February 14, 2022

Dr. Kevin W. Hamlen

Louis A. Beecherl, Jr. Distinguished Professor
Department of Computer Science
The University of Texas at Dallas

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Educational History:

Ph.D.	2006	Cornell University, NY	Computer Science
M.S.	2002	Cornell University, NY	Computer Science
B.S.	1998	Carnegie Mellon University, PA	Computer Science and Mathematical Sciences

Security Policy Enforcement by Program-rewriting
Ph.D. Dissertation
Computer Science Department, Cornell University
Advisors: Greg Morrisett and Fred B. Schneider

Proof-Carrying Code for x86 Architectures
Senior Undergraduate Honors Thesis
School of Computer Science, Carnegie Mellon University
Advisor: Peter Lee

Employment History:

Cyber Security Research and Education Institute, Executive Director
Department of Computer Science, The University of Texas at Dallas
September 2021 – present

Louis A. Beecherl, Jr. Distinguished Professor
Department of Computer Science, The University of Texas at Dallas
September 2020 – present

Eugene McDermott Professor
Department of Computer Science, The University of Texas at Dallas
September 2018 – present

Research Scientist (zero-hour dual appointment)
Applied Research Laboratories, The University of Texas at Austin
September 2016 – present

Research Consultant (ONR-sponsored project on software security)
Intelligent Automation, Inc.
15400 Calhoun Dr., Suite 190,Rockville MD, 20855
September 2015 – 2018

Associate Professor (with tenure)
Department of Computer Science,The University of Texas at Dallas
September 2012 – 2018

Assistant Professor
Department of Computer Science,The University of Texas at Dallas
August 2006 – 2012

Research and Teaching Assistant
Computer Science Department,Cornell University
September 1998 – August 2006

Research Intern
Microsoft Research, Cambridge, UK
September 2002 – December 2002

Technical Consultant
Microsoft Research, Redmond, WA
June 2001 – August 2001

Professional recognitions and honors:

Louis A. Beecherl, Jr. Faculty Endowment Award, The University of Texas at Dallas, 2020
Best Paper Award, IEEE International Conference on Big Data Security on Cloud, 2020
Eugene McDermott Faculty Endowment Award, The University of Texas at Dallas, 2018
Associate Faculty Outstanding Research Award, Erik Jonsson School of Engineering and Computer
       Science, The University of Texas at Dallas, 2017
Best Dissertation Award, UTD EECS, awarded to supervised PhD student Frederico Araujo
       (winner of 89 competing dissertations), 2017
NSF I/UCRC Technology Breakthrough Award, 2016
NYU-Poly CSAW Best Applied Security Paper of the Year Award, 2nd prize, 2014
Metroplex Technology Business Council Tech Titan Technology Inventor, Finalist (final four),
       2013
Outstanding Teaching Award, Erik Jonsson School of Engineering and Computer Science, The
       University of Texas at Dallas, 2013
Best Student Paper Award, Annual Computer Security Applications Conference (ACSAC), 2012
NYU-Poly AT&T Best Applied Security Paper of the Year Award, 2nd prize, 2012
Junior Faculty Outstanding Research Award, Erik Jonsson School of Engineering and Computer
       Science, The University of Texas at Dallas, 2012

Best Paper Award, IEEE International Conference on Tools with Artificial Intelligence (ICTAI), Special Session on Stream Data Mining, 2011

CAREER Award, National Science Foundation, 2011

Young Investigator Program (YIP) Award, U.S. Air Force Office of Scientific Research, 2008

Ph.D. Fellowship Award, Intel Foundation, 2004

Allen Newell Award for Excellence in Undergraduate Research, Carnegie Mellon University, 1998

Phi Kappa Phi Honor Society, Carnegie Mellon University, 1998

Phi Beta Kappa Honor Society, Carnegie Mellon University, 1998

Graduated *summa cum laude* (3rd in class), Carnegie Mellon University, 1998

Professional memberships:

Institute of Electrical and Electronics Engineers (IEEE), 2010–present
Senior Member

Association of Computing Machinery (ACM), 2008–present
Senior Member

Selected Invited Talks:

Proof, Assurance, and Evidence. **Kevin Hamlen**, Invited Panelist. Trusted Computing Center of Excellence (TCCoE) Summit, virtual event, February 1, 2022.

Kevin Hamlen, Invited Panelist. UT System Chancellor's Council Executive Committee Program on Cybersecurity, Austin, Texas, November 15, 2021.

Strengthening Binary Software Verification with Certified Code Transforms. **Kevin Hamlen**, Invited Speaker. The 3rd seL4 Microkernel Summit, virtual event, November 15, 2020.

Semi-automated Feature-debloating of Binary Software. **Kevin Hamlen**, Invited Speaker. ONR Total Platform Cyber Protection (TPCP) Software Security Summer School (SSSS), virtual event, August 3, 2020.

GAMEPLAY: Hybrid Source+Binary Vulnerability Analysis for C/C++. **Kevin Hamlen**, Principal Investigator. DARPA CHESS Site Visit, Chicago, Illinois, February 19, 2020.

Machine-verifying Raw Native Code from the Bits Up. **Kevin Hamlen**, Invited Speaker. U. Chicago Illinois Software Analysis Colloquium, Chicago, Illinois, February 19, 2020.

Software Securty Research at UTD: Recent Advances and Student Opportunities. **Kevin Hamlen**, Invited Speaker. U. Texas at Dallas Computer Security Group (CSG) Seminar, Richardson, Texas, February 26, 2020.

Bottom-up Formal Validation of Binary-specific Software Properties. **Kevin Hamlen**, Invited Speaker. The seL4 Microkernel Summit, Washington, D.C., September 22, 2019.

FINAL SECOND: Feature Identification, Neutralization, and Automated de-Layering for SEcuring Code ON Demand. **Kevin Hamlen**, Lead Principal Investigator. Office of Naval Research TPCP PI Meeting, Boston, Massachusetts, June 5, 2019.

Toward a Science of Cyber Deception. **Kevin Hamlen**, Invited Keynote Speaker. The 6th Symposium on Hot Topics in the Science of Security (HotSoS), Nashville, Tennessee, April 2, 2019.

Grants awarded:

Proof-driven Refinement of Infrastructure Software Models (PRISM)
PI: **Kevin Hamlen**
Defense Advanced Research Projects Agency (DARPA) / Georgia Tech
04/01/2021–03/31/2025
$550,000

Information and Software Assurance: Dynamic Multi-Layer Multi-Stage Cognition-Inspired Active Cyber Deception
PIs: **Kevin Hamlen** and Latifur Khan
Army Research Office (ARO)
12/15/2020–12/14/2023
$600,000

STTR Phase II: *High Assurance Information Segregation Solution (HAISS) for Real-time Embedded Systems*
PI: **Kevin Hamlen**
Air Force (USAF) / Trusted Science & Technology, Inc.
10/15/2020–09/30/2022
$175,000

STTR: *language Mechanisms and tOols for Run-TIme Memory AccEss policy EnfoRcement (MOR-TIMER)*
PI: **Kevin Hamlen**
Defense Advanced Research Projects Agency (DARPA) / Intelligent Automation, Inc.
09/16/2020–03/25/2021
$75,000

Extending Assurance of kernel Software to the Instruction Level (EASIL)
PI: **Kevin Hamlen**
Defense Advanced Research Projects Agency (DARPA) / Siege Technologies
08/01/2020–10/01/2021
$180,000

Formal Security Evaluation of Executing Untrusted Binaries on Embedded Processors
PIs: **Kevin Hamlen** and Georgios Makris
National Science Foundation (NSF) Industry/University Collaborative Research Center (I/UCRC) for Hardware and Embedded Systems Security and Trust (CHEST)
06/01/2020–05/31/2021
$50,000

SBIR: *Highly Assured Self Organizing Trusted Computing Base (HASO-TCB)*
PI: **Kevin Hamlen**
Defense Advanced Research Projects Agency (DARPA) / Trusted Science & Technology
03/20/2020–03/19/2022
$50,000

Highly Assured and Defended Embedded Systems (HADES)
PI: **Kevin Hamlen**
Air Force (AFRL) / Siege Technologies
02/01/2020–01/31/2022
$180,000

Binary Software Security Hardening
PI: **Kevin Hamlen**
Lockheed Martin
01/01/2020–12/31/2021
$80,000

STTR: *High Assurance Information Segregation Solution (HAISS) for Real-time Embedded Systems*
PI: **Kevin Hamlen**
Air Force (USAF) / Trusted Science & Technology, Inc.
09/01/2019–05/31/2020
$50,000

