Zili Meng, Jing Chen, Yaning Guo, Chen Sun, Hongxin Hu and Mingwei Xu, “PiTree: Practical Implementation of ABR Algorithms Using Decision Trees”, In *Proceedings of the 27th ACM International Conference on Multimedia (MM 2019)*, Nice, France, October 21-25, 2019. [Oral paper acceptance rate: 88/936 = 9.4%]
 12. Zhilong Zheng, Jun Bi, Heng Yu, Haiping Wang, Chen Sun, Hongxin Hu and Jianping Wu, “Octans: Optimal Placement of Service Function Chains in Many-Core Systems”, In *Proceedings of the 37th IEEE International Conference on Computer Communications (INFOCOM 2019)*, Paris, France, April 29-May 2, 2019. [Acceptance rate: 288/1464 = 19.7%]
 13. Wenbo Ding and Hongxin Hu, “On the Safety of IoT Device Physical Interaction Control”, In *Proceedings of the 25th ACM Conference on Computer and Communications Security (CCS 2018)*, Toronto, Canada, October 15-19, 2018. [Acceptance rate: 134/809 = 16.6%]
 14. Hongda Li, Hongxin Hu, Guofei Gu, Gail-Joon Ahn and Fuqiang Zhang, “vNIDS: Towards Elastic Security with Safe and Efficient Virtualization of Network Intrusion Detection Systems”, In *Proceedings of the 25th ACM Conference on Computer and Communications Security (CCS 2018)*, Toronto, Canada, October 15-19, 2018. [Acceptance rate: 134/809 = 16.6%]
 15. Yifang Li, Nishant Vishwamitra, Bart P. Knijnenburg, Hongxin Hu and Kelly Caine, “Effectiveness and Users’ Experience of Obfuscation as a Privacy-Enhancing Technology for Sharing Photos”, In *Proceedings of the 21st ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW 2018)*, Jersey City, NJ, USA, November 3-7, 2018. [Acceptance rate: 105/384 = 27.3%]
 16. Zhilong Zheng, Jun Bi, Haiping Wang, Chen Sun, Heng Yu, Hongxin Hu, Kai Gao and Jianping Wu, “Grus: Enabling Latency SLOs for GPU-Accelerated NFV Systems”, In *Proceedings of 26th IEEE International Conference on Network Protocols (ICNP 2018)*, Cambridge, UK, September 24-27, 2018. [Acceptance rate: 35/196 = 17.9%]

17. Chen Sun, Jun Bi, Zili Meng, Xiao Zhang and Hongxin Hu, "OFM: Optimized Flow Migration for NFV Elasticity Control", In *Proceedings of the 26th IEEE/ACM International Symposium on Quality of Service (IWQoS 2018)*, Banff, Alberta, Canada, June 4-6, 2018. [Acceptance rate: 26/125 = 20.8%]
18. Younghee Park, Hongxin Hu, Xiaohong Yuan and Hongda Li, "Enhancing Security Education Through Designing SDN Security Labs in CloudLab", In *Proceedings of the 49th ACM Technical Symposium on Computer Science Education (SIGCSE 2018)*, Baltimore, Maryland, USA, February 21-24, 2018. (**Best Paper Award**)
19. Guofei Gu, Hongxin Hu, Eric Keller, Zhiqiang Lin and Donald Porter, "Building a Security OS with Software Defined Infrastructure", In *Proceedings of the 8th ACM SIGOPS Asia-Pacific Workshop on Systems (APSys 2017)*, IIT, Bombay, Indian, September 2-3, 2017.
20. Chen Sun, Jun Bi, Zhilong Zheng, Heng Yu and Hongxin Hu, "NFP: Enabling Network Function Parallelism in NFV", In *Proceedings of the ACM SIGCOMM Conference (SIGCOMM 2017)*, Los Angeles, CA, USA, August 21-25, 2017. [Acceptance rate: 36/250 = 14.4%]
21. Nishant Vishwamitra, Yifang Li, Kevin Wang, Hongxin Hu, Kelly Caine and Gail-Joon Ahn, "Towards PII-based Multiparty Access Control for Photo Sharing in Online Social Networks", In *Proceedings of the 22nd ACM Symposium on Access Control Models And Technologies (SACMAT 2017)*, Indianapolis, IN, USA, June 21-23, 2017. [Acceptance rate: 14/50 = 28.0%]
22. Juan Deng*, Hongda Li*, Hongxin Hu, Kuang-Ching Wang, Gail-Joon Ahn, Ziming Zhao and Wonkyu Han, "On the Safety and Efficiency of Virtual Firewall Elasticity Control", In *Proceedings of the 24th Network and Distributed System Security Symposium (NDSS 2017)*, San Diego, California, February 26 - March 1, 2017 (*co-first author). [Acceptance rate: 68/423 = 16.1%]
23. Kang Chen, Ryan Izzard, Hongxin Hu, Kuangching Wang and James Martin, "HetSDN: Exploiting SDN for Intelligent Network Usage in Heterogeneous Wireless Networks", In *Proceedings of IEEE/ACM International Symposium on Quality of Service (IWQoS 2016)*, Beijing, China, June 20-21, 2016.
24. Hitesh Padekar, Younghee Park, Hongxin Hu and Sang-Yoon Chang, "Enabling Dynamic Access Control for Controller Applications in Software-Defined Networks", In *Proceedings of the 21st ACM Symposium on Access Control Models And Technologies (SACMAT 2016)*, Shanghai, China, June 5-8, 2016. (**Best Paper Honorable Mention Award**)
25. Wonkyu Han, Hongxin Hu, Ziming Zhao, Adam Doupé, Gail-Joon Ahn, Kuang-Ching Wang and Juan Deng, "State-aware Network Access Management for Software-Defined Networks", In *Proceedings of the 21st ACM Symposium on Access Control Models And Technologies (SACMAT 2016)*, Shanghai, China, June 5-8, 2016.
26. Shuyong Zhu, Jun Bi, Chen Sun, Chenghui Wu and Hongxin Hu, "SDPA: Enhancing Stateful Forwarding for Software-Defined Networking", In *Proceedings of the 23rd IEEE International Conference on Network Protocols (ICNP 2015)*, San Francisco, USA, November 10-13, 2015. [Acceptance rate: 38/187 = 20.3%] (**Best Paper Nominee**)
27. Yiming Jing, Ziming Zhao, Gail-Joon Ahn and Hongxin Hu, "Morpheus: Automatically Generating Heuristics to Detect Android Emulators", In *Proceedings of the 30th Annual Computer Security Applications Conference (ACSAC 2014)*, New Orleans, LA, USA, December 8-12, 2014. [Acceptance rate: 47/236 = 19.9%] (**Finalist for CSAW 2015 Best Applied Security Paper Award**)

