Curriculum Vitae

Thomas Moyer
333G Woodward Hall
University of North Carolina at Charlotte
9201 University City Blvd.
Charlotte, NC 28223

tom.moyer@uncc.edu
(704) 687-8194

1 Education

The Pennsylvania State University University Park, PA
PhD, Computer Science and Engineering, December 2011
Advisor: Dr. Patrick D. McDaniel
Dissertation Title: *Building Scalable Document Integrity Systems*

The Pennsylvania State University University Park, PA
MS, Computer Science and Engineering, 2009
Advisor: Dr. Patrick D. McDaniel
Thesis Title: *Scalable Web Content Attestations*

The Pennsylvania State University University Park, PA
B.S., Computer Engineering, 2006

2 Professional Experience

- **Assistant Professor**, August 2017-present
  University of North Carolina at Charlotte,
  Department of Software and Information Systems
  Charlotte, NC
- **Research Scientist**, September 2011 to August 2017
  Cyber Systems and Technology Group, MIT Lincoln Laboratory, Lexington, MA
  Worked on secure system design and prototyping.
  Developed prototype for protected, mobile, satellite communications terminal, including addressing information assurance requirements for multiple organizations.
  Developed understanding of certification and accreditation processes used to certify information systems.
  Participated in blue-team threat assessment for legacy computer systems.
  Supported DoD ASD(R&E) Information Systems and Cyber Technologies office as subject matter expert in cyber security.
  Developed secure data provenance architectures for large-scale enterprise systems.
- **Research Assistant**, May 2008 to September 2011
  The Pennsylvania State University, University Park, PA
  Advisor: Dr. Patrick D. McDaniel
  Worked on problems in virtual machine security.
  Utilized technologies for virtualization and trusted hardware to develop secure computing applications.
  Worked on problems in Web security.
- **Research Assistant**, September 2007 to May 2008
  The Pennsylvania State University, University Park, PA
  Advisor: Dr. Patrick D. McDaniel
  Mentor: Dr. Subhabrata Sen

Worked on problems in configuration management.
Assisted in developing/testing tool for creating router configurations.

- **Summer Research Intern AT&T**, May 2007 to September 2007
  Internet and Networking Systems Research Center, AT&T Labs Research, Florham Park, NJ
  Mentor: Dr. Subhabrata Sen
  Worked on problems in configuration management.
  Assisted in developing internal tool for creating configurations.

- **Instructor**, January 2007 to May 2007
  The Pennsylvania State University, University Park, PA
  Department of Computer Science Engineering, Pennsylvania State University
  Introduction to Algorithmic Processes (CMPSC 101)
  Instructed students in program design and creation using the MS Visual Basic programming language.

3 Publications

3.1 Peer Reviewed Journal Publications

1. Adam Bates, Dave (Jing) Tian, Grant Hernandez, Thomas Moyer, Kevin R. B. Butler, and Trent Jaeger. "Taming the Costs of Trustworthy Provenance Through Policy Reduction". In: *ACM Transactions on Internet Technology* 17.4 (Sept. 2017), 34:1–34:21. ISSN: 1533-5399. DOI: 10.1145/3062180. URL: https://thomasmoyer.org/pubs/bth+2017.pdfw

2. Thomas Moyer, Kevin R.B. Butler, Joshua Schiffman, Patrick McDaniel, and Trent Jaeger. "Scalable Web Content Attestation". In: *IEEE Transactions on Computers* 61.5 (May 2012), pp. 686–699. ISSN: 0018-9340. DOI: 10.1109/TC.2011.60. URL: https://thomasmoyer.org/pubs/mbs+2012.pdf

3. Joshua Schiffman, Thomas Moyer, Trent Jaeger, and Patrick McDaniel. "Network-Based Root of Trust for Installation". In: *IEEE Security Privacy* 9.1 (Jan. 2011), pp. 40–48. ISSN: 1540-7993. DOI: 10.1109/MSP.2011.15. URL: https://thomasmoyer.org/pubs/smj+2011.pdf