Adaptive Defense Against Stealthy Resource-intensive DoS Attacks
PI: Shuang Hao; Co-PI: **Kevin Hamlen**; Senior Personnel: Latifur Khan
Office of Naval Research (ONR)
09/01/2019–08/31/2021
$200,000

Bottom-up Formal Methods Validation of Secure Microkernel Software Components
PI: **Kevin Hamlen**
Air Force Office of Scientific Research (AFOSR)
01/01/2019–12/31/2019
$70,000

GAMEPLAY: Graph Analysis for Mechanized Exploit Generation and Patching Leveraging Human Assistance for Improved Yield
PI: **Kevin Hamlen**
Defense Advanced Research Projects Agency (DARPA)
01/23/2019–07/23/2022
$3,000,000 total ($824,000 for UTD)

ARM Binary Software Security Hardening
PI: **Kevin Hamlen**
Lockheed Martin
01/25/2018–09/01/2019
$70,000

FINAL SECOND: Feature Identification, Neutralization, and Automated de-Layering for SEcuring Code ON Demand
PI: **Kevin Hamlen**; Co-PI: Zhiqiang Lin
Office of Naval Research (ONR)
10/01/2017–09/30/2020
$1,700,000

Second Workshop on Forming an Ecosystem Around Software Transformation
PI: **Kevin Hamlen**
Office of Naval Research (ONR)
04/24/2017
$5,000

Deception-enabled Interactive Software for Active Cyber Defense
PI: **Kevin Hamlen**; Co-PIs: Latifur Khan and Zhiqiang Lin
National Security Agency (NSA)
09/01/2015–08/31/2016

TWC: TTP Option: Medium: Collaborative Research: *ENCORE: ENhanced program protection through COmpiler-REwriter cooperation*
PI: **Kevin Hamlen**
National Science Foundation (NSF)
07/01/2015–06/30/2018
$1,200,000 total ($177,000 for UTD)

UTD SFS Renewal: Growing a Cybersecurity Community through SFS Scholarship Program at UTD
PI: Kamil Sarac; Co-PIs: **Kevin Hamlen**, Alvaro Cardenas, Zhiqiang Lin, and Bhavani Thuraisingham
National Science Foundation (NSF)
09/01/2014–08/31/2019
$3,950,000

Automated, Binary Evidence-based Attribution of Software Attacks
PI: **Kevin Hamlen**; Co-PIs: Latifur Khan and Zhiqiang Lin
Air Force Office of Scientific Research (AFOSR)
07/01/2014–06/30/2018
$613,000

Binary Retrofitting of Untrusted Software Components for Secure Software Complexity Reduction
PI: **Kevin Hamlen**
Office of Naval Research (ONR)
11/01/2013–10/31/2016
$593,000

Metamorphic Extensions to Frankenstein Malware for Defensive Testing
PI: **Kevin Hamlen**; Co-PIs: Latifur Khan and Zhiqiang Lin
Raytheon Company
08/12/2013–08/11/2016
$105,000

MRI: *Development of an Instrument for Assured Cloud Computing*
PI: Latifur Khan; Co-PIs: **Kevin Hamlen** and Murat Kantarcioglu
National Science Foundation (NSF)
10/01/2012–09/30/2015
$300,000

TWC: Medium: Collaborative Research: *Policy Compliant Integration of Linked Data*
PI: Murat Kantarcioglu; Co-PIs: **Kevin Hamlen** and Latifur Khan
National Science Foundation (NSF)
09/01/2012–08/31/2015
$1,200,000 total ($400,000 for UTD)

Semantic Approach to Behavior-based IDS and its Applications
PI: Bhavani Thuraisingham; Co-PIs: Latifur Khan, Zhiqiang Lin, and **Kevin Hamlen**
Air Force Office of Scientific Research (AFOSR)
04/01/2012–03/31/2016
$2,200,000 total ($966,000 for UTD)

TC: Medium: Collaborative Research: *Securing Web Advertisements: Fixing the Short-term Crisis and Addressing Long-term Challenges*
PI: **Kevin Hamlen**
National Science Foundation (NSF)
09/01/2011–09/30/2016
$1,200,000 total ($527,000 for UTD)

DUE: *Capacity Building for Assured Cloud Computing*
PI: Bhavani Thuraisingham; Co-PIs: Latifur Khan, Kamil Sarac, Murat Kantarcioglu, and **Kevin Hamlen**
National Science Foundation (NSF)
09/15/2011–08/31/2014
$265,000

CAREER: *Language-based Security for Polymorphic Malware Protection*
PI: **Kevin Hamlen**
National Science Foundation (NSF)
08/01/2011–07/31/2017
$504,000

Adaptive Malware Detection over Evolving Malwares: Attacks and Defenses
PI: Latifur Khan; Co-PIs: **Kevin Hamlen** and Bhavani Thuraisingham
Army
08/01/2011–09/30/2012
$350,000

Federal Cyber Service: *Scholarship for Service Program at UTD*
PI: Kamil Sarac; Co-PIs: **Kevin Hamlen**, Murat Kantarcioglu, Edwin Sha, and Bhavani Thuraisingham
National Science Foundation (NSF)
09/01/2010–08/31/2014
$1,700,000

Reactively Adaptive Malware: Attacks and Defenses
PI: **Kevin Hamlen**; Co-PI: Latifur Khan
Air Force Office of Scientific Research (AFOSR)
03/01/2010–02/28/2014
$450,000

EAGER: *Secure Peer-to-peer Data Management*
PI: **Kevin Hamlen**; Co-PI: Bhavani Thuraisingham
National Science Foundation (NSF)
09/15/2009–08/31/2011
$80,000

IASP: *Information Assurance Education at UTD*
PI: **Kevin Hamlen**
Department of Defense (DoD)
09/01/2008–08/31/2009
$42,000

YIP: *Automated, Certified Program-rewriting for Software Security Enforcement*
PI: **Kevin Hamlen**
Air Force Office of Scientific Research (AFOSR)
01/01/2008–11/30/2011
$280,000

Achievements in Original Investigation:

Summary Statistics:

- 95 peer-reviewed publications
- 16 publications in tier-1 venues (e.g., ACM CCS, NDSS, USENIX Security, ACM TOPLAS, IEEE TDSC, etc.)
- 6 award-winning publications
- 41 publications in venues with ≤25% acceptance rate (of 67 venues with known rates)
- 30 publications with ≥30 citations (Google Scholar)
- >3800 total citations (Google Scholar)

Works most cited — citations vs. papers (ranked by citation count)
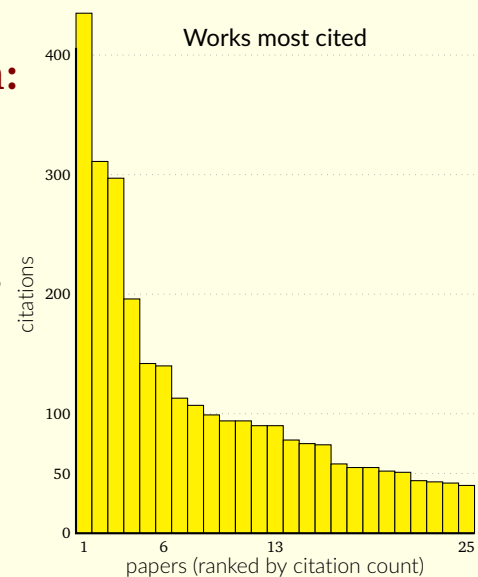
Refereed conference & workshop publications:

Frederico Araujo, Sailik Sengupta, Jiyong Jang, Adam Doupé, **Kevin W. Hamlen**, and Subbarao Kambhampati. Software Deception Steering through Version Emulation. In *Proceedings of the 54th Hawaii International Conference on System Sciences (HICSS)*, pp. 1988–1997. January 2021. [acceptance rate: 47%]

Xiaoyu He, Erick Bauman, Feng Li, Lei Yu, Linyu Li, Bingchang Liu, Aihua Piao, **Kevin W. Hamlen**, Wei Huo, and Wei Zou. Exploiting the Trust Between Boundaries: Discovering Memory Corruptions in Printers via Driver-Assisted Testing. In *Proceedings of the 21st ACM SIGPLAN/SIGBED International Conference on Languages, Compilers, and Tools for Embedded Systems (LCTES)*, pp. 74–84. London, UK. June 2020. [acceptance rate: 28%]

Zhuoyi Wang, Yigong Wang, Bo Dong, Sahoo Pracheta, **Kevin Hamlen**, and Latifur Khan. Adaptive Margin Based Deep Adversarial Metric Learning. In *Proceedings of the 6th IEEE International Conference on Big Data Security on Cloud (BigDataSecurity)*. Baltimore, Maryland. May 2020. [acceptance rate: 18.8%] [Best Paper Award]