28. Hongxin Hu, Wonkyu Han, Gail-Joon Ahn and Ziming Zhao, “FlowGuard: Building Robust Firewalls for Software-Defined Networks”, In *Proceedings of ACM SIGCOMM Workshop on Hot Topics in Software Defined Networking (HotSDN 2014)*, Chicago, IL, USA, August 22, 2014. [Acceptance rate for full paper with long presentation: $16/114 = 14.0\%$]
29. Hongxin Hu, Gail-Joon Ahn, Ziming Zhao and Dejun Yang, “Game Theoretic Analysis of Multiparty Access Control in Online Social Networks”, In *Proceedings of the 19th ACM Symposium on Access Control Models And Technologies (SACMAT 2014)*, London, Ontario, Canada, June 25-27, 2014.
30. Yiming Jing, Gail-Joon Ahn, Ziming Zhao and Hongxin Hu, “RiskMon: Continuous and Automated Risk Assessment for Mobile Applications”, In *Proceedings of the 4th ACM Conference on Data and Application Security and Privacy (CODASPY 2014)*, San Antonio, TX, USA, March 3-5, 2014. [Acceptance rate: $19/119 = 16.0\%$] (**Best Paper Award**)
31. Ziming Zhao, Gail-Joon Ahn, Jeong-Jin Seo and Hongxin Hu, “On the Security of Picture Gesture Authentication”, In *Proceedings of the 22nd USENIX Security Symposium (USENIX Security 2013)*, Washington DC, August 2013. [Acceptance rate: $44/277 = 15.9\%$] (**Media Coverage:** *ACM TechNews, InformationWeek, WeLiveSecurity, NetworkWorld, SlashDot, SoftPedia, TechEYE, PCInfoSite, PCWorld, TechRadar, TechDigest, ThreatPost, WebRoot, TechNewzIE, SiloBreaker, Topix, Neowin, ITSecureSite, CreativeGroups, Sysnative, LifeattheMoment, ParityNews, etc*)
32. Ziming Zhao, Gail-Joon Ahn, Hongxin Hu and Deepinder Mahi, “SocialImpact: Systematic Analysis of Underground Social Dynamics”, In *Proceedings of the 17th European Symposium on Research in Computer Security (ESORICS 2012)*, Pisa, Italy, September 10-14, 2012. [Acceptance rate: $50/248 = 20.1\%$]
33. Yan Zhu, Hongxin Hu, Gail-Joon Ahn and Mengyan Yu, “Comparison-Based Encryption for Fine-grained Access Control in Clouds”, In *Proceedings of the 2nd ACM Conference on Data and Application Security and Privacy (CODASPY 2012)*, San Antonio, Texas, USA, February 7-9, 2012. [Acceptance rate: $21/113 = 18.6\%$]
34. Yan Zhu, Hongxin Hu, Gail-Joon Ahn, Dijiang Huang and Shanbiao Wang, “Towards Temporal Access Control in Cloud Computing”, In *Proceedings of the 31st IEEE International Conference on Computer Communications (INFOCOM 2012)*, Mini-conference, Orlando, Florida, USA, March 25-30, 2012. [Acceptance rate: $378/1547 = 24.4\%$]
35. Ruoyu Wu, Gail-Joon Ahn, and Hongxin Hu “Towards HIPPA-compliant Healthcare Systems”, In *Proceedings of the 2nd ACM SIGHIT International Health Informatics Symposium (IHI 2012)*, Miami, Florida, USA, January 28-30, 2012. [Acceptance rate for oral presentation: $48/269 = 17.8\%$]
36. Hongxin Hu, Gail-Joon Ahn and Jan Jorgensen, “Detecting and Resolving Privacy Conflicts for Collaborative Data Sharing in Online Social Networks”, In *Proceedings of the 27th Annual Computer Security Applications Conference (ACSAC 2011)*, Orlando, Florida, USA, December 5-9, 2011. [Acceptance rate: $39/195 = 20.0\%$]
37. Hongxin Hu, Gail-Joon Ahn and Ketan Kulkarni, “Anomaly Discovery and Resolution in Web Access Control Policies”, In *Proceedings of the 16th ACM Symposium on Access Control Models And Technologies (SACMAT 2011)*, Innsbruck, Austria, June 15-17, 2011. (**Best Paper Award Candidate**; CSAW AT&T Applied Security Research Best Paper Award Nominee).

38. Wenjuan Xu, Gail-Joon Ahn, Hongxin Hu, Xinwen Zhang and Jean-Pierre Seifert, “DRFT: Efficient Remote Attestation Framework for Dynamic Systems”, In *Proceedings of the 15th European Symposium on Research in Computer Security (ESORICS 2010)*, Athens, Greece, September 20-22, 2010. [Acceptance rate: $42/201 = 20.8\%$]
39. Yan Zhu, Gail-Joon Ahn, Hongxin Hu and Huaixi Wang, “Cryptographic Role-based Security Mechanisms based on Role-Key Hierarchy”, In *Proceedings of the 5th ACM Symposium on Information, Computer and Communications Security (ASIACCS 2010)*, Beijing, China, April 13-16, 2010. [Acceptance rate: $35/166 = 21\%$]
40. Jing Jin, Gail-Joon Ahn, Hongxin Hu, Michael Covington and Xinwen Zhang, “Patient-centric Authorization Framework for Sharing Electronic Health Records”, In *Proceedings of the 14th ACM Symposium on Access Control Models And Technologies (SACMAT 2009)*, Stresa, Italy, June 3-5, 2009.
41. Hongxin Hu and Gail-Joon Ahn, “Enabling Verification and Conformance Testing for Access Control Model”, In *Proceedings of the 13th ACM Symposium on Access Control Models And Technologies (SACMAT 2008)*, Estes Park, Colorado, USA, June 11-12, 2008. [Acceptance rate: $20/79 = 25\%$]
42. Gail-Joon Ahn and Hongxin Hu, “Towards Realizing a Formal RBAC Model in Real Systems”, In *Proceedings of the 12th ACM Symposium on Access Control Models And Technologies (SACMAT 2007)*, Sophia Antipolis, France, June 20-22, 2007. [Acceptance rate: $19/79 = 24\%$]

Representative Journal Publications:

43. Song Liao, Christin Wilson, Long Cheng, Hongxin Hu and Huixing Deng, “Problematic Privacy Policies of Voice Assistant Applications”, *IEEE Security & Privacy (S&P)*, 2021.
44. Guanyu Li, Menghao Zhang, Shicheng Wang, Chang Liu, Mingwei Xu, Ang Chen, Hongxin Hu, Guofei Gu, Qi Li, Jianping Wu, “Enabling Performant, Flexible and Cost-Efficient DDoS Defense with Programmable Switches”, *IEEE/ACM Transactions on Networking (ToN)*, 2021.
45. Heng Yu, Zhilong Zheng, Junxian Shen, Congcong Miao, Chen Sun, Hongxin Hu, Jun Bi, Jianping Wu, Jilong Wang, “Octans: Optimal Placement of Service Function Chains in Many-Core Systems”, *IEEE Transactions Parallel and Distributed Systems (TPDS)*, 2021.
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48. Yuan Luo, Long Cheng, Hongxin Hu, Guojun Peng and Danfeng Yao, “Context-rich Privacy Leakage Analysis through Inferring Apps in Smart Home IoT”, *IEEE Internet of Things Journal (IoTJ)*, 2020.
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51. Zili Meng, Jun Bi, Haiping Wang, Chen Sun and Hongxin Hu, "MicroNF: An Efficient Framework for Enabling Modularized Service Chains in NFV", *IEEE Journal of Selected Areas in Communications (JSAC)*, 2019.
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53. Chen Sun, Jun Bi, Zili Meng, Tong Yang, Xiao Zhang and Hongxin Hu, "Enabling NFV Elasticity Control with Optimized Flow Migration", *IEEE Journal of Selected Areas in Communications (JSAC)*, Vol.36, No.10, 2018.
54. Chen Sun, Jun Bi, Zhilong Zheng and Hongxin Hu, "HYPER: A Hybrid High-Performance Framework for Network Function Virtualization", *IEEE Journal of Selected Areas in Communications (JSAC)*, Vol. 35, No. 11, 2017.
55. Chen Sun, Jun Bi, Haoxian Chen, Hongxin Hu, Zhilong Zheng, Shuyong Zhu and Chenghui Wu, "SDPA: Towards a Stateful Data Plane in Software-Defined Networking", *IEEE/ACM Transactions on Networking (TON)*, 2017.
56. Yiming Jing, Gail-Joon Ahn, Hongxin Hu, Haehyun Cho, and Ziming Zhao, "TripleMon: A Multi-layer Security Framework for Mediating Inter-Process Communication on Android", *Journal of Computer Security (JCS)*, Vol. 24, No. 4, 2016.
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58. Ziming Zhao, Mukund Sankaran, Gail-Joon Ahn, Tom Holt, Yiming Jing and Hongxin Hu, "Mules, Seals, and Attacking Tools: Analyzing Twelve Online Marketplaces", *IEEE Security & Privacy*, Vol. 14, No. 3, 2016.
59. Ziming Zhao, Gail-Joon Ahn and Hongxin Hu, "Picture Gesture Authentication: Empirical Analysis, Automated Attacks, and Scheme Evaluation", *ACM Transactions on Information and System Security (TISSEC)*, Vol. 17, No. 4, April, 2015.
60. Yiming Jing, Gail-Joon Ahn, Ziming Zhao and Hongxin Hu, "Towards Automated Risk Assessment and Mitigation of Mobile Applications", *IEEE Transactions on Dependable and Secure Computing (TDSC)*, Vol. 17, No. 4, April, 2015. **(Selected as the spotlight paper of the issue)**
61. Yan Zhu, Gail-Joon Ahn, Hongxin Hu, Changjun Hu and Di Ma, "Role-Based Cryptosystem: A New Cryptographic RBAC System Based on Role-Key Hierarchy", *IEEE Transactions on Information Forensics & Security (TIFS)*, Vol. 8, No. 12, December, 2013.
62. Hongxin Hu, Gail-Joon Ahn and Ketan Kulkarni, "Discovery and Resolution of Anomalies in Web Access Control Policies", *IEEE Transactions on Dependable and Secure Computing (TDSC)*, Vol. 10, No. 6, November/December, 2013. **(Selected as the spotlight paper of the issue)**
63. Hongxin Hu, Gail-Joon Ahn and Jan Jorgensen, "Multiparty Access Control for Online Social Networks: Model and Mechanisms", *IEEE Transactions on Knowledge and Data Engineering (TKDE)*, Vol. 25, No. 7, July, 2013. **(Featured by the IEEE Special Technical Community on Social Networking)**