4. Kevin R.B. Butler, Stephen McLaughlin, Thomas Moyer, and Patrick McDaniel. "New Security Architectures Based on Emerging Disk Functionality". In: *IEEE Security Privacy* 8.5 (Sept. 2010), pp. 34–41. ISSN: 1540-7993. DOI: 10.1109/MSP.2010.90. URL: https://thomasmoyer.org/pubs/bmm+2010.pdf

5. William Enck, Thomas Moyer, Patrick McDaniel, Subhabrata Sen, Panagiotis Sebos, Sylke Spoerel, Albert Greenberg, Yu-Wei Eric Sung, Sanjay Rao, and William Aiello. "Configuration Management at Massive Scale: System Design and Experience". In: *IEEE Journal on Selected Areas in Communications* 27.3 (Apr. 2009), pp. 323–335. ISSN: 0733-8716. DOI: 10.1109/JSAC.2009.090408. URL: https://thomasmoyer.org/pubs/emm+2009.pdf

3.2 Peer Reviewed Conference Publications

6. Maya Kapoor, Michael Napolitano, Jonathan Quance, Thomas Moyer, and Siddharth Krishnan. "Detecting VoIP Data Streams: Approaches Using Hidden Representation Learning". In: *35th Annual Conference on Innovative Applications of Artificial Intelligence (IAAI-23)*. 2023

7. Maya Kapoor, Joshua Melton, Michael Ridenhour, Thomas Moyer, and Siddharth Krishnan. "Flurry: A Fast Framework for Provenance Graph Generation for Representation Learning". In: *Proceedings of the 31st ACM International Conference on Information and Knowledge Management*. CIKM '22. Atlanta, GA, USA: Association for Computing Machinery, 2022, pp. 4887–4891. ISBN: 9781450392365. DOI: 10.1145/3511808.3557200. URL: https://doi.org/10.1145/3511808.3557200

8. Maya Kapoor, Thomas Moyer, and Siddharth Krishnan. "Deep Packet Inspection at Scale: Search Optimization Through Locality-Sensitive Hashing". In: *21st IEEE International Symposium on Network Computing and Applications (NCA 2022)*. 2022

9. Maya Kapoor, Joshua Melton, Michael Ridenhour, Siddharth Krishnan, and Thomas Moyer. "Prov-GEm: Automated Provenance Analysis Framework using Graph Embeddings". In: *Proceedings of the IEEE 2021 International Conference on Machine Learning and Applications, ICMLA 2021*. Dec. 2021

10. Abdullah Al Farooq, Jessica Marquard, Kripa George, and Thomas Moyer. "Detecting Safety and Security Faults in PLC Systems with Data Provenance". In: *IEEE International Symposium on Technologies for Homeland Security*. Nov. 2019. arXiv: 1911.06304 [cs.CR]

11. Abdullah Al Farooq, Ehab Al-Shaer, Thomas Moyer, and Krishna Kant. "IoTC^2: A Formal Method Approach for Detecting Conflicts in Large Scale IoT Systems". In: *2019 IFIP/IEEE Symposium on Integrated Network and Service Management (IM)*. Apr. 2019, pp. 442–447. URL: https://thomasmoyer.org/pubs/aamk2019.pdf

12. Thomas Pasquier, Xueyuan Han, Thomas Moyer, Adam Bates, Olivier Hermant, David Eyers, Jean Bacon, and Margo Seltzer. "Runtime Analysis of Whole-System Provenance". In: *Proceedings of the 2018 ACM SIGSAC Conference on Computer and Communications Security*. CCS '18. acceptance rate=16.6%. Toronto, Canada: ACM, 2018, pp. 1601–1616. ISBN: 978-1-4503-5693-0. DOI: 10.1145/3243734.3243776. URL: https://thomasmoyer.org/pubs/phm+2018.pdf

13. Wajih Ul Hassan, Mark Lemay, Nuraini Aguse, Adam Bates, and Thomas Moyer. "Towards Scalable Cluster Auditing through Grammatical Inference over Provenance Graphs". In: *25th Annual Network and Distributed System Security Symposium, NDSS 2018, San Diego, California, USA, February 18-21, 2018*. acceptance rate=21.0%. The Internet Society, 2018. URL: https://thomasmoyer.org/pubs/hbm2018.pdf