Gbadebo Ayoade, Frederico Araujo, Khaled Al-Naami, Ahmad M. Mustafa, Yang Gao, **Kevin W. Hamlen**, and Latifur Khan. Automating Cyberdeception Evaluation with Deep Learning. In *Proceedings of the 53rd Hawaii International Conference on System Sciences (HICSS)*. Wailea, Maui. January 2020. [acceptance rate: 48%]

Frederico Araujo, Gbadebo Ayoade, Khaled Al-Naami, Yang Gao, **Kevin W. Hamlen**, and Latifur Khan. Improving Intrusion Detectors by Crook-sourcing. In *Proceedings of the 35th Annual Computer Security Applications Conference (ACSAC)*, pp. 245–256. San Juan, Puerto Rico. December 2019. [acceptance rate: 22.6%]

Masoud Ghaffarinia and **Kevin W. Hamlen**. Binary Control-flow Trimming. In *Proceedings of the 26th ACM Conference on Computer and Communications Security (CCS)*, pp. 1009–1022. London, UK. November 2019. [acceptance rate: 16%]

Kevin W. Hamlen, Dakota Fisher, and Gilmore R. Lundquist. Source-free Machine-checked Validation of Native Code in Coq. In *Proceedings of the 4th Workshop on Forming an Ecosystem Around Software Transformation (FEAST)*. London, UK. November 2019. [acceptance rate: 88%]

Gilmore R. Lundquist, Utsav Bhatt, and **Kevin W. Hamlen**. Relational Processing for Fun and Diversity: Simulating a CPU Relationally with miniKanren. In *Proceedings of the 1st miniKanren and Relational Programming Workshop*, pp. 100–114. Berlin, Germany. August 2019.

Xiaoyang Xu, Masoud Ghaffarinia, Wenhao Wang, **Kevin W. Hamlen**, and Zhiqiang Lin. ConFIRM: Evaluating Compatibility and Relevance of Control-flow Integrity Protections for Modern Software. In *Proceedings of the 28th USENIX Security Symposium*, pp. 1805–1821. Santa Clara, CA. August 2019. [acceptance rate: 16%]

Gbadebo Ayoade, Erick Bauman, Latifur Khan, and **Kevin W. Hamlen**. Smart Contract Defense Through Bytecode Rewriting. In *Proceedings of the IEEE International Conference on Recent Advances on Blockchain and its Applications (ICBC)*, pp. 384–389. Atlanta, GA. July 2019. [acceptance rate: 19.6%]

Jun Duan, **Kevin W. Hamlen**, and Benjamin Ferrell. Better Late Than Never: An *n*-Variant Framework of Verification for Java Source Code on CPU×GPU Hybrid Platform. In *Proceedings of the 28th ACM International Symposium on High-performance Parallel and Distributed Computing (HPDC)*, pp. 207–218. Phoenix, AZ. June 2019. [acceptance rate: 20.7%]

Benjamin Ferrell, Jun Duan, and **Kevin W. Hamlen**. CUDA au Coq: A Framework for Machine-validating GPU Assembly Programs. In *Proceedings of the 26th Design, Automation & Test in Europe Conference & Exhibition (DATE)*, pp. 474–479. Florence, Italy. March 2019. [acceptance rate: 24%]

Gbadebo Ayoade, Swarup Chandra, Latifur Khan, **Kevin W. Hamlen**, and Bhavani M. Thuraisingham. Automated Threat Report Classification Over Multi-source Data. In *Proceedings of the 4th IEEE International Conference on Collaboration and Internet Computing (CIC)*, pp. 236–245. Philadelphia, PA. October 2018. [acceptance rate: 27%]

Xiaoyang Xu, Wenhao Wang, **Kevin W. Hamlen**, and Zhiqiang Lin. Towards Interface-driven COTS Binary Hardening. In *Proceedings of the 3rd Workshop on Forming an Ecosystem Around Software Transformation (FEAST)*. Toronto, Canada. October 2018.

Wenhao Wang, Benjamin Ferrell, Xiaoyang Xu, **Kevin W. Hamlen**, and Shuang Hao. SEISMIC: SEcure In-lined Script Monitors for Interrupting Cryptojacks. In *Proceedings of the 23rd European Symposium on Research in Computer Security (ESORICS)*, pp. 122–142. Barcelona, Spain. September 2018. [acceptance rate: 20%] #18

Gbadebo Ayoade, Vishal Karande, **Kevin Hamlen**, and Latifur Khan. Decentralized IoT Data Management Using BlockChain and Trusted Execution Environment. In *Proceedings of the 19th IEEE International Conference on Information Reuse and Integration for Data Science (IRI)*, pp. 15–22. Salt Lake City, Utah. July 2018. [acceptance rate: 23.65%] #10

Meera Sridhar, Abhinav Mohanty, Fadi Yilmaz, Vasant Tendulkar, and **Kevin W. Hamlen**. Inscription: Thwarting ActionScript Web Attacks From Within. In *Proceedings of the 17th IEEE International Conference on Trust, Security and Privacy in Computing and Communications (TrustCom)*. New York, New York. July 2018. [acceptance rate: 30%]

Vishal Karande, Swarup Chandra, Zhiqiang Lin, Juan Caballero, Latifur Khan, and **Kevin W. Hamlen**. BCD: Decomposing Binary Code Into Components Using Graph-based Clustering. In *Proceedings of the 13th Asia Conference on Computer and Communications Security (AsiaCCS)*, pp. 393–398. Incheon, S. Korea. June 2018. [acceptance rate: 20%]

Bahman Rashidi, Carol J. Fung, **Kevin W. Hamlen**, and Andrzej Kamisinski. HoneyV: A Virtualized Honeynet System Based on Network Softwarization. In *Proceedings of the 14th IEEE/IFIP Network Operations and Management Symposium (NOMS)*, pp. 504–515. Taipei, Taiwan. April 2018. [acceptance rate: 29.6%]

Erick Bauman, Zhiqiang Lin, and **Kevin W. Hamlen**. Superset Disassembly: Statically Rewriting x86 Binaries Without Heuristics. In *Proceedings of the 25th Network and Distributed System Security Symposium (NDSS)*. San Diego, California. February 2018. [acceptance rate: 21%] #15

Ahmad M. Mustafa, Gbadebo Ayoade, Khaled Al-Nami, Latiur Khan, **Kevin W. Hamlen**, Bhavani Thuraisingham, and Frederico Araujo. Unsupervised Deep Embedding for Novel Class Detection Over Data Stream. In *Proceedings of the 5th IEEE International Conference on Big Data (BigData): Special Session on Information Granulation in Data Science and Scalable Computing*. Boston, Massachusetts. December 2017. [acceptance rate: 17%]

Ahsanul Haque, Zhuoyi Wang, Swarup Chandra, Bo Dong, Latifur Khan, and **Kevin W. Hamlen**. FUSION: An Online Method for Multistream Classification. In *Proceedings of the 26th ACM Conference on Information and Knowledge Management (CIKM)*, pp. 919–928. Pan Pacific, Singapore. November 2017. [acceptance rate: 21%]

Wenhao Wang, Xiaoyang Xu, and **Kevin W. Hamlen**. Object Flow Integrity. In *Proceedings of the 24th ACM Conference on Computer and Communications Security (CCS)*, pp. 1909–1924. Dallas, Texas. November 2017. [acceptance rate: 18%]

Jun Duan, Kang Zhang, and **Kevin W. Hamlen**. VisualVital: An Observation Model for Multiple Sections of Scenes. In *Proceedings of the 14th IEEE International Conference on Ubiquitous Intelligence and Computing (UIC)*. San Francisco, California. August 2017. [acceptance rate: 32%]

Ahsanul Haque, Swarup Chandra, Latifur Khan, **Kevin Hamlen**, and Charu Aggarwal. Efficient Multistream Classification Using Direct Density Ratio Estimation. In *Proceedings of the 33rd IEEE International Conference on Data Engineering (ICDE)*, pp. 155–158. San Diega, California. April 2017. [acceptance rate: 28.9%]

Khaled Al-Naami, Swarup Chandra, Ahmad M. Mustafa, Latifur Khan, Zhiqiang Lin, **Kevin W. Hamlen**, and Bhavani M. Thuraisingham. Adaptive Encrypted Traffic Fingerprinting with Bi-directional Dependence. In *Proceedings of the 32nd Annual Conference on Computer Security Applications (ACSAC)*, pp. 177–188. Los Angeles, California. December 2016. [acceptance rate: 22.8%]   #25

Masoud Ghaffarinia and **Kevin W. Hamlen**. Binary Software Complexity Reduction: From Artifact- to Feature-removal. In *Proceedings of the 1st Workshop on Forming an Ecosystem Around Software Transformation (FEAST)*. Vienna, Austria. October 2016.