64. Yan Zhu, Gail-Joon Ahn, Hongxin Hu, Stephen S. Yau and Ho G. An, “Dynamic Audit Services for Outsourced Storages in Clouds”, *IEEE Transactions on Services Computing (TSC)*, Vol. 6, No. 2, April-June, 2013.
65. Yan Zhu, Hongxin Hu, Gail-Joon Ahn, Mengyang Yu and Shimin Chen, “Co-operative Provable Data Possession for Integrity Verification in Multi-Cloud Storage”, *IEEE Transactions on Parallel and Distributed Systems (TPDS)*, Vol. 23, No. 12, December, 2012.
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67. Wenjuan Xu, Xinwen Zhang, Hongxin Hu, Gail-Joon Ahn and Jean-Pierre Seifert, “Remote Attestation with Domain-based Integrity Model and Policy Analysis”, *IEEE Transactions on Dependable and Secure Computing (TDSC)*, Vol. 9, No. 3, May/June 2012.
68. Ziming Zhao, Hongxin Hu, Gail-Joon Ahn and Ruoyu Wu, “Risk-Aware Response for Mitigating MANET Routing Attacks”, *IEEE Transactions on Dependable and Secure Computing (TDSC)*, Vol. 9, No. 2, March/April 2012.
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70. Hongxin Hu and Gail-Joon Ahn, “Constructing Authorization Systems Using Assurance Management Framework”, *IEEE Transactions on Systems, Man, and Cybernetics (TSMC)*, Part C, Special Issue on Availability, Reliability, and Security, Vol. 40, No. 4, July 2010. [Acceptance rate for the special issue: $6/70 = 8.6\%$]
71. Gail-Joon Ahn, Hongxin Hu and Jing Jin, “Security-enhanced OSGi Service Environments”, *IEEE Transactions on Systems, Man, and Cybernetics (TSMC)*, Part C, Vol. 39, No. 5, September 2009.

Other Conference/Workshop Publications:

72. Jiasong Bai, Menghao Zhang, Guanyu Li, Chang Liu, Mingwei Xu and Hongxin Hu, “FastFE: Accelerating ML-based Traffic Analysis with Programmable Switches”, In *Proceedings of the 1st Workshop on Secure Programmable Network Infrastructure (SPIN 2020)*, co-located with SIGCOMM 2020, New York, USA, August 10, 2020.
73. Shuhe Wang, Zili Meng, Chen Sun, Minhu Wang, Mingwei Xu, Jun Bi, Tong Yang, Qun Huang and Hongxin Hu, “SmartChain: Enabling High-Performance Service Chain Partition between SmartNIC and CPU”, In *Proceedings of 2020 IEEE International Conference on Communications (ICC 2020)*, Dublin, Ireland, June 7-11, 2020. (**Best Paper Award**)
74. Menghao Zhang, Jiasong Bai, Guanyu Li, Zili Meng, Hongda Li, Hongxin Hu and Mingwei Xu, “When NFV Meets ANN: Rethinking Elastic Scaling for ANN-based NFs”, In *Proceedings of IEEE ICNP 2019 HDR-Nets Workshop (HDR-Nets 2019)*, Chicago, IL, USA, October 7, 2019.
75. Xiaohong Yuan, Zhipeng Liu, Younghee Park, Hongxin Hu and Hongda Li, “Teaching SDN Security Using Hands-on Labs in CloudLab”, In *Proceedings of the 23rd Colloquium for Information System Security Education (CISSE 2019)*, Las Vegas, Nevada, USA June 10-12, 2019.

76. Hongda Li*, Feng Wei* and Hongxin Hu, “Enabling Dynamic Network Access Control with Anomaly-based IDS and SDN”, In *Proceedings of ACM International Workshop on Security in Software Defined Networks and Network Function Virtualization* (SDN-NFV Security 2019), Richardson, TX, USA, March 27, 2019. (*co-first author)
77. Xiang Zhang, Nishant Vishwamitra, Hongxin Hu and Feng Luo, “CrescendoNet: A New Deep Convolutional Neural Network with Ensemble Behavior”, In *Proceedings of the 17th IEEE International Conference on Machine Learning and Applications* (ICMLA 2018), Orlando, Florida, USA, December 17-20, 2018.
78. Zhilong Zheng, Jun Bi, Chen Sun, Heng Yu, Hongxin Hu, Zili Meng, Shuhe Wang, Kai Gao and Jianping Wu, “GEN: A GPU-Accelerated Elastic Framework for NFV”, In *Proceedings of the 2nd Asia-Pacific Workshop on Networking* (APNet 2018), Beijing, China, August 2-3, 2018.
79. Kang Chen, Jianwei Liu, James Martin, Kuang-Ching Wang and Hongxin Hu, “Improving Integrated LTE-WiFi Network Performance with SDN based Flow Scheduling”, In *Proceedings of the 27th IEEE International Conference on Computer Communications and Networks* (ICCCN 2018), Hangzhou, China, July 30-August 2, 2018. [Acceptance rate: 29.5%]
80. Hongda Li, Fuqiang Zhang, Lu Yu, Jon Oakley, Hongxin Hu and Richard Brooks, “Towards Efficient Traffic Monitoring for Science DMZ with Side-channel Based Traffic Winnowing”, In *Proceedings of ACM International Workshop on Security in Software Defined Networks and Network Function Virtualization* (SDN-NFV Security 2018), Tempe, Arizona, USA, March 21, 2018.
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82. Zili Meng, Jun Bi, Haiping Wang, Chen Sun and Hongxin Hu, “CoCo: Compact and Optimized Consolidation of Modularized Service Function Chains in NFV”, In *Proceedings of the 53rd IEEE International Conference on Communications* (ICC 2018), Kansas City, Missouri, USA, May 20-24, 2018.
83. Yifang Li, Nishant Vishwamitra, Hongxin Hu, Bart Knijnenburg and Kelly Caine, “Effectiveness and Users’ Experience of Face Blurring as a Privacy Protection for Sharing Photos via Online Social Networks”, In *Proceedings of the Human Factors and Ergonomics Society Annual Meeting* (HFES 2017), Austin, Texas, USA, October 9-13, 2017.
84. Yifang Li, Nishant Vishwamitra, Bart Knijnenburg, Hongxin Hu and Kelly Caine, “Blur vs. Block: Investigating the Effectiveness of Privacy-Enhancing Obfuscation for Images”, In *Proceedings of the 1st International Workshop on The Bright and Dark Sides of Computer Vision: Challenges and Opportunities for Privacy and Security* (CV-COPS 2017), Honolulu, Hawaii, USA, July 21, 2017.
85. Anjan Rayamajhi, Mizanur Rahman, Manveen Kaur, Jianwei Liu, Mashrur Chowdhury, Hongxin Hu, Jerome McClendon, Kuang-Ching Wang, Abhimanyu Gosain and Jim Martin, “ThinGs In a Fog: System Illustration with Connected Vehicles”, In *Proceedings of IEEE 85th Vehicular Technology Conference* (VTC Spring 2017), Sydney, NSW, Australia, June 4-7, 2017.
86. Nuyun Zhang, Hongda Li, Hongxin Hu and Younghee Park, “Towards Effective Virtualization of Intrusion Detection Systems”, In *Proceedings of ACM*