14. Thomas Pasquier, Xueyuan Han, Mark Goldstein, Thomas Moyer, David Eyers, Margo Seltzer, and Jean Bacon. "Practical Whole-system Provenance Capture". In: *Proceedings of the 2017 Symposium on Cloud Computing*. SoCC '17. Santa Clara, California: ACM, 2017, pp. 405–418. ISBN: 978-1-4503-5028-0. DOI: 10.1145/3127479.3129249. URL: https://thomasmoyer.org/pubs/phg+2017.pdf

15. Adam Bates, Kevin Butler, Alin Dobra, Brad Reaves, Patrick Cable, Thomas Moyer, and Nabil Schear. "Transparent Web Service Auditing via Network Provenance Functions". In: *Proceedings of the 26th International Conference on World Wide Web*. WWW '17. acceptance rate=17.0%. Perth, Australia: International World Wide Web Conferences Steering Committee, Apr. 2017, pp. 887–895. ISBN: 978-1-4503-4913-0. DOI: 10.1145/3038912.3052640. URL: https://thomasmoyer.org/pubs/bbd+2017.pdf

16. Nabil Schear, Patrick T. Cable II, Thomas Moyer, Bryan Richard, and Robert Rudd. "Bootstrapping and Maintaining Trust in the Cloud". In: *Proceedings of the 32Nd Annual Conference on Computer Security Applications*. ACSAC '16. acceptance rate=20.7%. Los Angeles, California, USA: ACM, Dec. 2016, pp. 65–77. ISBN: 978-1-4503-4771-6. DOI: 10.1145/2991079.2991104. URL: https://thomasmoyer.org/pubs/scm+2016.pdf

17. Thomas Moyer, Patrick T. Cable, Karishma Chadha, Robert Cunningham, Nabil Schear, Warren Smith, Adam Bates, Kevin Butler, Frank Capobianco, and Trent Jaeger. "Leveraging Data Provenance to Enhance Cyber Resilience". In: *1st IEEE Cybersecurity Development (SecDev)*. Nov. 2016

18. Thomas Moyer and Vijay Gadepally. "High-throughput Ingest of Data Provenance Records into Accumulo". In: *2016 IEEE High Performance Extreme Computing Conference, HPEC 2016, Waltham, MA, USA, September 13-15, 2016*. IEEE, Sept. 2016, pp. 1–6. ISBN: 978-1-5090-3525-0. DOI: 10.1109/HPEC.2016.7761589. URL: https://thomasmoyer.org/pubs/mg2016.pdf

19. Adam Bates, Dave Tian, Kevin R.B. Butler, and Thomas Moyer. "Trustworthy Whole-System Provenance for the Linux Kernel". In: *24th USENIX Security Symposium (USENIX Security 15)*. acceptance rate=15.7%. Washington, D.C.: USENIX Association, Aug. 2015. URL: https://thomasmoyer.org/pubs/btb+2015.pdf

20. Thomas Moyer, Trent Jaeger, and Patrick McDaniel. "Scalable Integrity-Guaranteed AJAX". in: *Web Technologies and Applications*. Ed. by Quan Z. Sheng, Guoren Wang, Christian S. Jensen, and Guandong Xu. Berlin, Heidelberg: Springer Berlin Heidelberg, Apr. 2012, pp. 1–19. ISBN: 978-3-642-29253-8. URL: https://thomasmoyer.org/pubs/mjm2012.pdf

21. Boniface Hicks, Sandra Rueda, Dave King, Thomas Moyer, Joshua Schiffman, Yogesh Sreenivasan, Patrick McDaniel, and Trent Jaeger. "An Architecture for Enforcing End-to-End Access Control Over Web Applications". In: *Proceedings of the 2010 Symposium on Access Control Models and Technologies, SACMAT '10*. June 2010. URL: https://thomasmoyer.org/pubs/hrk+2010.pdf