Gilmore R. Lundquist, Vishwath Mohan, and **Kevin W. Hamlen**. Searching for Software Diversity: Attaining Artificial Diversity Through Program Synthesis. In *Proceedings of the 24th New Security Paradigms Workshop (NSPW)*. C Lazy U Ranch, Colorado. September 2016. [acceptance rate: 46%]

Bhavani Thuraisingham, Murat Kantarcioglu, **Kevin Hamlen**, Latifur Khan, Tim Finin, Anupam Joshi, Tim Oates, and Elisa Bertino. A Data Driven Approach for the Science of Cyber Security: Challenges and Directions. In *Proceedings of the IEEE 17th Conference on Information Reuse and Integration (IRI)*, pp. 177–188. Pittsburgh, Pennsylvania. July 2016. [acceptance rate: 25.6%]

Meera Sridhar, Abhinav Mohanty, Vasant Tendulkar, Fadi Yilmaz, and **Kevin W. Hamlen**. In a Flash: An In-lined Monitoring Approach to Flash App Security. In *the 12th Workshop on Foundations of Computer Security (FCS)*. Lisbon, Portugal. June 2016. [acceptance rate: 75%]

Frederico Araujo and **Kevin W. Hamlen**. Compiler-instrumented, Dynamic Secret-redaction of Legacy Processes for Attacker Deception. In *Proceedings of the 24th USENIX Security Symposium*, pp. 145–159. Washington, D.C. August 2015. [acceptance rate: 15.7%]

Frederico Araujo, Mohammad Shapouri, Sonakshi Pandey, and **Kevin W. Hamlen**. Experiences with Honey-patching in Active Cyber Security Education. In *Proceedings of the 8th Workshop on Cyber Security Experimentation and Test (CSET)*. Washington, D.C. August 2015. [acceptance rate: 26.7%]

Vishwath Mohan, Per Larsen, Stefan Brunthaler, **Kevin W. Hamlen**, and Michael Franz. Opaque Control-flow Integrity. In *Proceedings of the 22nd Network and Distributed System Security Symposium (NDSS)*. San Diego, California. February 2015. [acceptance rate: 16.9%] [NSF IUCRC Technology Breakthrough Award]   #4

Frederico Araujo, **Kevin W. Hamlen**, Sebastian Biedermann, and Stefan Katzenbeisser. From Patches to Honey-Patches: Lightweight Attacker Misdirection, Deception, and Disinformation. In *Proceedings of the 21st ACM Conference on Computer and Communications Security (CCS)*, pp. 942–953. Scottsdale, Arizona. November 2014. [acceptance rate: 19.5%] [NYU-Poly CSAW Best Applied Security Paper of the Year, 2nd prize, 2014]   #8

Huseyin Ulusoy, Murat Kantarcioglu, Erman Pattuk, and **Kevin W. Hamlen**. Vigiles: Fine-grained ⊙#21 Access Control for MapReduce Systems. In *Proceedings of the 2nd IEEE International Congress on Big Data (BigData)*, pp. 40–47. Anchorage, Alaska. June 2014. [acceptance rate: 19%]

Richard Wartell, Yan Zhou, **Kevin W. Hamlen**, and Murat Kantarcioglu. Shingled Graph Disassembly: Finding the Undecidable Path. In *Proceedings of the 18th Pacific-asia Conference on Knowledge Discovery and Data Mining (PAKDD)*, pp. 273–285. Tainan, Taiwan. May 2014. [acceptance rate: 16.4%]

Safwan Mahmud Khan, **Kevin W. Hamlen**, and Murat Kantarcioglu. Silver Lining: Enforcing Secure Information Flow at the Cloud Edge. In *Proceedings of the 2nd IEEE Conference on Cloud Engineering (IC2E)*, pp. 37–46. Boston, Massachusetts. March 2014. [acceptance rate: 18.4%]

Yangchun Fu, Zhiqiang Lin, and **Kevin W. Hamlen**. Subverting System Authentication with Context-Aware, Reactive Virtual Machine Introspection. In *Proceedings of the 29th Annual Computer Security Applications Conference (ACSAC)*, pp. 229–238. New Orleans, Louisiana. December 2013. [acceptance rate: 19.8%]

Richard Wartell, Yan Zhou, **Kevin W. Hamlen**, and Murat Kantarcioglu. Shingled Graph Disassembly: Finding the Undecidable Path. In *Proceedings of the 16th International Symposium on Research in Attacks, Intrusions and Defenses (RAID)*, pp. 460–462. Saint Lucia. October 2013.

Kevin W. Hamlen. Stealthy Software: Next-generation Cyber-attacks and Defenses, Invited Paper. In *Proceedings of the 11th IEEE Intelligence and Security Informatics Conference (ISI)*, pp. 109–112. Seattle, Washington. June 2013.

Daniel Krawczyk, James Bartlett, Murat Kantarcioglu, **Kevin Hamlen**, and Bhavani Thuraisingham. Measuring Expertise and Bias in Cyber Security Using Cognitive and Neuroscience Approaches. In *Proceedings of the 11th IEEE Intelligence and Security Informatics Conference (ISI)*, pp. 364–367. Seattle, Washington. June 2013.

Safwan M. Khan and **Kevin W. Hamlen**. Computation Certification as a Service in the Cloud. In *Proceedings of the 13th IEEE/ACM International Symposium on Cluster, Cloud and Grid Computing (CCGrid)*, pp. 434–441. Delft, The Netherlands. May 2013. [acceptance rate: 22.18%]

Richard Wartell, Vishwath Mohan, **Kevin W. Hamlen**, and Zhiqiang Lin. Securing Untrusted ⊙#12 Code Via Compiler-agnostic Binary Rewriting. In *Proceedings of the 28th Annual Computer Security Applications Conference (ACSAC)*, pp. 299–308. Orlando, Florida. December 2012. [acceptance rate: 19%] [Best Student Paper Award]

Richard Wartell, Vishwath Mohan, **Kevin W. Hamlen**, and Zhiqiang Lin. Binary Stirring: Self- ⊙#1 randomizing Instruction Addresses of Legacy x86 Binary Code. In *Proceedings of the 19th ACM Conference on Computer and Communications Security (CCS)*, pp. 157–168. Raleigh, North Carolina. October 2012. [acceptance rate: 19%] [NYU-Poly AT&T Best Applied Security Paper of the Year, 2nd prize, 2012]

Vishwath Mohan and **Kevin W. Hamlen**. Frankenstein: Stitching Malware From Benign Binaries. ⊙#22 In *Proceedings of the 6th USENIX Workshop on Offensive Technologies (WOOT)*, pp. 77–84. Bellevue, Washington. August 2012. [acceptance rate: 40%]

Safwan M. Khan and **Kevin W. Hamlen**. AnonymousCloud: A Data Ownership Privacy Provider (#17) Framework in Cloud Computing. In *Proceedings of the 11th IEEE International Conference on Trust, Security and Privacy in Computing and Communications (TrustCom)*, pp. 170–176. Liverpool, UK. June 2012. [acceptance rate: <30%]

Safwan M. Khan and **Kevin W. Hamlen**. Hatman: Intra-cloud Trust Management for Hadoop. In (#13) *Proceedings of the 5th IEEE International Conference on Cloud Computing (CLOUD)*, pp. 494–501. Honolulu, Hawaii. June 2012. [acceptance rate: 19%]

Bhavani Thuraisingham, Vaibhav Khadilkar, Jyothsna Rachapalli, Tyrone Cadenhead, Murat Kantarcioglu, **Kevin Hamlen**, Latifur Khan, and Farhan Husain. Cloud-centric Assured Information Sharing. In *Proceedings of the 7th Pacific Asia Workshop on Intelligence and Security Informatics (PAISI)*. Ed. by Michael Chau, G. Alan Wang, Wei Thoo Yue, and Hsinchun Chen, pp. 1–26. Kuala Lumpur, Malaysia. May 2012.