- International Workshop on Security in Software Defined Networks and Network Function Virtualization (SDN-NFV Security 2017)*, Scottsdale, Arizona, USA, March 24, 2017.
87. Younghee Park, Pritesh Chandaliya, Akshaya Muralidharan, Nikash Kumar and Hongxin Hu, “Dynamic Defense Provision via Network Functions Virtualization”, In *Proceedings of ACM International Workshop on Security in Software Defined Networks and Network Function Virtualization (SDN-NFV Security 2017)*, Scottsdale, Arizona, USA, March 24, 2017.
 88. Nishant Vishwamitra, Xiang Zhang, Jonathan Tong, Hongxin Hu, Feng Luo, Robin Kowalski and Joseph Mazer, “MCDefender: Toward Effective Cyberbullying Defense in Mobile Online Social Networks”, In *Proceedings of the 3rd International Workshop on Security and Privacy Analytics (IWSPA 2017)*, Scottsdale, Arizona, USA, March 24, 2017.
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 90. Xiang Zhang, Jonathan Tong, Nishant Vishwamitra, Joseph P. Mazer, Robin Kowalski, Elizabeth Whittake, Hongxin Hu, Feng Luo, Jamie Macbeth and Edward Dillon, “Cyberbullying Detection with a Pronunciation Based Convolutional Neural Network”, In *Proceedings of the 15th IEEE International Conference on Machine Learning and Applications (ICMLA 2016)*, Anaheim, California, USA, December 18-20, 2016.
 91. Chen Sun, Jun Bi and Hongxin Hu, “NeSMA: Enabling Network-Level State-Aware Applications in SDN”, In *Proceedings of the 24th IEEE International Conference on Network Protocols (ICNP 2016)*, CoolSDN Workshop, Singapore, November 8-11, 2016.
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 93. Jason Anderson, Udit Agarwal, Hongda Li, Hongxin Hu, Craig Lowery and Amy Apon, “Performance Considerations of Network Functions Virtualization using Containers”, In *Proceedings of International Conference on Computing, Networking and Communications (ICNC 2016)*, Kauai, Hawaii, USA, February 15-18, 2016.
 94. Juan Deng, Hongxin Hu, Hongda Li, Zhizhong Pan, Kuang-Ching Wang, Gail-Joon Ahn, Jun Bi and Younghee Park, “VNGuard: An NFV/SDN Combination Framework for Provisioning and Managing Virtual Firewalls”, In *Proceedings of IEEE Conference on Network Function Virtualization and Software Defined Networks (NFV-SDN 2015)*, San Francisco, USA, November 18-21, 2015.
 95. Khaled Riad, Yan Zhu, Hongxin Hu and Gail-Joon Ahn, “AR-ABAC: A New Attribute Based Access Control Model Supporting Attribute-Rules for Cloud Computing”, In *Proceedings of the 1st IEEE International Conference on Collaboration and Internet Computing (CIC 2015)*, Hangzhou, China, October 27-30, 2015.
 96. WC Moody, Hongxin Hu and Amy W. Apon, “Defensive Maneuver Cyber Platform Modeling with Stochastic Petri Nets”, In *Proceedings of the 10th International Conference on Collaborative Computing (CollaborateCom 2014)*, Miami, Florida, USA, October 22-25, 2014.

97. Wonkyu Han, Hongxin Hu and Gail-Joon Ahn, “LPM: Layered Policy Management for Software-Defined Networks”, In *Proceedings of the 28th Annual WG 11.3 Conference on Data and Applications Security and Privacy* (DBSec 2014), Vienna, Austria. July 14-16, 2014.
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99. Juan Wang, Yong Wang, Hongxin Hu, Qingxin Sun, He Shi and Longjie Zeng, “Towards a Security-Enhanced Firewall Application for OpenFlow Networks”, In *Proceedings of the 5th International Symposium on Cyberspace Safety and Security* (CSS 2013), November 13-15, 2013.
100. Juan Wang, Xuhui Xie and Hongxin Hu, “Towards a Trusted Launch Mechanism for Virtual Machines in Cloud Computing”, In *Proceedings of the 4th International Conference on Cloud Computing* (CLOUDCOMP 2013), October 17–19, 2013.
101. Hongxin Hu, Gail-Joon Ahn and Jan Jorgensen, “Enabling Collaborative Data Sharing in Google+”, In *Proceedings of the 55th IEEE Global Communications Conference* (GLOBECOM 2012), Anaheim, California, USA, December 3-7, 2012.
102. Yan Zhu, Shanbiao Wang, Di Ma, Hongxin Hu and Gail-Joon Ahn, “Secure and Efficient Constructions of Hash, MAC and PRF for Mobile Devices”, In *Proceedings of the 55th IEEE Global Communications Conference* (GLOBECOM 2012), Anaheim, California, USA, December 3-7, 2012.
103. Yiming Jing, Gail-Joon Ahn and Hongxin Hu, “Model-based Conformance Testing for Android”, In *Proceedings of the 7th International Workshop on Security* (IWSEC 2012), Fukuoka, Japan, November 7-9, 2012.
104. Ruoyu Wu, Gail-Joon Ahn and Hongxin Hu, “Secure Sharing of Electronic Health Records in Clouds”, In *Proceedings of the 8th IEEE International Conference on Collaborative Computing* (CollaborateCom 2012), Pittsburgh, Pennsylvania, USA, October 14-17, 2012.
105. Ziming Zhao, Gail-Joon Ahn and Hongxin Hu, “Examining Social Dynamics for Countering Botnet Attacks”, In *Proceedings of the 54th IEEE Global Communications Conference* (GLOBECOM 2011), Houston, Texas, USA, December 5-9, 2011.
106. Hongxin Hu, Gail-Joon Ahn and Ketan Kulkarni, “Ontology-based Policy Anomaly Management for Autonomic Computing”, In *Proceedings of the 7th International Conference on Collaborative Computing* (CollaborateCom 2011), Orlando, Florida, USA, October 15-18, 2011.
107. Yan Zhu, Hongxin Hu, Gail-Joon Ahn, Yujing Han and Shimin Chen, “Collaborative Integrity Verification in Hybrid Clouds”, In *Proceedings of the 7th International Conference on Collaborative Computing* (CollaborateCom 2011), Orlando, Florida, USA, October 15-18, 2011.
108. Ziming Zhao, Gail-Joon Ahn and Hongxin Hu, “Automatic Extraction of Secrets from Malware”, In *Proceedings of the 18th Working Conference on Reverse Engineering* (WCRE 2011), Limerick, Ireland, October 17-20, 2011. [Acceptance rate: $27/104 = 25.9\%$]
109. Hongxin Hu and Gail-Joon Ahn, “Multiparty Authorization Framework for Data Sharing in Online Social Networks”, In *Proceedings of the 25th Annual*

