Venkat Venkatakrishnan **Vita**

CONTACT INFORMATION

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University of Illinois at Chicago
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EDUCATION

Stony Brook University (Formerly, SUNY @ Stony Brook), New York USA 08/1998 - 12/2004

Ph.D. (Computer Science) - 05/2001 - 12/2004
- GPA: 4.0 / 4.0
- Ph.D. Adviser: R. Sekar

M.S., (Computer Science) - 08/1998 - 05/2001
- GPA: 4.0 / 4.0

Birla Institute of Technology & Science, Pilani, India 08/1992 - 07/1997

Master of Science (with honors) in Mathematics

RESEARCH AND TEACHING EXPERIENCE

Dept. of Computer Science, University of Illinois @ Chicago 08/2015 - Present
Full Professor (with tenure)

Dept. of Computer Science, University of Illinois @ Chicago 08/2010 - 07/2015
Associate Professor (with tenure)

Dept. of Computer Science, University of Illinois @ Chicago 12/2004 - 08/2010
Assistant Professor

Secure Systems Lab, Dept. of Computer Science, SUNY @ Stony Brook 08/1999 - 11/04
Graduate Research Assistant

INDUSTRIAL EXPERIENCE

HRL Research Laboratories., Malibu, CA 06/2001 - 08/2001
Research Intern, Network Analysis and Systems group

Infosys Technologies Ltd. , Bangalore, India 08/1997 - 07/1998
Software Engineer - Telecommunications

RESEARCH INTERESTS

- ❑ Use of compiler, OS and software engineering methods for addressing challenges in security and privacy. Specific areas include:
  - Threat detection and prevention
  - Retroftting software for security
  - Secure software design and development
  - Attacks and Defenses
  - Web security
  - Privacy and information flow

AWARDS AND HONORS

Awards/Honors

- ❑ University Scholar, University of Illinois, Nov 2017. (2nd highest research award from the university, with $45,000 awarded for support for scholarly activities).
- ❑ Best Paper Award at the 2016 IEEE Conference on Quality, Reliability and Security (QRS), 2016.
- ❑ Illinois Gov. Bruce Rauner's cybersecurity Advisory Council. 2016 onwards.

- ❑ UIC Award for Excellence in Teaching 2015-16. (highest university level teaching award, 5 out of 2000 faculty received in 2015, 5k permanent salary increase).
- ❑ UIC Chancellor's Proof-of-Concept Award. 2013. (Six awards from seventy applicants across UIC).
- ❑ Three inventions disclosed to UIC's Office of Technology Management.
- ❑ UIC College of Engineering Teaching Award for 2011-12. (College-wide teaching excellence award, nominated by the departmental advisory committee).
- ❑ UIC Teaching Recognition Program Award for 2009-10. (Campus-wide teaching excellence award, 19 out of 2574 faculty received it in 2009-10, 1.5k permanent salary increase).
- ❑ NYU-Poly Cybersecurity Research Award for Best Applied Paper in Computer Security Research (Nationwide Top-10 finalist), 2010.
- ❑ UIC College of Engineering Research Excellence Award, 2009-10. (Three of over one hundred faculty in the College received the award in 2009-10.
- ❑ NYU-AT&T Award for Best CyberSecurity Applied Research Paper in Computer Security Research, 2009.
- ❑ NSF CAREER Award, 2009-14.
- ❑ UIC College of Engineering Award for Excellence in Teaching, 2007-08. (7 out of 114 faculty in the college of Engineering were chosen for this award).
- ❑ Center for Excellence in Information Assurance Education, Award by the National Security Advisory (NSA), 2007.
- ❑ Computer security curriculum, Committee on National Security Systems, Awarded to UIC for the period 2006-2009, renewed until 2014.
- ❑ Outstanding research paper award, 19th Annual Computer Applications Security Conference (ACSAC), Las Vegas NV, December 2003.
- ❑ Ericcson Graduate Fellowship for Academic Excellence awarded by the Dept. of Computer Science, SUNY Stony brook, Fall 2000.

PUBLICATIONS

Note: Author names with an asterisk (*) are my UIC graduate advisees, those with two asterisks (**) my UIC undergraduate advisees, authors with a dagger † are my postdoctoral advisees, and authors with a $^{\mathcal{I}}$ are IGERT students.

Conference Papers

[C1] Md Nahid Hossain, Sadegh M. Milajerdi*, Junao Wang, Birhanu Eshete†, Rigel Gjomemo†, R. Sekar, Scott Stoller, V.N. Venkatakrishnan. *SLEUTH: Real-time Attack Scenario Reconstruction from COTS Audit Data*, **26th USENIX Security Symposium (SEC)**, Vancouver, BC, Canada, 2017. (Acceptance Rate: 16%.)