Kevin W. Hamlen, Micah M. Jones, and Meera Sridhar. Aspect-oriented Runtime Monitor Certification. In *Proceedings of the 18th International Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS)*, pp. 126–140. Tallinn, Estonia. March–April 2012. [acceptance rate: 24%]

Pallabi Parveen, Zackary R. Weger, Bhavani Thuraisingham, **Kevin W. Hamlen**, and Latifur Khan. (#20) Supervised Learning for Insider Threat Detection Using Stream Mining. In *Proceedings of the 23rd IEEE International Conference on Tools with Artificial Intelligence (ICTAI)*, pp. 1032–1039. Boca Raton, Florida. November 2011. [acceptance rate: 30%] [Best Paper Award, Special Session on Stream Data Mining]

Kevin Hamlen, Peng Liu, Murat Kantarcioglu, Bhavani Thuraisingham, and Ting Yu. Identity Management for Cloud Computing: Developments and Directions. In *Proceedings of the 7th Annual Cyber Security and Information Intelligence Research Workshop (CSIIRW)*. Oak Ridge, Tennessee. October 2011. [acceptance rate: 52%]

Pallabi Parveen, Jonathan Evans, Bhavani Thuraisingham, **Kevin W. Hamlen**, and Latifur Khan. (#14) Insider Threat Detection Using Stream Mining and Graph Mining. In *Proceedings of the 3rd IEEE Conference on Privacy, Security, Risk and Trust (PASSAT)*, pp. 1102–1110. Boston, Massachusetts. October 2011. [acceptance rate: 8%]

Micah Jones and **Kevin W. Hamlen**. A Service-oriented Approach to Mobile Code Security. In *Proceedings of the 8th International Conference on Mobile Web Information Systems (MobiWIS)*. Ed. by Elhadi Shakshuki and Muhammad Younas, pp. 531–538. Niagara Falls, Ontario. September 2011. [acceptance rate: 36%]

Richard Wartell, Yan Zhou, **Kevin W. Hamlen**, Murat Kantarcioglu, and Bhavani Thuraisingham. (#9) Differentiating Code From Data in x86 Binaries. In *Proceedings of the European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML PKDD)*. Ed. by Dimitrios Gunopulos, Thomas Hofmann, Donato Malerba, and Michalis Vazirgiannis. Vol. 3, pp. 522–536. Athens, Greece. September 2011. [acceptance rate: 20%]

Meera Sridhar and **Kevin W. Hamlen**. Flexible In-lined Reference Monitor Certification: Challenges and Future Directions. In *Proceedings of the 5th ACM SIGPLAN Workshop on Programming Languages Meets Program Verification (PLPV)*. Ed. by Ranjit Jhala and Wouter Swierstra, pp. 55–60. Austin, Texas. January 2011. [acceptance rate: 60%]

Arindam Khaled, Mohammad Farhan Husain, Latifur Khan, **Kevin W. Hamlen**, and Bhavani Thuraisingham. A Token-based Access Control System for RDF Data in the Clouds. In *Proceedings of the 2nd IEEE International Conference on Cloud Computing Technology and Science (CloudCom)*, pp. 104–111. Indianapolis, Indiana. November–December 2010. [acceptance rate: <25%]

Aditi Patwardhan, **Kevin W. Hamlen**, and Kendra Cooper. Towards Security-aware Program Visualization for Analyzing In-lined Reference Monitors. In *Proceedings of the International Workshop on Visual Languages and Computing (VLC)*, pp. 257–260. Oak Brook, Illinois. October 2010. [acceptance rate: 36.5%]

Bhavani Thuraisingham and **Kevin W. Hamlen**. Challenges and Future Directions of Software Technology: Secure Software Development, Invited Paper. In *Proceedings of the 34th IEEE Annual International Computer Security and Applications Conference (COMPSAC)*. Ed. by Seikh Iqbal Ahamed, Doo-Hwan Bae, Sung Deok Cha, Carl K. Chang, Rajesh Subramanyan, Eric Wong, and Hen-I Yang, pp. 17–20. Seoul, Korea. July 2010.

Bhavani Thuraisingham and **Kevin W. Hamlen**. Secure Semantic Sensor Web and Pervasive Computing. In *Proceedings of the IEEE International Conference on Sensor Networks, Ubiquitous, and Trustworthy Computing (SUTC)*, pp. 5–10. Newport Beach, California. June 2010. [acceptance rate: 25%]

Micah Jones and **Kevin W. Hamlen**. Disambiguating Aspect-oriented Security Policies. In *Proceedings of the 9th International Conference on Aspect-oriented Software Development (AOSD)*. Ed. by Jean-Marc Jézéquel and Mario Südholt, pp. 193–204. Rennes, France. March 2010. [acceptance rate: 22%]

Meera Sridhar and **Kevin W. Hamlen**. ActionScript In-lined Reference Monitoring in Prolog. In *Proceedings of the 12th International Symposium on Practical Aspects of Declarative Languages (PADL)*. Ed. by Manuel Carro and Ricardo Peña, pp. 149–151. Madrid, Spain. January 2010. [acceptance rate: 37.9%]

Meera Sridhar and **Kevin W. Hamlen**. Model-checking In-lined Reference Monitors. In *Proceedings of the 11th International Conference on Verification, Model Checking, and Abstract Interpretation (VMCAI)*. Ed. by Gilles Barthe and Manuel V. Hermenegildo, pp. 312–327. Madrid, Spain. January 2010. [acceptance rate: 36.8%]   (#24)

Brian W. DeVries, Gopal Gupta, **Kevin W. Hamlen**, Scott Moore, and Meera Sridhar. ActionScript Bytecode Verification with Co-logic Programming. In *Proceedings of the 4th ACM SIGPLAN Workshop on Programming Languages and Analysis for Security (PLAS)*. Ed. by Stephen Chong and David A. Naumann, pp. 9–15. Dublin, Ireland. June 2009. [acceptance rate: 42%]

Micah Jones and **Kevin W. Hamlen**. Enforcing IRM Security Policies: Two Case Studies. In *Proceedings of the 7th IEEE Intelligence and Security Informatics Conference (ISI)*, pp. 214–216. Dallas, Texas. June 2009.

Bhavani Thuraisingham, Latifur Khan, Mohammed M. Masud, and **Kevin W. Hamlen**. Data Mining for Security Applications. In *Proceedings of the 6th IEEE/IFIP International Conference on Embedded and Ubiquitous Computing (EUC)*. Ed. by Cheng-Zhong Xu and Minyi Guo, pp. 585–589. Shanghai, China. December 2008. [acceptance rate: 30%]   (#19)

Mohammed M. Masud, Tahseen Al-khateeb, Latifur Khan, Bhavani Thuraisingham, and **Kevin** (#5)
W. Hamlen**. Flow-based Identification of Botnet Traffic By Mining Multipe Log Files. In
Proceedings of the International Conference on Distributed Frameworks & Applications (DFmA),
pp. 200–206. Penang, Malaysia. October 2008.

Kevin W. Hamlen and Micah Jones. Aspect-oriented In-lined Reference Monitors. In *Proceedings* (#11)
*of the 3rd ACM SIGPLAN Workshop on Programming Languages and Analysis for Security
(PLAS)*. Ed. by Úlfar Erlingsson and Marco Pistoia, pp. 11–20. Tucson, Arizona. June 2008.
[acceptance rate: 54%]

Nathalie Tsybulnik, **Kevin W. Hamlen**, and Bhavani Thuraisingham. Centralized Security
Labels in Decentralized P2P Networks. In *Proceedings of the 23rd Annual Computer Security
Applications Conference (ACSAC)*, pp. 315–324. Miami Beach, Florida. December 2007.
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Kevin W. Hamlen and Bhavani Thuraisingham. Secure Peer-to-peer Networks for Trusted
Collaboration, Invited Paper. In *Proceedings of the 3rd IEEE International Conference on
Collaborative Computing: Networking, Applications and Worksharing (COLCOM)*, pp. 58–63.
White Plains, New York. November 2007.

Kevin W. Hamlen, Greg Morrisett, and Fred B. Schneider. Certified In-lined Reference Monitoring (#7)
on .NET. In *Proceedings of the 1st ACM SIGPLAN Workshop on Programming Languages and
Analysis for Security (PLAS)*. Ed. by Vugranam C. Sreedhar and Steve Zdancewic, pp. 7–16.
Ottawa, Ontario. June 2006. [acceptance rate: 56%]

Articles in refereed journals:

Frederico Araujo, Gbadebo Ayoade, Khaled Al-Naami, Yang Gao, **Kevin W. Hamlen**, and Latifur
Khan. Crook-sourced Intrusion Detection as a Service. *Journal of Information Security and
Applications (JISA)*, 61. September 2021.