- WG 11.3 Conference on Data and Applications Security and Privacy (DBSec 2011)*, Richmond, Virginia, USA. July 11-13, 2011.
110. Yan Zhu, Huaixi Wang, Zexing Hu, Gail-Joon Ahn, Hongxin Hu and Stephen S. Yau, “Dynamic Audit Services for Integrity Verification of Outsourced Storages in Clouds”, In *Proceedings of the 26th ACM Symposium on Applied Computing (SAC 2011)*, Security Track, TaiChung, Taiwan, March 21-25, 2011. [Acceptance rate for the security track: $9/41 = 21.9\%$]
 111. Ziming Zhao, Hongxin Hu, Gail-Joon Ahn and Ruoyu Wu, “Risk-Aware Response for Mitigating MANET Routing Attacks”, In *Proceedings of the 53rd IEEE Global Communications Conference (GLOBECOM 2010)*, Miami, Florida, USA, December 6-10, 2010.
 112. Juan Wang, Hongxin Hu, “Security Validation of Information Card Protocol with AVISPA”, In *Proceedings of International Conference on Energy Systems and Electrical Power (ESEP 2011)*, Singapore, December 9-10, 2011.
 113. Yan Zhu, Zexing Hu, Huaixi Wang, Hongxin Hu and Gail-Joon Ahn, “A Collaborative Framework for Privacy Protection in Online Social Networks”, In *Proceedings of the 6th International Conference on Collaborative Computing (CollaborateCom 2010)*, Chicago, Illinois, USA, October 9-12, 2010.
 114. Ruoyu Wu, Gail-Joon Ahn, Hongxin Hu and Mukesh Singhal, “Information Flow Control in Cloud Computing”, In *Proceedings of the 6th International Conference on Collaborative Computing (CollaborateCom 2010)*, Chicago, Illinois, USA, October 9-12, 2010.
 115. Hongxin Hu, Gail-Joon Ahn and Ketan Kulkarni, “FAME: A Firewall Anomaly Management Environment”, In *Proceedings of ACM CCS Workshop on Assurable & Usable Security Configuration (SafeConfig)* in conjunction with 17th ACM Conference on Computer and Communications Security (CCS 2010), Chicago, IL, USA, October 4, 2010.
 116. Gail-Joon Ahn, Hongxin Hu, Joohyung Lee and Yunsong Meng, “Representing and Reasoning about Web Access Control Policies”, In *Proceedings of the 34th Annual IEEE International Computer Software and Applications Conference (COMPSAC 2010)*, Seoul, South Korea, July 19-23, 2010. [Acceptance rate: $39/193 = 20\%$]
 117. Gail-Joon Ahn, Hongxin Hu, Joohyung Lee and Yunsong Meng, “Reasoning about XACML Policy Descriptions in Answer Set Programming”, In *Proceedings of the 13th International Workshop on Nonmonotonic Reasoning (NMR 2010)*, Toronto, Canada, May 14-16, 2010.
 118. Gail-Joon Ahn, Hongxin Hu and Jing Jin, “Towards Role-based Authorization for OSGi Service Environments”, In *Proceedings of the 12th IEEE International Workshop on Future Trends of Distributed Computing Systems (FTDCS 2008)*, Kunming, China, October 21-23, 2008.
 119. Jing Jin, Gail-Joon Ahn, Mohammed Shehab and Hongxin Hu, “Towards Trust-aware Access Management for Ad-hoc Collaborations”, In *Proceedings of the 3rd International Conference on Collaborative Computing (CollaborateCom 2007)*, New York, USA, November 12-15, 2007.

Other Journal Publications:

120. Mhafuzul Islam, Mashrur Chowdhury, Hongda Li and Hongxin Hu, “Vision-Based Navigation of Autonomous Vehicle in Roadway Environments with Unexpected Hazards”, *Journal of the Transportation Research Board (TRB)*, 2019.

121. Hongxin Hu, Wonkyu Han, Sukwha Kyung, Juan Wang, Gail-Joon Ahn, Ziming Zhao and Hongda Li, "Towards a Reliable Firewall for Software-Defined Networks", *Computers & Security (COSE)*, Vol. 87, November, 2019.
122. Mhafuzul Islam, Mashrur Chowdhury, Hongda Li and Hongxin Hu, "Cybersecurity Attacks in Vehicle-to-Infrastructure (V2I) Applications and Their Prevention", *Journal of the Transportation Research Board (TRB)*, 2018.
123. Yuan Shi, Huanguo Zhang, Juan Wang, Feng Xiao, Jianwei Huang, Daochen Zha, Hongxin Hu, Fei Yan and Bo Zhao, "CHAOS: An SDN-Based Moving Target Defense System", *Security and Communication Networks (SCN)*, October, 2017.
124. Juan Wang, Jiang Wang, Hongyang Jiao, Yong Wang, Shiya Chen, Shihui Liu and Hongxin Hu, "OpenFlow-based Real-Time Conflict Detection and Resolution for SDN Access Control Policies", *Chinese Journal of Computers (CJC)*, Vol. 38, No. 4, April, 2015.
125. Yan Zhu, Di Ma, Changjun Hu, Gail-Joon Ahn and Hongxin Hu, "Secure and Efficient Random Functions with Variable-Length Output", *Journal of Network and Computer Applications (JNCA)*, August, 2014.
126. Juan Wang, Hongxin Hu, Bo Zhao, Fei Yan, Huangguo Zhang and Qianhong Wu, "Formal Analysis of Information Card Federated Identity-Management Protocol", *Chinese Journal of Electronics (CJE)*, Vol. 22, No. 1, January, 2013.
127. Ruoyu Wu, Gail-Joon Ahn and Hongxin Hu, "Towards HIPAA-compliant Healthcare Systems in Cloud Computing", *International Journal of Computational Models and Algorithms in Medicine (IJCMAM)*, Special Issue on Privacy in Health Informatics, Vol. 3, No. 2, December, 2012.
128. Yan Zhu, Hongxin Hu, Gail-Joon Ahn, Yujing Han and Shimin Chen, "Collaborative Integrity Verification in Hybrid Clouds", *International Journal of Cooperative Information Systems (IJCIS)*, World Scientific, Vol. 21, No. 03, November, 2012. (Invited as one of best papers presented at CollaborateCom'11)
129. Karsten Sohr, Mirco Kuhlmann, Martin Gogolla, Hongxin Hu and Gail-Joon Ahn, "Comprehensive Two-Level Analysis of Role-Based Delegation and Revocation Policies", *Information and Software Technology (IST)*, Elsevier, Vol. 54, No. 12, December, 2012. (Invited as the SSIRI'11 best paper)
130. Yan Zhu, Hongxin Hu, Gail-Joon Ahn and Stephen S. Yau, "Efficient Audit Service Outsourcing for Data Integrity in Clouds", *Journal of Systems and Software (JSS)*, Elsevier, Vol. 85, No 5, May 2012.
131. Yan Zhu, Mengyang Yu, Hongxin Hu, Gail-Joon Ahn and Hongjia Zhao, "Efficient Constructions of Provably Secure Steganography under Ordinary Covert Channels", *SCIENCE CHINA - Information Sciences*, Springer, Vol. 55, No. 7, July, 2012.
132. Yan Zhu, Hongxin Hu, Gail-Joon Ahn, Huaixi Wang and Shanbiao Wang, "Provably Secure Role-Based Encryption with Revocation Mechanism", *Journal of Computer Science and Technology (JCST)*, Springer, Vol. 26, No. 4, July, 2011.
133. Yan Zhu, Zexing Hu, Huaixi Wang, Gail-Joon Ahn and Hongxin Hu, "Zero-knowledge Proofs of Retrievability", *SCIENCE CHINA - Information Sciences*, Springer, Vol. 54, No. 8, August, 2011.