[C2] Birhanu Eshete and V.N. Venkatakrishnan. *Dynaminer: Leveraging Offline Infection Analytics for On-the-Wire Malware Detection*, **47th Annual IEEE/IFIP International Conference on Dependable Systems and Networks (DSN)**, Denver 2017.

[C3] Abeer Alhuzhali, Birhanu Eshete, Rigel Gjomemo and V.N. Venkatakrishnan. *Chainsaw: Chained Automated Workflow-based Exploit Generation*, **ACM Conference on Computer and Communications Security (CCS)** , Vienna, Austria, October 2016. (Acceptance rate: 16%.)

[C4] Rigel Gjomemo, Phu H. Phung, Ted Ballou, Kedar Namjoshi, V.N. Venkatakrishnan and Lenore Zuck. *From Verifications to Optimizations*, **IEEE Conference on Quality, Reliability and Security (QRS)** Vienna, Austria August 2016. (Acceptance rate 29%). **Best paper award!!**

[C5] Maliheh Monshizadeh*, Prasad Naldurg, and V.N. Venkatakrishnan. *Patching Logic Vulnerabilities for Web Applications using LogicPatcher*, **ACM Conference on Data and Applications Security (CODASPY)**, March 2016.

[C6] R. He, V. Rastogi, Y. Cao, Y. Chen, R. Yang and Z. Zhang *Vetting SSL Usage in Applications with SSLINT*, **36th IEEE Symposium on Security and Privacy (Oakland'15)** , San Jose, CA, May 2015.

[C7] Daniele Gallingani*, Rigel Gjomemo†, V.N. Venkatakrishnan, Stefano Zanero. *Practical Exploit*

Generation for Intent Message Vulnerabilities in Android. Web 2.0 Security and Privacy Workshop, 2015.

[C8] Maliheh Monshizadeh*, Prasad Naldurg, and V.N. Venkatakrishnan. *MACE: Detecting Privilege Escalation Vulnerabilities in Web Applications* , **ACM Conference on Computer and Communications Security (CCS)**, November 2014.

[C9] Rigel Gjomemo, Kedar Namjoshi, Phu H. Phung, V.N. Venkatakrishnan and Lenore Zuck. *From Verifications to Optimizations*, **Verification, Model Checking and and Abstract Interpretation (VMCAI)** Mumbai, India, January 2015. (115 papers accepted out of 585, 19.6%)

[C10] Kalpana Gondi*, A. Prasad Sistla, and V.N. Venkatakrishnan. *DEICS: Data Erasure in Concurrent Software*, **19th Nordic Conference on Secure IT Systems (NORDSEC)**, Tromso, Norway, October 2014.

[C11] Pratik Narang*, Subhajit Ray, Chittaranjan Hota and V.N. Venkatakrishnan. *PeerShark: Detecting Peer-to-Peer Botnets*. **International Workshop on Cyber Crime (IWCC)**, San Jose, May 2014.

[C12] Rigel Gjomemo, Hafiz Malik, Nilesh Sumb, Rashid Ansari and V.N. Venkatakrishnan. *Digital Check Forgery Attacks on Client Check Truncation Systems*. **Financial Cryptography and Data Security 2014.** Barbados. March 2014. (31 papers accepted out of 165 submissions, 18.8%).

[C13] Birhanu Eshete and V.N. Venkatakrishnan. *WebWinnow: Leveraging Exploit Kit Workflows to Detect Malicious URLs* . **4th ACM Conference on Data and Application Security and Privacy (CODASPY'14)**. San Antonio, TX, March 2014. (19 papers accepted out of 119, 15.9%).

[C14] Federica Fornaciari$^{\mathcal{I}}$, C. Ranganathan and V.N. Venkatakrishnan. *Sensitive Information Disclosure in Amazon Reviews*. **Eighth International Conference on Digital Society (ICDS'14)**, Barcelona, Spain, March 2014. (Acceptance Rate: 28%.)

[C15] John C. Pendergrass$^{\mathcal{I}}$, Karen Heart$^{\mathcal{I}*}$, C. Ranganathan, V.N. Venkatakrishnan. *A Threat Table based Approach for Telemedicine Security*. **International Conference on Health Information Technology Advancement.**. Kalamazoo, Michigan, October 2013.

[C16] Mike Ter Louw*, Phu H. Phung†, Rohini Krishnamurti*, V.N. Venkatakrishnan. *SAFESCRIPT: JavaScript Transformation for Policy Enforcement*. **18th Nordic Conference on Secure IT Systems (NORDSEC)**, Illulisat, Greenland, October 2013.