Fadi Yilmaz, Meera Sridhar, Abhinav Mohanty, Vasant Tendulkar, and **Kevin W. Hamlen**. A Fine-
grained Classification and Security Analysis of Web-based Virtual Machine Vulnerabilities.
Computers & Security, 105. June 2021.

Khaled Al-Naami, Amir El-Ghamry, Md Shihabul Islam, Latifur Khan, Bhavani M. Thuraisingham,
Kevin W. Hamlen, Mohammed AlRahmawy, and Magdi Z. Rashad. BiMorphing: A Bi-
directional Bursting Defense Against Website Fingerprinting Attacks. *IEEE Transactions on
Dependable and Secure Computing (TDSC)*, 18(2):505–517. April 2021.

Meera Sridhar, Mounica Chirva, Benjamin Ferrell, Dhiraj Karamchandani, and **Kevin W. Hamlen**.
Flash in the Dark: Illuminating the Landscape of ActionScript Web Security Trends and
Threats. *Journal of Information Systems Security (JISSec)*, 13(2):59–96. December 2017.

Phu H. Phung, Maliheh Monshizadeh, Meera Sridhar, **Kevin W. Hamlen**, and V.N. Venkatakrish-
nan. Between Worlds: Securing Mixed JavaScript/ActionScript Multi-party Web Content.
IEEE Transactions on Dependable and Secure Computing (TDSC), 12(4):443–457. July–August
2015.

Meera Sridhar, Richard Wartell, and **Kevin W. Hamlen**. Hippocratic Binary Instrumentation:
First Do No Harm. *Science of Computer Programming (SCP), Special Issue on Invariant
Generation*, 93(B):110–124. November 2014.

Safwan Mahmud Khan and **Kevin W. Hamlen**. Penny: Secure, Decentralized Data Management. *International Journal of Network Security (IJNS)*, 16(5):340–354. September 2014.

Pallabi Parveen, Nathan McDaniel, Zackary Weger, Jonathan Evans, Bhavani Thuraisingham, **Kevin Hamlen**, and Latifur Khan. Evolving Insider Threat Detection Stream Mining Perspective. *International Journal on Artificial Intelligence Tools (IJAIT)*, 22(5):1360013. August 2013.

Kevin W. Hamlen and Bhavani M. Thuraisingham. Data Security Services, Solutions and Standards for Outsourcing. *Computer Standards & Interfaces*, 35(1):1–5. January 2013.

Kevin W. Hamlen, Lalana Kagal, and Murat Kantarcioglu. Policy Enforcement Framework for Cloud Data Management. *IEEE Data Engineering Bulletin (DEB), Special Issue on Security and Privacy in Cloud Computing*, 35(4):39–45. Ed. by David B. Lomet and Sharad Mehrotra. December 2012.

William Hamlen and **Kevin Hamlen**. An Interactive Computer Model of Two-Country Trade. *International Review of Economics Education (IREE)*, 11(2):91–101. November 2012.

Kevin W. Hamlen and William Hamlen. An Economic Perspective of Message-dropping Attacks in Peer-to-peer Overlays. *Security Informatics*, 1(6). March 2012.

Bhavani Thuraisingham, Tahseen Al-Khatib, Latifur Khan, Mehedy Masud, **Kevin Hamlen**, Vaibhav Khadilkar, and Satyen Abrol. Design and Implementation of a Data Mining System for Malware Detection. *Journal of Integrated Design & Process Science (JIDPS)*, 16(2):33–49. 2012.

Mohammad Mehedy Masud, Clay Woolam, Jing Gao, Latifur Khan, Jiawei Han, **Kevin W. Hamlen**, and Nikunj C. Oza. Facing the Reality of Data Stream Classification: Coping with Scarcity of Labeled Data. *Knowledge and Information Systems (KAIS)*, pp. 1–32. November 2011. (#6)

Mohammad M. Masud, Tahseen M. Al-Khateeb, **Kevin W. Hamlen**, Jing Gao, Latifur Khan, Jiawei Han, and Bhavani Thuraisingham. Cloud-based Malware Detection for Evolving Data Streams. *ACM Transactions on Management Information Systems (TMIS)*, 2(3). October 2011. (#16)

Kevin W. Hamlen and Bhavani Thuraisingham. Secure Semantic Computing. *International Journal of Semantic Computing*, 5(2):121–131. June 2011.

Kevin W. Hamlen, Murat Kantarcioglu, Latifur Khan, and Bhavani Thuraisingham. Security Issues for Cloud Computing. *International Journal of Information Security and Privacy (IJISP)*, 4(2):36–48. April–June 2010. (#2)

Kevin W. Hamlen, Vishwath Mohan, Mohammad M. Masud, Latifur Khan, and Bhavani Thuraisingham. Exploiting an Antivirus Interface. *Computer Standards & Interfaces Journal*, 31(6):1182–1189. April 2009. (#23)

William Hamlen and **Kevin W. Hamlen**. A Closed System of Production Possibility and Social Welfare. *Computers in Higher Education Economics Review (CHEER)*, 18(1):15–18. December 2006.

Kevin W. Hamlen, Greg Morrisett, and Fred B. Schneider. Computability Classes for Enforcement Mechanisms. *ACM Transactions on Programming Languages and Systems (TOPLAS)*, 28(1):175–205. January 2006. (#3)

Edited Volumes:

Kevin W. Hamlen and Long Lu, eds. Proceedings of the 5th Workshop on Forming an Ecosystem Around Software Transformation (ACM SIGSAC CCS FEAST). Sheridan, November 2020.

Ehab Al-Shaer, Jinpeng Wei, **Kevin W. Hamlen**, and Cliff Wang, eds. Autonomous Cyber Deception: Reasoning, Adaptive Planning, and Evaluation of HoneyThings. Springer, 2019. 237 pp.

Francesco Calimeri, **Kevin W. Hamlen**, and Nicola Leone, eds. Proceedings of the 20th International Symposium on Practical Aspects of Declarative Languages (PADL). Lecture Notes in Computer Science 10702. Los Angeles, California: Springer, January 2018.

Patents:

Kevin William Hamlen. Using Object Flow Integrity to Improve Software Security. Utility (16/173,358). The Board of Regents, The University of Texas System. January 16, 2020.

Kevin William Hamlen. System and Method for Retrofitting Application Code. Utility (14/086,179). The Board of Regents, The University of Texas System. August 3, 2015.

Unrefereed articles, chapters, and technical reports:

Frederico Araujo, Gbadebo Ayoade, **Kevin W. Hamlen**, and Latifur Khan. Deception-Enhanced Threat Sensing for Resilient Intrusion Detection. In *Autonomous Cyber Deception*. Chap. 8, pp. 147–165. Springer, 2019.

Frederico Araujo and **Kevin W. Hamlen**. Embedded Honeypotting. In *Cyber Deception: Building the Scientific Foundation*. Ed. by Sushil Jajodia, V.S. Subrahmanian, Vipin Swarup, and Cliff Wang. Chap. 10: Embedded Honeypotting, pp. 195–225. Springer, 2016.

Richard Wartell, Yan Zhou, **Kevin W. Hamlen**, and Murat Kantarcioglu. Shingled Graph Disassembly: Finding the Undecidable Path. Tech. rep. (UTDCS-12-13). Richardson, Texas: Computer Science Department, The University of Texas at Dallas, June 2013.

Meera Sridhar, Richard Wartell, and **Kevin W. Hamlen**. Hippocratic Binary Instrumentation: First Do No Harm. Tech. rep. (UTDCS-03-13). Richardson, Texas: Computer Science Department, The University of Texas at Dallas, February 2013.

Kevin W. Hamlen. When Gothic Horror Gives Birth to Malware. In *The 2013 Cisco Annual Security Report*, pp. 46–47. Cisco Systems, January 2013.

Vishwath Mohan and **Kevin W. Hamlen**. Frankenstein: A Tale of Horror and Logic Programming. *ALP Newsletter Digest*, 25(4). Ed. by Agostino Dovier and Enrico Pontelli. December 2012.

Bhavani Thuraisingham, Vaibhav Khadilkar, Jyothsna Rachapalli, Tyrone Cadenhead, Murat Kantarcioglu, **Kevin Hamlen**, Latifur Khan, and Farhan Husain. Towards the Design and Implementation of a Cloud-centric Assured Information Sharing System. Tech. rep. (UTDCS-27-11). Richardson, Texas: Computer Science Department, The University of Texas at Dallas, September 2011.

Kevin W. Hamlen, Micah M. Jones, and Meera Sridhar. Chekov: Aspect-oriented Runtime Monitor Certification via Model-checking. Tech. rep. (UTDCS-16-11). Richardson, Texas: Computer Science Department, The University of Texas at Dallas, May 2011.