22. Thomas Moyer, Kevin Butler, Joshua Schiffman, Patrick McDaniel, and Trent Jaeger. "Scalable Web Content Attestation". In: *2009 Annual Computer Security Applications Conference*. acceptance rate=19.0%. Dec. 2009, pp. 95–104. DOI: 10.1109/ACSAC.2009.19. URL: https://thomasmoyer.org/pubs/mbs+2009.pdf

23. Joshua Schiffman, Thomas Moyer, Christopher Shal, Trent Jaeger, and Patrick McDaniel. "Justifying Integrity Using a Virtual Machine Verifier". In: *2009 Annual Computer Security Applications Conference*. acceptance rate=19.0%. Dec. 2009, pp. 83–92. DOI: 10.1109/ACSAC.2009.18. URL: https://thomasmoyer.org/pubs/sms+2009.pdf

3.3 Peer Reviewed Extended Abstracts/Short Papers

24. Warren Smith, Thomas Moyer, and Charles Munson. "Curator: Provenance Management for Modern Distributed Systems". In: *10th USENIX Workshop on the Theory and Practice of Provenance, TaPP 2018, London, UK, July 11-12, 2018.* Ed. by Melanie Herschel. USENIX Association, July 2018. URL: https://thomasmoyer.org/pubs/smm2018.pdf

25. Mark Lemay, Wajih Ul Hassan, Thomas Moyer, Nabil Schear, and Warren Smith. "Automated Provenance Analytics: A Regular Grammar Based Approach with Applications in Security". In: *9th USENIX Workshop on the Theory and Practice of Provenance (TaPP 2017)*. Seattle, WA: USENIX Association, 2017. URL: https://thomasmoyer.org/pubs/lhm+2017.pdf

26. Adam Bates, Kevin R.B. Butler, and Thomas Moyer. "Take Only What You Need: Leveraging Mandatory Access Control Policy to Reduce Provenance Storage Costs". In: *7th USENIX Workshop on the Theory and Practice of Provenance (TaPP 15)*. Edinburgh, Scotland: USENIX Association, July 2015. URL: https://thomasmoyer.org/pubs/bbm2015.pdf

27. Joshua Schiffman, Thomas Moyer, Hayawardh Vijayakumar, Trent Jaeger, and Patrick McDaniel. "Seeding Clouds with Trust Anchors". In: *CCSW '10: Proceedings of the 2010 ACM workshop on Cloud computing security*. ACM, Oct. 2010. URL: https://thomasmoyer.org/pubs/smv+2010.pdf

3.4 Other Publications

28. Adam Bates, Kevin Butler, Alin Dobra, Brad Reaves, Patrick Cable, Thomas Moyer, and Nabil Schear. "Retrofitting Applications with Provenance-Based Security Monitoring". https://arxiv.org/abs/1609.00266. Sept. 2016

29. Thomas Moyer and Patrick McDaniel. *Scalable Integrity-Guaranteed AJAX*. tech. rep. NAS-TR-0149-2011. Department of Computer Science and Engineering, Pennsylvania State University, University Park, PA, USA: Network and Security Research Center, Mar. 2011

30. Thomas Moyer. *USENIX Security Symposium Session Summaries.* ;login: The USENIX Magazine. Aug. 2010

31. Thomas Moyer. *USENIX Conference on Web Application Developement Session Summaries.* ;login: The USENIX Magazine. Oct. 2010

32. Joshua Schiffman, Thomas Moyer, Hayawardh Vijayakumar, Trent Jaeger, and Patrick McDaniel. *Seeding Clouds with Trust Anchors.* Tech. rep. NAS-TR-0127-2010. Department of Computer Science and Engineering, Pennsylvania State University, University Park, PA, USA: Network and Security Research Center, Apr. 2010

33. Kevin Butler, Stephen McLaughlin, Thomas Moyer, Joshua Schiffman, Patrick McDaniel, and Trent Jaeger. *Firma: Disk-Based Foundations for Trusted Operating Systems.* Tech. rep. NAS-TR-0114-2009. Department of Computer Science and Engineering, Pennsylvania State University, University Park, PA, USA: Network and Security Research Center, Apr. 2009