Posters/Demos:

134. Zili Meng, Jun Bi, Chen Sun, Shuhe Wang, Minhu Wang and Hongxin Hu, "PAM: When Overloaded, Push Your Neighbor Aside!", In *Proceedings of ACM SIGCOMM Conference (SIGCOMM 2018)* on Posters and Demos, Budapest, Hungary, August 20-25, 2018. **(First Place in SIGCOMM SRC 2018)**
135. Zili Meng, Jun Bi, Chen Sun, Anmin Xu and Hongxin Hu, "PRAM: Priority-aware Flow Migration Scheme in NFV Networks", In *Proceedings of the ACM Symposium on SDN Research (SOSR 2017)*, Poster Session, Santa Clara, CA, April 3-4, 2017.
136. Chen Sun, Jun Bi, Zhilong Zheng and Hongxin Hu, "SLA-NFV: an SLA-aware High Performance Framework for Network Function Virtualization", In *Proceedings of ACM SIGCOMM Conference (SIGCOMM 2016)*, Poster Session, Florianópolis, Brazil, August 22-26, 2016.
137. Juan Wang, Bo Zhao, Huanguo Zhang, Fei Yan, Liqiang Zhang, Fajiang Yu and Hongxin Hu, "An E2E Trusted Cloud Infrastructure", In *Proceedings of the 21st ACM Conference on Computer and Communications Security (CCS 2014)*, Poster Session, Scottsdale, AZ, USA, November 3-7, 2014.
138. Yan Zhu, Hongxin Hu, Gail-Joon Ahn, Xiaorui Gong and Shimin Chen, "POSTER: Temporal Attribute-Based Encryption in Clouds", In *Proceedings of the 18th ACM Conference on Computer and Communications Security (CCS 2011)*, Poster Session, Chicago, IL, USA, October 17-21, 2011.
139. Yan Zhu, Huaixi Wang, Zexing Hu, Gail-Joon Ahn, Hongxin Hu and Stephen S. Yau, "Efficient Provable Data Possession for Hybrid Clouds", In *Proceedings of the 17th ACM Conference on Computer and Communications Security (CCS 2010)*, Poster Session, Chicago, IL, USA, October 4-8, 2010.
140. Wenjuan Xu, Gail-Joon Ahn, Hongxin Hu, Xinwen Zhang and Jean-Pierre Seifert, "Building Dynamic Remote Attestation Framework", In *Proceedings of the 16th ACM Conference on Computer and Communications Security (CCS 2009)*, Poster Session, Chicago, IL, USA, November 9-13, 2009.

Books/Book Chapters:

141. Sifa Zhang, Junqin Fan, Hongxin Hu, "Computer Graphics & Image Processing", *Higher Education Press*, Beijing, 2004.
142. Junqin Fan, Hongxin Hu, Sifa Zhang, "Guide on Computer Organization and Assembly Language", *Higher Education Press*, Beijing, 2003.
143. Hongxin Hu, Sifa Zhang, Juan Yang, Junqin Fan, "Internet and Its Applications", *Press of China University of Geosciences*, Wuhan, 2001.

TALKS

1. "Enforcing Safety and Security Policy with Real IoT Physical Interaction Discovery", *3rd International Workshop on Cyber Security and Data Privacy*, 2021.
2. "Security Labs for Software Defined Networks in CloudLab", *Cybersecurity Faculty Development Workshop, University of Tennessee at Chattanooga*, 2021.
3. "AI-based Cyberharassment Detection", *REU Site: Special Topics on Biometrics and Authentication, University at Buffalo*, 2021.
4. "Network Security Function Virtualization: Challenges and Solutions", Keynote Speech, *ACM SDN-NFV Sec*, 2021.
5. "Rethinking Security for the Internet of Things (IoT)", *University of Missouri*, 2021.
6. "Rethinking Security for the Internet of Things (IoT)", *University of Louisiana at Lafayette*, 2021.

7. “Rethinking Security for the Internet of Things (IoT)”, *University of North Carolina at Charlotte*, 2021.
8. “Rethinking Security for the Internet of Things (IoT)”, *University at Buffalo - SUNY*, 2020.
9. “Poseidon: Mitigating Volumetric DDoS Attacks with Programmable Switches”, *NDSS 2020*.
10. “Rethinking Security for the Internet of Things (IoT)”, *University of Delaware*, 2020.
11. “Dynamic Defense of IoT Malware”, *VMWare*, 2019.
12. “Rethinking Security for the Internet of Things (IoT)”, *Wuhan University*, 2019.
13. “Rethinking Security for the Internet of Things (IoT)”, *University of Texas at Dallas*, 2019.
14. “vNIDS: Safe and Efficient Virtualization of Network Intrusion Detection Systems”, *VMWare*, 2018.
15. “Safety Control on IoT Device Physical Interaction”, *Tsinghua University*, 2018.
16. “Enabling Reliable Access Control in Modern Network and Information Systems”, *University of Texas at Arlington*, 2018.
17. “Network Security Function Virtualization (NSFV): Challenges and Solutions”, *Tsinghua University*, 2017.
18. “Network Security Function Virtualization (NSFV): Challenges and Solutions”, *Wuhan University*, 2017.
19. “Network Security Function Virtualization: Challenges and Solutions”, *NFV World Congress*, 2017.
20. “Securing Software Defined Networks: From Theory to Practice”, *SDN Security panel, IEEE CNS 2016*.
21. “Enabling Reliable Access Control for Emerging Networking Technologies”, *Tsinghua University*, 2016.
22. “Enabling Reliable Access Control for Emerging Networking Technologies”, *University of Science and Technology Beijing*, 2016.
23. “Enabling Reliable Access Control for Emerging Networking Technologies”, *China University of Geosciences*, 2016.
24. “Enabling Reliable Access Control for Emerging Networking Technologies”, *Wuhan University*, 2016.
25. “HetSDN: Exploiting SDN for Intelligent Network Usage in Heterogeneous Wireless Networks”, *IWQoS 2016*.
26. “Enabling Dynamic Access Control for Controller Applications in Software-Defined Networks”, *SACMAT 2016*.
27. “Virtualizing and Utilizing Network Security Functions for Securing Software Defined Infrastructure”, *NSF SDI/SDX Workshop*, 2016.
28. “NFV-enabled Security Mechanism”, *NFV World Congress*, 2016.
29. “Defending Against Visual Cyberbullying Attacks in Emerging Mobile Social Networks”, *NSF SaTC EAGER Workshop*, 2016.
30. “VNGuard: An NFV/SDN Combination Framework for Provisioning and Managing Virtual Firewalls”, *NFV-SDN 2015*.

31. “Building Robust Firewalls for Software-Defined Networks”, *CyberDNA Security Seminar, UNC Charlotte*, 2015.
32. “Defensive Maneuver Cyber Platform Modeling with Stochastic Petri Nets”, *CollaborateCom 2014*.
33. “Towards a Reliable SDN Firewall”, *2014 Open Networking Summit (ONS) Research Track*.
34. “Securing Software-Defined Networks”, *Faculty Workshop on Secure Software Engineering & Computer Science Retention sponsored by the U.S Department of Education*, 2013.
35. “Enabling Collaborative Data Sharing in Google+”, *GLOBECOM 2012*.
36. “Secure and Efficient Constructions of Hash, MAC and PRF for Mobile Devices”, *GLOBECOM 2012*.
37. “Detecting and Resolving Privacy Conflicts for Collaborative Data Sharing in Online Social Networks”, *ACSAC 2011*.
38. “Ontology-based Policy Anomaly Management for Autonomic Computing”, *CollaborateCom 2011*.
39. “Multiparty Authorization Framework for Data Sharing in Online Social Networks”, *DBSec 2011*.
40. “Firewall Policy Analysis for Autonomic Computing”, Poster, *IARE 2011*.
41. “FAME: A Firewall Anomaly Management Environment”, *SafeConfig 2010*.
42. “Efficient Provable Data Possession for Hybrid Clouds”, Poster, *CCS 2010*.
43. “Assurance Management Framework for Access Control”, Poster, *IARE 2010*.
44. “Enabling Verification and Conformance Testing for Access Control Model”, *SACMAT 2008*.