[C17] Timothy Hinrichs†, Michael Cueno**, Daniel Ruiz*, V.N. Venkatakrishnan and Lenore Zuck. *CAVEAT: Facilitating Interactive and Secure Client-Side Validators for Ruby on Rails applications*. **Seventh International Conference on Emerging Security Information, Systems and Technologies (SECUREWARE 2013)**, Barcelona, Spain, August 2013.

[C18] Timothy Hinrichs†, Daniele Rosetti, Gabriel Petronella, V.N. Venkatakrishnan, A. Prasad Sistla and Lenore Zuck. *Weblog: A Declarative Language for Secure Web Development*. **Eighth ACM SIGPLAN Workshop on Programming Languages and Security (PLAS)**, Seattle, WA. June 2013.

[C19] Nazari Skrupsky*, Prithvi Bisht†, Tim Hinrichs†, V.N. Venkatakrishnan and Lenore Zuck. TamperProof: A Server-Agnostic Defense for Parameter Tampering Attacks on Web Applications. **3rd ACM Conference on Data and Application Security and Privacy (CODASPY'13)**. San Antonio, TX, February 2013. (Acceptance rate 24 papers out of 107, 22%)

[C20] Nazari Skrupsky*, Maliheh Monshizadeh*, Prithvi Bisht†, Tim Hinrichs†, V.N. Venkatakrishnan and Lenore Zuck. WAVES: Automatic Synthesis of Client-side Validation Code for Web Applications. **ASE Cyber Security Conference** . Washington D.C., December 2012. (One of the 3% of papers submitted to the conference recommended to journal).

[C21] Nazari Skrupsky*, Maliheh Monshizadeh*, Prithvi Bisht†, Tim Hinrichs†, V.N. Venkatakrishnan and Lenore Zuck. Dont Repeat Yourself: Automatically Synthesizing Client-side Validation Code for Web Applications. **USENIX Conference on Web Application Development (WebApp'12s)**. Boston, June 2012.

[C22] Kalpana Gondi*, Prithvi Bisht†, Praveen Venkatachair*, A. Prasad Sistla, V.N. Venkatakrishnan. SWIPE: Eager Erasure of Sensitive Data in Large Scale Systems Software. **2nd ACM Conference**

on Data and Application Security and Privacy (CODASPY'12) San Antonio, TX. (21 papers accepted out of 113, 18.5%).

[C23] Prithvi Bisht*, Tim Hinrichs, Nazari Skrupsky*, V.N. Venkatakrishnan. WAPTEC: Whitebox Analysis of Web Applications for Parameter Tampering Exploit Construction. **18th ACM Conference on Computer and Communications Security (CCS'11)**, Chicago, IL. (60 papers accepted out of 421 submissions, 14%).

[C24] V.N. Venkatakrishnan, Prithvi Bisht*, Mike Ter Louw*, Michelle Zhou*,Kalpana Gondi*and Karthik Thotta Ganesh*. WebAppArmor: A Framework for Robust Prevention of Attacks on Web Applications, **Sixth International Conference on Information Systems Security**, Gandhinagar, India, December, 2010. (Invited Paper).

[C25] Michelle Zhou*, Prithvi Bisht*, V.N. Venkatakrishnan. Strengthening XSRF Defenses for Legacy Web Applications Using White-box Analysis and Transformation, **Sixth International Conference on Information Systems Security**, Gandhinagar, India, December, 2010. (14 papers accepted out of 51, 27.5%).

[C26] Prithvi Bisht*, Tim Hinrichs, Nazari Skrupsky**, Radoslaw Bobrowicz**and V.N. Venkatakrishnan. NoTamper: Automated Blackbox detection of Parameter Tampering Vulnerabilities. **ACM Conference on Computer and Communications Security (CCS)**, Chicago, IL. Oct 2010. (55 papers accepted out of 320. 17.6%.). **Top-10 nationwide finalists for the 2010 ATT Award for Best Applied Security Research paper (see `http://www.poly.edu/csaw-research`.)**

[C27] Mike Ter Louw*, Karthik Thotta Ganesh*and V.N. Venkatakrishnan. AdJail: Practical Confidentiality and Integrity Policies on Web Advertisements . **USENIX Security Symposium (SECURITY'10)**, Washington D.C. Aug 2010. (30 papers accepted out of 202, 14.8%).

[C28] Prithvi Bisht*, A. Prasad Sistla and V.N. Venkatakrishnan. Automatically Preparing Safe SQL Queries. **Financial Cryptography and Data Security (FC'10)**, Tenerife, Spain. Jan 2010. (19 papers accepted out of 130, 14.6%).