34. Joshua Schiffman, Thomas Moyer, Christopher Shal, Trent Jaeger, and Patrick McDaniel. *No Node Is an Island: Shamon Integrity Monitoring Approach.* Tech. rep. NAS-TR-0103-2009. Department of Computer Science and Engineering, Pennsylvania State University, University Park, PA, USA: Network and Security Research Center, Feb. 2009

35. Kevin Butler, Stephen McLaughlin, Thomas Moyer, Trent Jaeger, and Patrick McDaniel. *SwitchBlade: Policy-Driven Disk Segmentation.* Tech. rep. NAS-TR-0098-2008. Department of Computer Science and Engineering, Pennsylvania State University, University Park, PA, USA: Network and Security Research Center, Nov. 2008

36. Thomas Moyer, Kevin Butler, Joshua Schiffman, Patrick McDaniel, and Trent Jaeger. *Scalable Asynchronous Web Content Attestation.* Tech. rep. NAS-TR-0095-2008. Department of Computer Science and Engineering, Pennslyvania State University, University Park, PA, USA: Network and Security Research Center, Sept. 2008

4 Student Supervision

4.1 Doctoral Students Supervised

- **Maya Kapoor**, Disssertation co-advisor, Project title: *Scalable Graph Representation Learning for Cybersecurity*, Degree: PhD, Completion date: *expected Fall 2024*
- **Ambarish Regmi**, Dissertation advisor, Project title: *Trustworhty Endpoint Agents for Enterprise Systems*, Degree: PhD, Completion date: *expected Spring 2022*
- **Trevon Williams**, Dissertation advisor, Project title: *Software-defined Networking for Resilience*, Degree: PhD, Completion date: *expected Spring 2024*
- **Enas Al Kawasmi**, Dissertation advisor, Project title: *A Secure Decentralized Storage Platform for Data Provenance*, Degree: PhD, Completion date: *expected Spring 2023*
- **Abdullah Al Farooq**, Dissertation advisor, Project title: *Enforcing Security Policies with Data Provenance to Enrich the Security of IoT/Smart Building System*, Degree: PhD, Completion date: Summer 2020, Current Position: Assistant Professor, Wentworth Institute of Technology, Boston, MA

4.2 Masters Students Supervised

- **Trevon Williams**, Thesis advisor, Project title: *A Programmable Approach for a Resilient SDN Architecture*, Degree: MS Cybersecurity, Completion date: Fall 2019

- **Mir Mehedi Pritom**, Academic advisor, Degree: MS IT, Completion date: Fall 2018
- **Anibal J. Robles Perez**, Thesis advisor, Project title: *Towards and Agent-based Approach to Simulating Humans Falling for Phishing Attacks*, Degree: MS IT, Completion date: Fall 2018

4.3 Bachelors Students Supervised

- **Cameron Pacileo**, Project supervisor, Project title: *Rollback-aware Trustworthy Data Provenance*, Degree: BS, Completion date: *expected Spring 2022*
- **Bryce Kane**, Project supervisor, Project title: *Building a Safe and Scalable Testbed for System Security Research*, Degree: BS, Completion date: *expected Spring 2022*
- **Zachary Taylor**, Project supervisor, Project title: *Enhancing Trustworthy Whole-system Provenance Analysis with Network Events*, Degree: BS, Completion date: *expected Fall 2019*
- **Kevin Cardoso**, Project supervisor, Project title: *Building a Safe and Scalable Testbed for System Security Research*, Degree: BS, Completion date: Spring 2019
- **Joe Waller**, Project supervisor, Project title: *Enhancing Trustworthy Data Provenance Systems with Network Event Tracking*, Degree: BS, Completion date: Spring 2019, Note: PhD student starting in Fall 2019
- **Joeseph Logan**, Project supervisor, Project title: *Rollback-aware Trustworthy Data Provenance*, Degree: BS, Completion date: Spring 2019
- **Abdalla El-Ghannam**, Project supervisor, Project title: *Exploring Resource-aware Data Provenance Collection in Embedded Devices*, Degree: BS, Completion date: Spring 2019
- **Jessica Marquard**, Project supervisor, Project title: *Building Resilient Microservices with Data Provenance*, Degree: BS, Completion date: Summer 2018
- **Kailey Wolfe**, REU faculty mentor, Project title: *Exploration of Graph Databases for Secure Data Provenance*, Degree: BS, Note: Summer 2018 REU Student
- **Karena Huang**, REU faculty mentor, Project title: *Exploration of Graph Databases for Secure Data Provenance*, Degree: BS, Note: Summer 2018 REU Student
- **Kripa George**, REU faculty mentor, Project title: *Identifying Conflicts in Provenance Graphs for IoT/Smart Buildings*, Degree: BS, Note: Summer 2019 REU Student