Kevin W. Hamlen, Vishwath Mohan, and Richard Wartell. Reining in Windows API Abuses with In-lined Reference Monitors. Tech. rep. (UTDCS-18-10). Richardson, Texas: Computer Science Department, The University of Texas at Dallas, June 2010.

Kevin W. Hamlen, Greg Morrisett, and Fred B. Schneider. Certified In-lined Reference Monitoring on .NET. Tech. rep. (TR-2005-2003). Ithaca, New York: Computer Science Department, Cornell University, November 2005.

In the News:

The following is an assortment of press articles covering my research.

Janaki Barik. Researchers at UT Dallas Develop New Cybersecurity to Welcome Hackers. *GizmoPosts*. March 3, 2020.

John Leyden. AI-powered Honeypots: Machine Learning May Help Improve Intrusion Detection. *The Daily Swig*. March 9, 2020.

David Paul. Decoy Website Used to Fool Hackers into Sharing Tactics. *Digit*. March 2, 2020.

Sarah Coble. University Fools Hackers into Sharing Tactics. *InfoSecurity Magazine*. February 27, 2020.

Sandra Engelland. UT Dallas Researchers Develop a New Cybersecurity Tool That Actually Welcomes Hackers. *Dallas Innovates*. February 28, 2020.

Kim Horner. Computer Scientists' New Tool Fools Hackers into Sharing Keys for Better Cybersecurity. *Science Daily*. February 27, 2020.

Alex McFarland. Deep Learning Used to Trick Hackers. *UniteAI*. February 29, 2020.

Selena Hernandez. UTD Professor Creates Solution to 'Heartbleed' Bug. *CW 33 Nightcap News*. April 15, 2014.

Brian New. North Texas Professor Setting Trap for Hackers. *CBS 11 Nightly News, Dallas/Fort Worth*. April 14, 2014.

Press Trust of India (PTI). New Technique Red Herring Fights 'Heartbleed' Virus. *The Economic Times, Times of India*. April 15, 2014.

Dallas Business Journal Staff. Tech Titans Technology Inventor Award Finalist Kevin Hamlen The University of Texas at Dallas. *Dallas Business Journal*. August 30, 2013.

Jacob Aron. Frankenstein Virus Creates Malware by Pilfering Code. *New Scientist*. August 20, 2012.

Marco Attard. Frankenstein: The Modern (Virus) Prometheus. *eSP: IT Solution Providers in Europe*. August 23, 2012.

Ian Chant. Frankenstein Virus Steals Code From Other Programs. *GeekOSystem*. August 20, 2012.

Devin Coldewey. Frankenstein Virus Could Assemble Itself from App Snippets. *NBC News Digital*. August 22, 2012.

Adrian Covert. New Frankenstein Virus Can Build Itself on Any Computer From Stolen Snippets of Code. *Gizmodo*. August 21, 2012.

Tim Cross. A Thing of Threads and Patches. *The Economist*. August 23, 2012.

James Edward. Virus Frankenstein is Built With Parts of Your PC Software. *TechNews*. August 21, 2012.

Jeff Goldman. UT Researchers Develop Frankenstein Malware. *eSecurity Planet*. August 24, 2012.

Innovation News Daily Staff. Frankenstein Computer Virus Assembles Itself. *TechNews Daily*. August 20, 2012.

Mohit Kumar. Frankenstein Malware Turning Legitimate Software Into Invisible Malware. *The Hacker News*. August 25, 2012.

Brian Prince. Frankenstein Malware Uses Safe Programs Against Users. *Security Week*. August 23, 2012.

Michael Rundle. Frankenstein Virus Could Build Itself From Safe Computer Code. *Huffington Post UK*. August 22, 2012.

Olivia Solon. Frankenstein Virus Stitches Malware Together from Pieces of Benign Code. *Wired UK*. August 21, 2012.

Kimber Streams. Frankenstein: Turning Legitimate Software into Invisible Malware. *The Verge*. August 21, 2012.

Peter Suciu. Cyber-Security Pros Create "Frankenstein" Monster. *Red Orbit*. August 28, 2012.

Mark Tyson. Frankenstein Malware Builds Itself with Benign Common Code. *Hexus*. August 21, 2012.

Bob Yirka. Researchers Create Frankenstein Malware Made Up Of Common Gadgets. *Phys.org*. August 21, 2012.

Max Cacas. Texas Computer Scientist Outflanks Next-Generation Computer Viruses. *SIGNAL Online*. October 3, 2011.

Teaching:

Graduated Ph.D. students supervised:

2021 Jun Duan: *Securing Computations with GPUs*
2020 Masoud Ghaffarinia: *Automated Binary Software Attack Surface Reduction*
2020 Xiaoyang Xu: *Native Software Security Hardening in the Real World: Compatibility, Modularity, Expressiveness, and Performance*
2019 Gbadebo Ayoade: *Mitigating Cyberattack with Machine Learning-based Feature Space Transforms*
2019 Wenhao Wang: *Source-free, Component-driven Software Security Hardening*
2019 Erick Bauman: *Securing Binary Programs Without Perfect Disassembly*
2017 Khaled Al-Naami: *Enhancing Cybersecurity with Encrypted Traffic Fingerprinting*
2016 Frederco Araujo: *Engineering Cyber-deceptive Software*
2014 Vishwath Mohan: *Source-free Binary Mutation for Offense and Defense*
2014 Meera Sridhar: *Model-checking In-lined Reference Monitors*
2013 Safwan Khan: *Decentralizing Trust: New Security Paradigms for Cloud Computing*
2012 Richard Wartell: *Rewriting x86 Binaries Without Code-producer Cooperation*
2011 Sunitha Ramanujam: *Towards an Integrated Semantic Web: Interoperability Between Data Models*
2011 Micah Jones: *Declarative Aspect-oriented Security Policies for In-lined Reference Monitors*

Graduated masters students supervised:

2013 Dhiraj V. Karamchandani: *Surveying the Landscape of ActionScript Security Trends and Threats*
2010 Aditi Patwardhan: *Security-aware Program Visualization for Analyzing In-lined Reference Monitors*
2009 Scott Moore: graduation based on coursework (non-thesis)

Undergraduate honors theses supervised:

2009 Jonathan Cooke: *A Comparison of the Effectiveness of Denial-of-service Attacks against Structured Peer-to-peer Networks*

Classroom teaching:

Median student evaluation: 4.81 / 5 = Excellent

semester	course	student evaluation
2021 Fall	CS6301 Language-based Security	4.50 / 5 = Excellent
2020 Spring	CS6371 Advanced Programming Languages	4.79 / 5 = Excellent
2019 Fall	CS6301 Language-based Security	4.88 / 5 = Excellent
2019 Spring	CS6371 Advanced Programming Languages	4.88 / 5 = Excellent
2018 Fall	CS6301 Language-based Security	5.00 / 5 = Excellent
2018 Spring	CS6371 Advanced Programming Languages	5.00 / 5 = Excellent
2017 Fall	CS6301 Language-based security	5.00 / 5 = Excellent
2017 Spring	CS6371 Advanced Programming Languages	5.00 / 5 = Excellent
2016 Fall	CS6301 Language-based Security	4.81 / 5 = Excellent
2016 Fall	CS7301 Recent Advances in Software Cybersecurity	5.00 / 5 = Excellent
2016 Spring	CS6371 Advanced Programming Languages	5.00 / 5 = Excellent
2015 Fall	CS6301 Language-based Security	5.00 / 5 = Excellent
2015 Spring	CS6371 Advanced Programming Languages	4.89 / 5 = Excellent
2014 Fall	CS6301 Language-based Security	4.75 / 5 = Excellent
2014 Spring	CS6371 Advanced Programming Languages	4.92 / 5 = Excellent
2013 Fall	CS6301 Language-based Security	4.69 / 5 = Excellent
2013 Spring	CS6371 Advanced Programming Languages	4.92 / 5 = Excellent
2012 Fall	CS6V81 Language-based Security	4.83 / 5 = Excellent
2012 Fall	CS4384 Automata Theory	4.80 / 5 = Excellent
2012 Spring	CS6371 Advanced Programming Languages	4.81 / 5 = Excellent
2011 Fall	CS4384 Automata Theory	4.50 / 5 = Excellent
2011 Spring	CS6371 Advanced Programming Languages	4.19 / 5 = Very Good
2011 Spring	CS7301 Language-based Security	4.75 / 5 = Excellent
2010 Fall	CS4384 Automata Theory	4.33 / 5 = Very Good
2010 Spring	CS6371 Advanced Programming Languages	4.58 / 5 = Excellent
2009 Fall	CS4485 Computer Science Project	4.50 / 5 = Excellent
2009 Fall	CS6371 Advanced Programming Languages	4.81 / 5 = Excellent
2009 Spring	CS4485 Computer Science Project	4.83 / 5 = Excellent
2009 Spring	CS6371 Advanced Programming Languages	3.22 / 5 = Good
2008 Fall	CS6371 Advanced Programming Languages	4.25 / 5 = Very Good
2008 Spring	CS6V81 Language-based Security	4.92 / 5 = Excellent
2007 Fall	CS6371 Advanced Programming Languages	4.08 / 5 = Very Good
2007 Spring	CS7301 Seminar on Language-based Security	4.75 / 5 = Excellent