**SELECTED
MEDIA
COVERAGE**

- “Protecting privacy, preventing cyberbullying, and detecting hate speech with artificial intelligence”, *News Standard, Clemson University*, March 11, 2020. ([Link](#))
- “Securing cyberspace: Hongxin Hu develops new ways to protect computer networks”, *News Standard, Clemson University*, July 9, 2019. ([Link](#))
- “Clemson University cybersecurity research to be highlighted at top-tier security conference”, *News Standard, Clemson University*, July 30, 2018. ([Link](#))
- “Researchers Land \$3 Million to Build Cyberattack Defenses”, *News Standard, Clemson University*, June 6, 2017. ([Link](#))
- “Researchers Land \$3 Million to Build Cyberattack Defenses”, *ACM TechNews*, June 12, 2017. ([Link](#))
- “High schooler to assist Clemson professor in \$3M data security research project this summer”, *Independent Mail*, June 9, 2017. ([Link](#))
- “Clemson Professor to Research Cyberattack Defenses”, *GSA Business Report*, June 6, 2017. ([Link](#))
- “Clemson Researchers Land \$3 Million to Build Cyberattack Defenses”, *WSNW Radio*, June 7, 2017. ([Link](#))
- “Clemson University Computer Scientist to Present Research at Esteemed Security Conference”, *News Standard, Clemson University*, November 3, 2016. ([Link](#))
- “Clemson University app could help fight cyberbullying”, *News Standard, Clemson University*, August 19, 2015. ([Link](#))

- “Clemson developing app to take on bullies”, *The Post and Courier*, September 5, 2015. ([Link](#))
- “App could identify cyberbullying as it happens”, *Greenville (SC) News*, August 19, 2015. ([Link](#))
- “Clemson Team Making App to Fight Cyber Bullies”, *WSPA-TV*, August 19, 2015. ([Link](#))
- “Clemson developing app to combat cyberbullying”, *WHNS-TV*, August 19, 2015. ([Link](#))
- “App in the works at Clemson to fight cyberbullying”, *WYFF4*, August 19, 2015. ([Link](#))
- “Innovation Challenge Winners Demonstrate SDN Applications to Secure and Simplify Networks”, *Extreme Blog*, June 2, 2015. ([Link](#))
- “Windows 8 Picture Passwords Easily Cracked”, *ACM TechNews*, September 4, 2013 ([Link](#))
- “Windows 8 Picture Passwords Easily Cracked”, *InformationWeek Dark Reading*, August 29, 2013. ([Link](#))
- “Researchers develop attack framework for cracking Windows 8 picture passwords”, *NetworkWorld*, September 5, 2013. ([Link](#))
- “Windows 8’s Picture Passwords Weaker Than Users Might Hope”, *Slashdot*, September 5, 2013. ([Link](#))
- “Windows Picture Passwords – are they really as ‘easily crackable’ as everyone’s saying?”, *NakedSecurity*, September 9, 2013. ([Link](#))
- “Windows 8 picture passwords ‘can be cracked’, researchers warn”, *WeLiveSecurity*, August 30, 2013. ([Link](#))
- “Picture passwords promising, security researcher says”, *PCWorld*, September 15, 2013. ([Link](#))

TEACHING EXPERIENCE

Instructor for Courses July 2014 - Present
School of Computing, Clemson University

- Undergraduate/graduate Course: CPSC 4200/6200 - Computer Security Principles
- Graduate Course: CPSC 8570 - Security in Advanced Networking Technologies (**newly developed course**)
- Graduate Course: CPSC 8810 - Advanced Networking and Security
- Graduate Course: CPSC 8810/CPSC 8580 - Security in Emerging Computing and Networking Systems (**newly developed course**)

Instructor for Courses August 2012 - June 2014
Department of Computer and Information Sciences, Delaware State University

- Undergraduate Course: INFO-385 - Network Security
- Undergraduate Course: INFO-350 - Operating Systems
- Graduate Course: CSCI-510 - Advanced Operating Systems (**newly developed course**)
- Graduate Course: CSCI-520 - Advanced Computer Networking and Communications (**newly developed course**)

**POST-
DOCTORAL
RESEARCHERS**

- Kang Chen Sep 2014 - Aug 2015
First employment: **Assistant Professor**, Southern Illinois University
- Juan Deng Sep 2014 - Jul 2016
First employment: Senior Researcher, Huawei

**STUDENT
ADVISING**

Current Ph.D. Students:

- Nishant Vishwamitra since May 2016
 - First-authored an **NDSS’21** paper
 - First-authored a **SACMAT’17** paper
 - Co-authored a **CHI’20** paper
 - Co-authored a **CSCW’18** paper
 - Received Talford Annual Fellowship award for 2018-2019
- Wenbo Ding since Jan 2017
 - First-authored an **NDSS’21** paper
 - First-authored a **CCS’18** paper
- Feng Wei since May 2018
- Qiqing Huang since May 2020
- Zheyuan Ma since September 2021

Previous Ph.D. Students:

- Hongda Li May 2015 - Aug 2020
 - First-authored a **CCS’18** paper
 - First-authored an **NDSS’17** paper
 - Co-authored an **ASIACCS’20** paper
 - Co-authored a **SIGCSE’18** paper (**Best Paper Award**)
 - Received **Outstanding Ph.D. Student Award** in computer science
 - Received Talford Annual Fellowship award for 2018-2019
- Chen Sun (Tsinghua University, co-advised) May 2015 - Aug 2019
 - First-authored a **SIGCOMM’17** paper
 - First-authored a **IWQoS’18** paper
 - First-authored two IEEE **JSAC** papers and an IEEE/ACM **TON** paper
 - Co-authored an **ICNP’18** paper
 - Co-authored an **ICNP’15** paper (**Best Paper Nominee**)
 - Received **Google PhD Fellowship** in Systems and Networking 2018
- Wonkyu Han (Arizona State University, co-advised) May 2013 - Aug 2016
 - First-authored a **SACMAT’16** paper and a **DBSec’14** paper
 - Co-authored an **NDSS’17** paper and a **HotSDN’14** paper
- Shuyong Zhu (Tsinghua University, co-advised) May 2014 - Aug 2016
 - First-authored an **ICNP’15** paper (**Best Paper Nominee**)
 - Co-authored an IEEE/ACM **TON** paper and an IEEE Network paper

Current Undergraduate Students:

- Martha Newton (REU Student) Apr 2018 - Present
- Tyreek Wilson (REU Student) Apr 2018 - Present

Previous Undergraduate Students:

- Maxwell Harley (REU Student) Aug 2017 - Feb 2018
- Nick Castro (REU Student) Sep 2017 - Feb 2018
- Wesley Knight (REU Student) Sep 2017 - Feb 2018
- Kevin Wang (REU Student) May 2016 - May 2017
 - Co-authored a SACMAT'17 paper
- Alexander Sferrella (REU Student) May 2016 - Apr 2017
- Jan Jorgensen (Arizona State University) May 2010 - May 2012
 - Co-authored an **ACSAC'11** paper and a GLOBECOM'12 paper
 - Co-authored an IEEE **TKDE** paper featured by the IEEE Special Technical Community on Social Networking

High School Students:

- Wyatt Dorris (D. W. Daniel High School, Central, SC) May 2019 - Present
 - Co-authored an ICMLA'20 paper and an IWSPA'20 paper
 - Studying in Computer Science at Clemson University
- Jonathan Tong (D. W. Daniel High School, Central, SC) May 2016 - Apr 2017
 - Co-authored an IWSPA'17 paper and an ICMLA'17 paper
 - Studying in Computer Science at Cornell University
- Charlie Cao (Wootton High School, Rockville, MD) May 2017 - Jul 2017
 - Studying in Computer Science at the University of Maryland, College Park
- Kevin Feng (D. W. Daniel High School, Central, SC) Jun 2017 - Jul 2017
 - Studying in Computer Science at Duke University

Middle School Student:

- Roger Hu (R C Edwards Middle School, Central, SC) Jun 2017 - Jul 2017
 - Studying in Computer Science at Duke University

**INSTITUTIONAL
SERVICE**

- Search Committee for the C. Tycho Howle Endowed Chair of Collaborative Computing 2015 - 2017
- Clemson Cybersecurity Research Task Force 2016 - Present
- Faculty Search Committee for School of Computing 2015 - Present
- Equipment Committee for School of Computing 2014 - 2015
- Website Committee for School of Computing 2017 - Present
- PhD Thesis Committee
 - Adil Alsuhaime (Advisor: Dr. Jim Martin)
 - Jason Anderson (Advisor: Dr. Amy W. Apon)