5 Teaching

5.1 Courses Taught

5.1.1 Graduate Courses

- ITIS 6010: *Topics in SIS: Competitive Cyber Defense*: Spring 2019, Average enrollment: 18 students, Note: Starting Spring 2020 this will be ITIS 5246

5.1.2 Undergraduate Courses

- ITIS 3110: *IT Infrastructure II: Design and Practice*: Fall 2017, Spring 2018, Average enrollment: 50 students

- ITIS 3246: *IT Infrastructure and Security*: Fall 2018, Spring 2019, Fall 2019, Spring 2020, Fall 2020, Spring 2021, Fall 2021, Spring 2022, Average enrollment: 80 students
- ITIS 4010: *Topics in SIS: Competitive Cyber Defense*: Spring 2018, Spring 2019, Average enrollment: 16 students, Note: Starting Spring 2020 this will be ITIS 4246
- ITIS 6010: *Topics in SIS: Competitive Cyber Defense*: Spring 2018, Spring 2019, Average enrollment: 16 students, Note: Starting Spring 2020 this will be ITIS 5246
- ITIS 4246: *Competitive Cyber Defense*: Spring 2020, Spring 2021, Spring 2022, Average enrollment: 45 students
- ITIS 5246: *Competitive Cyber Defense*: Spring 2020, Spring 2021, Spring 2022, Average enrollment: 65 students
- ITIS 6010: *Topics in SIS: Resilient Systems*: Fall 2021, Average enrollment: 8

6 Service and Outreach

6.1 External Service

6.1.1 Invited Talks

1. "Blockchain Introduction". Concord, NC, May 2019
2. "Scalable Cluster Auditing for Resilient Systems". University Park, PA, Sept. 2018
3. "Building Resilient Systems with Secure End-to-End Data Provenance". Ithica, NY, Jan. 2017
4. "Building Resilient Systems with Secure End-to-End Data Provenance". Worcester, MA, Jan. 2017
5. "Building Resilient Systems with Secure End-to-End Data Provenance". Storrs, CT, Oct. 2016
6. "Building Resilient Systems with Secure End-to-End Data Provenance". Lexington, MA, June 2016
7. "Scalable Web Content Attestation". Lexington, MA, Jan. 2011
8. "Building Document Integrity Systems". University Park, PA, Aug. 2011
9. "Scalable Web Content Attestation". University Park, PA, May 2009

6.1.2 Journal Reviewer

Years removed for brevity

- ACM Cloud Computing Security Workshop (CCSW)
- ACM Computer and Communications Security Conference (CCS)
- ACM Symposium on Access Control Models and Technologies (SACMAT)
- ACM Transactions on Internet Technology (TOIT)
- ACM Transactions on Privacy and Security (TOPS)
- Ad Hoc Networks
- Annual Computer Security Applications Conference (ACSAC)
- Computers and Security
- Future Generation Computer Systems (FGCS)
- IEEE Embedded Systems Letters (ESL)

- IEEE International Conference on Computer Communications (INFOCOM)
- IEEE International Symposium on Hardware Oriented Security and Trust (HOST)
- IEEE Security and Privacy Magazine (S&P)
- IEEE Symposium on Security and Privacy (Oakland)
- IEEE Transactions on Big Data (TBD)
- IEEE Transactions on Dependable and Secure Computing (TDSC)
- IEEE Transactions on Software Engineering (TSE)
- International Conference on Information Security and Assurance (ISA)
- International Conference on Information Systems Security (ICISS)
- Journal of Grid Computing (GRID)
- Packt Publishing
- Springer-Verlag Transactions on Computational Science (TCS)
- USENIX Security Symposium (USENIX Security)
- USENIX Workshop on Hot Topics in Security (HotSec)
- Wiley Software Practice and Experience (SPE)
- Workshop on Virtual Machine Security (VMSec)