Service:

External service:

2021 Program Committee Member for the *ACM ASIA Conference on Computer and Communications Security (AsiaCCS)*

2020 General Co-Chair of the *ACM CCS Workshop on Forming an Ecosystem Around Software Transformation (FEAST)*

2020 Program Committee Member for the *Network and Distributed System Security Symposium (NDSS)*

2020 Program Committee Member for the *IEEE Intelligence and Security Informatics Conference (ISI)*

2020 Program Committee Member for the *IJCAI-PRICAI Machine Learning for Binary Analysis (MLBA) Workshop*

2019 Program Committee Member for the *Network and Distributed System Security Symposium (NDSS)*

2019 Program Committee Member for the *ACM CCS Workshop on Forming an Ecosystem Around Software Transformation (FEAST)*

2018 Co-Chair of the *Army Research Office Workshop on HoneyThings: Autonomous and Resilient Cyber Deception*

2018 Program Committee Co-Chair of the *Symposium on Practical Aspects of Declarative Programing (PADL)*

2017 Co-Chair of the *24th ACM Conference on Computer and Communications Security (CCS)* Poster/Demo Session

2017, 2009 Program Committee Member for the *ACM SIGPLAN Workshop on Programming Languages and Analysis for Security (PLAS)*

2017 Program Committee Member for the *Workshop on Innovative CyberSecurity and Privacy for Internet of Things (WICSPIT)*

2016 Program Committee Member for the *9th International Conference on Trust and Trustworthy Computing (TRUST)*

2016 Program Committee Member for the *9th Workshop on Cyber Security Experimentation and Test (CSET)*

2016, 2015, 2013 Program Committee Member for the *14th, 13th and 11th IEEE Intelligence and Security Informatics Conferences (ISI)*

2015, 2014 Program Committee Member for the *International Workshop on Secure Peer-to-Peer Intelligent Networks & Systems (SPINS)*

2014 Program Committee Member for the *13th IEEE International Conference on Trust, Security and Privacy in Computing and Communications (TrustCom)*

2014 Program Committee Member for the *8th International Conference on Emerging Security Information, Systems and Technologies (SECURWARE)*

2013 Program Chair of the *Next Generation Malware Attacks and Defenses Workshop (NGMAD)*

2013 Local Chair of the *16th Information Security Conference (ISC)*

2013 Program Committee Member for the *12th IEEE International Conference on Trust, Security and Privacy in Computing and Communications (TrustCom)*

2013 Program Committee Member for the *7th International Conference on Emerging Security Information, Systems and Technologies (SECURWARE)*

2013 Program Committee Member for the *1st International Workshop on Privacy in Semantic Technologies (PriSeT)*

2013 Program Committee Member for the *International Symposium on Foundation of Open Source Intelligence and Security Informatics (FOSINT-SI)*

2013 Program Committee Member for the *International Conference on Information Communication Technology (ICT-EurAsia)*

2012 Program Committee Member for the *8th International Conference on Information Systems Security (ICISS)*

2012 Program Committee Member for the *International Symposium on Foundation of Open Source Intelligence and Security Informatics (FOSINT-SI)*

2012 Program Committee Member for the *10th IEEE Intelligence and Security Informatics Conference (ISI)*

2010 Program Committee Member for the *International Workshop on Visual Languages and Computing (VLC)*

2009 General Chair and Program Committee Member for the *11th ACM International Symposium on Practical Aspects of Declarative Languages (PADL)*

2007 Registration Chair for the *10th High Assurance Systems Engineering Symposium (HASE)*

Other external review duties rendered:

2016, 2013, 2012 IEEE Transactions on Information Forensics & Security (TIFS)

2013, 2009–2007 IEEE Transactions on Dependable and Secure Computing (TDSC)

2013, 2012, 2009–2007 ACM Transactions on Information and System Security (TISSEC)

2013 ACM Conference on Computer and Communications Security (CCS)

2013 Theory and Practice of Logic Programming (TPLP)

2013, 2011 Journal of Machine Learning Research (JMLR)

2012 Journal of Computer Engineering & Information Technology (JCEIT)

2012 International Symposium on Foundation of Open Source Intelligence and Security Informatics (FOSINT-SI)

2012, 2010 Air Force Research Laboratory (AFRL)

2011, 2009 Practical Aspects of Declarative Languages (PADL)

2010 International Journal of Information Security (IJIS)

2010 Information Processing Letters (IPL)

2010 Mathematical Structures in Computer Science Journal (MSCS)

2009–2007 Science of Computer Programming

2009 International Journal of Computer Mathematics

2009, 2008 Encyclopedia of Computer Science and Engineering

2008, 2007 Fundamenta Informaticae

2008 The European Symposium on Programming (ESOP)

University/department service:

2022   Faculty Search Committee, CS, UTD

2018–2019   Dean Search Committee, ECS, UTD

2017-2018   Academic Affairs Committee, ECS, UTD

2016   Ad Hoc Committee for Tenure/Promotion Candidacy

2012–present   Information Security Committee, UTD

2012–present   Designer and Maintainer of University LaTeX Dissertation Template
2009–present   TA Committee, Computer Science Department, UTD
2006–present   Computer Systems Group Committee, Computer Science Department, UTD
2015   Ad Hoc Committee *Chair* for Tenure/Promotion Candidacy
2014, 2009, 2007, 2019, 2021   Outside chair for Doctoral Final Oral Exam (4 Ph.D. students)
2006–2016   Faculty co-advisor for the UTD Graduate Christian Fellowship

Dissertation/thesis committees served:

2020 Farhad Shakerin, Ph.D.: *Logic Programming-based Approaches in Explainable Artificial Intelligence and Natural Language Understanding* (supervisor: Gopal Gupta)

2016 Brian Schieb, M.S.: *Delinker: Automatic Delinking of ELF Executables for Binary Code Reuse* (supervisor: Zhiqiang Lin)

2015 Huseyin Ulusoy, Ph.D.: *Towards Accountable Big Data Management Systems* (supervisor: Murat Kantarcioglu)

2015 Junyuan Zeng, Ph.D.: *Binary Code Reuse: A Dynamic Analysis Based Approach* (supervisor: Zhiqiang Lin)

2014 Timothy Hoffman, M.S.: *Flexible Access and Information Flow Control in Multi-domain Distributed Systems* (supervisor: I-Ling Yen)

2014 Kyle Marple, Ph.D.: *Goal-directed Answer Set Programming* (supervisor: Gopal Gupta)

2012 Wei-Che Tseng, Ph.D.: *Memory Architecture, Management, and Scheduling for Embedded Systems* (supervisor: Edwin Sha)

2011 Mohammad Farhan Husain, Ph.D.: *Data Intensive Query Processing for Semantic Web using Hadoop and MapReduce* (supervisor: Latifur Khan)

2011 Neda Saeedloei, Ph.D.: *Modeling and Verification of Real-time and Cyber-physical Systems* (supervisor: Gopal Gupta)

2010 Raymon L. Novales, Ph.D.: *Symmetric Key Pre-distribution for Resource-constrained Wireless Networks* (supervisor: Neeraj Mittal)

2010 Jeffrey Koch, Ph.D.: *AOVis: Reverse Engineering and Visualization of AspectJ/Java Source Code* (supervisor: Kendra Cooper)

2009 Mohammad Mehedy Masud, Ph.D.: *Adaptive Classification of Scarcely Labeled and Evolving Data Streams* (supervisor: Latifur Khan)

2007 Parag Doshi, M.S.: *General Strategies for Buffer Overflow Attack Proofing* (supervisor: Gopal Gupta)

2007 Srividya Kona, Ph.D.: *Semantics-based Web Service Discovery and Composition* (supervisor: Gopal Gupta)

2007 Ajay Bansal, Ph.D.: *Next Generation Logic Programming Systems* (supervisor: Gopal Gupta)