- Oluwakemi Hambolu (Advisor: Richard R. Brooks)
- William Clay Moody (Advisor: Dr. Amy W. Apon)
- Fan Yang (Advisor: Dr. Richard R. Brooks)
- Master’s Thesis Committee
 - Emmanuel John (Advisor: Dr. Ilya Safro)
 - Udit Agarwal (Advisor: Dr. Amy W. Apon)

PROFESSIONAL SERVICE *Associate Editor:*

- IEEE Transactions on Dependable and Secure Computing (TDSC) 2020 - Present
- Computers & Security (COSE) 2020 - Present
- Cybersecurity & Privacy. *Frontiers in Big Data* 2018 - Present

Guest Editor:

- Special Issue of Network Traffic Analytics in the Era of AI and SDN. *Computer Networks* 2021
- Special Issue of Advances in Steganography and Multimedia Security for Big Data. *International Journal of Distributed Sensor Networks (IJDSN)* 2019
- Special Issue of Security in Emerging Networking Technologies. *IEEE Transactions on Dependable and Secure Computing (TDSC)* 2017/2018
- Special Issue of Advances in Network Function Virtualization. *China Communications* 2018
- Special Issue of Adaptive Mobile Crowd Sensing Security for BYOD Convergence in Mobile Creative Research. *Mobile Information System* 2016
- Special Issue of Security & Privacy Mechanisms for Sensor Middleware and Application in Internet of Things (IoT). *International Journal of Distributed Sensor Networks* 2015
- Special Issue of TrustCol2014. *EAI Endorsed Transactions on Collaborative Computing* 2015

Proposal Panelist/Reviewer:

- National Science Foundation (NSF) 2015, 2016, 2017, 2018, 2020
- Army Research Office (ARO) 2019
- Maryland Industrial Partnerships Program (MIPStrack) 2014

Conference/Workshop (Co-)Founder:

- ACM International Workshop on Security in Software Defined Networks & Network Function Virtualization (SDN-NFV Security)
- IEEE International Workshop Big Data Security and Services (BigDataService)

Program (Co-)Chair:

- International Conference on Computer Communications and Networks (ICCCN), SDN/NFV Track, 2021
- ACM International Workshop on Security in Software Defined Networks & Network Function Virtualization (SDN-NFV Security), 2016, 2017, 2018, 2019

- IEEE International Workshop Big Data Security and Services (BigDataService), 2017, 2018, 2019
- IEEE International Workshop on Trusted Collaboration (TrustCol), 2014, 2015, 2016

Poster Chair:

- ACM Conference on Data and Application Security and Privacy (CODASPY), 2018 - 2021

Proceedings Chair:

- ACM Conference on Data and Application Security and Privacy (CODASPY), 2017
- ACM Symposium on Access Control Models and Technologies (SACMAT), 2014, 2016, 2017, 2018, 2019, 2021

Publicity Chair:

- ACM Symposium on Access Control Models and Technologies (SACMAT), 2015

Session Chair:

- ACM Conference on Data and Application Security and Privacy (CODASPY), 2018
- ACM Symposium on Access Control Models and Technologies (SACMAT), 2017
- ACM Conference on Computer and Communications Security (CCS), 2014
- IEEE International Workshop on Trusted Collaboration (TrustCol), 2011

Web Chair:

- ACM Conference on Computer and Communications Security (CCS), 2014

Technical Program Committee:

- The AAAI Conference on Artificial Intelligence (AAAI), 2021
- The Web Conference (WWW), 2019, 2021
- Annual Computer Security Applications Conference (ACSAC), 2018, 2019, 2020, 2021
- ACM Symposium on Information, Computer and Communications Security (AsiaCCS), 2018, 2019, 2021
- ACM Conference on Security and Privacy in Wireless and Mobile Networks (WiSec), 2020
- IEEE/ACM International Symposium on Quality of Service (IWQoS), 2021
- ACM Conference on Data and Application Security and Privacy (CODASPY), 2018, 2021
- ACM Symposium on Access Control Models and Technologies (SACMAT), 2013, 2014, 2015, 2018, 2019, 2020
- IEEE Conference on Communications and Network Security (CNS), 2017, 2018, 2019, 2020
- IFIP Networking Conference (NETWORKING), 2019

- ACM SIGCOMM Workshop on Security in Softwarized Networks: Prospects and Challenges (SecSoN), 2018
- ACM SIGCOMM Workshop on Internet of Things Security and Privacy (IoT S&P), 2018
- ACM Symposium on Applied Computing (SAC), Internet of Things (IoT) track, 2018, 2019, 2020
- ACM International Workshop on Multimedia Privacy and Security (MPS), 2017, 2018
- International Conference on Privacy, Security and Trust (PST), 2017, 2018, 2019
- IEEE International Conference on Advanced and Trusted Computing (ATC), 2016, 2017, 2018
- International Conference on Information and Communications Security (ICICS), 2018
- IEEE International Conference on Cloud Networking (CloudNet), 2018, 2019, 2020
- IEEE International Conference on Smart City Innovations (SCI), 2018
- Workshop on Security and Privacy-Enhanced Big Data (SPEBD), 2018
- IEEE International Conference on Computer Communications and Networks (ICCCN), 2015, 2016, 2017, 2018, 2019
- IEEE INFOCOM CrossCloud Workshop (CrossCloud), 2014, 2016, 2017, 2018
- ACM Workshop on Internet of Things Security and Privacy (IoT S&P), 2017
- IEEE International Conference on Parallel and Distributed Systems (ICPADS), 2016
- IEEE Global Communications Conference (GLOBECOM), 2015
- International Conference on Computing and Network Communications (Co-CoNet), 2015
- Workshop on Action Languages, Process Modeling, and Policy Reasoning (ALPP), 2015
- IEEE ICNP CoolSDN Workshop (CoolSDN), 2014, 2015, 2016
- International Workshop on Access Control Policies, Models and Mechanisms (ACPM), 2014
- IEEE International Workshop on Trusted Collaboration (TrustCol), 2013
- International Symposium on Cyberspace Safety and Security (CSS), 2013
- International Conference on Mobile, Ubiquitous, and Intelligent Computing (MUSIC), 2013
- FTRA International Symposium on Advances in Cryptography, Security and Applications for Future Computing (ACSA-Summer), 2012

Conference Paper Reviewer:

- ACM Conference on Computer and Communications Security (CCS), 2005-2007, 2013, 2016, 2017, 2018, 2019, 2020
- ACM CHI Conference on Human Factors in Computing Systems (CHI), 2018
- European Symposium on Research in Computer Security (ESORICS), 2018

- ACM Symposium on Access Control Models And Technologies (SACMAT), 2005- 2013
- ACM Conference on Data and Application Security and Privacy (CODASPY), 2011 - 2013
- International World Wide Web Conferences (WWW)–Security and Privacy Track, 2009-2011
- ACM Symposium on Applied Computing (SAC)–Computer Security Track. 2006-2011
- ACM Symposium on InformAtion, Computer and Communications Security (AsiaCCS), 2006-2008

Journal Paper Reviewer:

- ACM Transactions on Privacy and Security
- ACM Transactions on Information and System Security
- ACM Transactions on Software Engineering and Methodology
- ACM Transactions on Internet Technology
- IEEE Transactions on Dependable and Secure Computing
- IEEE Transactions on Knowledge and Data Engineering
- IEEE/ACM Transactions on Networking
- IEEE Transactions on Information Forensics and Security
- IEEE Transactions on Services Computing
- IEEE Transactions on Network and Service Management
- IEEE Internet Computing
- Journal of Computer Security
- Computers & Security
- Security and Communication Networks
- IBM Journal of Research and Development
- International Journal of Information Security
- International Journal of Network Management
- Journal of Systems and Software
- Journal of Data & Knowledge Engineering
- Journal of Biomedical Informatics
- Journal of Organizational Computing and Electronic Commerce
- International Journal of Computer Systems Science and Engineering
- Security and Communication Networks
- IET Information Security
- Wireless Networks
- Cluster Computing
- Sensors
- Journal of Network and Computer Applications
- Journal of Computer Science and Technology