6.1.3 Organizing Committees

- *2022*: IEEE Secure Development Conference (SecDev, Treasurer), IEEE Symposium on Security and Privacy (Oakland, Treasurer)
- *2021*: IEEE Secure Development Conference (SecDev, Treasurer), IEEE Symposium on Security and Privacy (Oakland, Publications Chair), Provenance Week (General Chair)
- *2020*: IEEE Secure Development Conference (SecDev, Treasurer), IEEE Symposium on Security and Privacy (Oakland, Student PC Chair), Provenance Week (General Chair), Annual Computer Security Applications Conference (ACSAC, Student Conferenceships Chair)
- *2019*: IEEE Symposium on Security and Privacy (Oakland, Student PC Chair), USENIX Workshop on the Theory and Practice of Provenance (TaPP, Co-Chair), Annual Computer Security Applications Conference (ACSAC, Student Conferenceships Chair)
- *2018*: IEEE Symposium on Security and Privacy (Oakland, Treasurer), Annual Computer Security Applications Conference (ACSAC, Poster and WiP Chair)
- *2017*: IEEE Symposium on Security and Privacy (Oakland, Treasurer), Annual Computer Security Applications Conference (ACSAC,Poster and WiP Chair)
- *2016*: Annual Computer Security Applications Conference (ACSAC,Poster and WiP Chair)
- *2015*: Annual Computer Security Applications Conference (ACSAC, Poster and WiP Chair)

6.1.4 Program Committees

- *2022*: USENIX Security
- *2021*: IEEE International Conference on Cyber-Security and Resilience (IEEE CSR), International Conference on Science of Cyber Security (SciSec), IEEE International Conference on Distributed Computing Systems (ICDCS), Premier International Conference for Military Communications (MILCOM)
- *2020*: International Conference on Science of Cyber Security (SciSec), EAI International Conference on Security and Privacy in Communication Networks (SecureComm)
- *2019*: International Conference on Science of Cyber Security (SciSec), Premier International Conference for Military Communications (MILCOM), IEEE Secure Development Conference (SecDev),

- *2018*: Network and Distributed System Security Symposium (NDSS), USENIX Security (Security), International Workshop on Theory and Practice of Provenance (TaPP), International Conference on Science of Cyber Security (SciSec), IEEE Secure Development Conference (SecDev), Premier International Conference for Military Communications (MILCOM)
- *2017*: International Conference on Availability, Reliability and Security (ARES), International Workshop on Theory and Practice of Provenance (TaPP), International Symposium on Stabilization, Safety, and Security of Distributed Systems (SSS), Premier International Conference for Military Communications (MILCOM), IEEE Secure Development Conference (SecDev)
- *2016*: Annual Computer Security Applications Conference (ACSAC), International Conference on Availability, Reliability and Security (ARES), Premier International Conference for Military Communications (MILCOM)
- *2015*: Annual Computer Security Applications Conference (ACSAC), International Conference on Availability, Reliability and Security (ARES), Premier International Conference for Military Communications (MILCOM)
- *2014*: Annual Computer Security Applications Conference (ACSAC), International Conference on Availability, Reliability and Security (ARES)
- *2013*: Annual Computer Security Applications Conference (ACSAC), International Conference on Availability, Reliability and Security (ARES)
- *2012*: Annual Computer Security Applications Conference (ACSAC), International Conference on Availability, Reliability and Security (ARES)

6.1.5 Professional Affiliations/Memberships

- Member, Association for Computing Machinery (ACM)
- Member, ACM Special Interest Group on Security, Audit and Control (SIGSAC)
- Member, Institute of Electrical and Electronics Engineers (IEEE)
- Member, IEEE Computer Society
- Member, USENIX Association