[C29] Mike Ter Louw*and V.N. Venkatakrishnan. BLUEPRINT: Robust Prevention of Cross-site Scripting Attacks for Existing Browsers. **IEEE Symposium on Security and Privacy (Oakland'09)**, Oakland, CA, May 2009. (26 out of 254 papers accepted, 10.2%). **Award for the 2009 ATT Award for Best Applied Security Research paper (see `http://www.poly.edu/csaw-research`.)**

[C30] Roberto Capizzi*, Antonio Longo*, V.N. Venkatakrishnan and A. Prasad Sistla. Preventing Information Leaks Through Shadow Executions . **24th ACSA Computer Applications Security Conference (ACSAC'08)**, Anaheim, CA, December 2008. (42 out of 185 submissions accepted, 22.7%). Note:

[C31] Prithvi Bisht*and V.N. Venkatakrishnan. XSS-Guard: Precise Dynamic Prevention of Cross-site Scripting Attacks. **Detection of Intrusions, Malware and Vulnerability Assessment (DIMVA)**, Paris, France, July 2008. (13 out of 42 submissions accepted, 31%).

[C32] W. Sun, R. Sekar, Z. Liang and V.N. Venkatakrishnan. Managing Malware Threat by Securing Software Installations. **Detection of Intrusions, Malware and Vulnerability Assessment (DIMVA)**. Paris. France. July 2008. (13 out of 42 submissions accepted, 31%).

[C33] Mike Ter Louw*, Prithvi Bisht*and V.N. Venkatakrishnan. Analysis of Hypertext Isolation Techniques for XSS Prevention. **Web 2.0 Security and Privacy Workshop (W2SP)**, Oakland, California, 2008. (Acceptance rate 12 out of 36 papers, 33%).

[C34] A. Prasad Sistla, V.N. Venkatakrishnan, Michelle Zhou*and Hilary Branske*. CMV: Automatic Verification of Complete Mediation for Java Virtual Machines. **ACM Symposium of Information and Commmunications Security (ASIACCS)**, Tokyo, Japan, 2007. (Accepted 32 out of 182 submissions, 18%).

[C35] Sruthi Bandhakavi, Prithvi Bisht*, P. Madhusudan and V.N. Venkatakrishnan. CANDID: Preventing SQL injection attacks using Dynamic Candidate Evaluations. **ACM Conference on Computer and Communications Security (CCS)**, Alexandria, Virginia, Nov 2007. (Accepted 55 out of 303 submissions, 18.15%).

[C36] Mike Ter Louw*, Jin Soon Lim*and V.N. Venkatakrishnan. Extensible Web Browser Security. **Fourth GI International Conference on Detection of Intrusions & Malware, and Vulnerability Assessment (DIMVA'07)**, Luzerne, Switzerland, July 2007. (Accepted 14 out of 57 submissions, 24.5%).

[C37] Michael Leonhard**and V.N. Venkatakrishnan. A Comparative Study of Three Random Password Generators. **IEEE International conference on Information Technology (EIT'07)**, Chicago, IL. May 2007.

[C38] Tejas Khatiwala*, Raj Swaminathan*and V.N. Venkatakrishnan. Data Sandboxing: An approach for Enforcing Confidentiality Policies, **21st Annual Computer Applications Security Conference (ACSAC)**, Miami, FL, December 2006. (Accepted 32 out of 135 submissions 26.5%).

[C39] V.N. Venkatakrishnan, Wei Xu, Daniel C. DuVarney and R. Sekar. Provably Correct Runtime Enforcement of Non-interference Properties, **8th International Conference on Information and Communications Security (ICICS)**, Raleigh, NC, December 2006. (Acceptance rate 18.5%).

[C40] Doo San Sim*and V.N. Venkatakrishnan. SUEZ: A Distributed System Environment for System Administration Trials. **19th USENIX System Administration Conference (LISA)**, December 2006.

[C41] V.N. Venkatakrishnan, Wei Xu and R. Sharda*. On Active User Feedback in P3P. **2nd Secure Knowledge Management Workshop (SKM)**, New York, September 2006.

[C42] Wei Xu, V.N. Venkatakrishnan, R. Sekar and I.V. Ramakrishnan. A Framework for Privacy Concious Web-services. **IEEE internation conference on Web Services (ICWS)** (Application services track), Chicago, IL, Sep 2006. (Acceptance rate 17%).

[C43] Jon A. Solworth and V.N. Venkatakrishnan. Programming-Language based Analysis for Lifting to an Operating Systems Authorization Model, **2nd workshop on Programming Languages and Operating Systems (PLOS '05)**, Glasgow, UK, July 2005.

[C44] Wei Xu, V.N. Venkatakrishnan, R. Sekar and I.V. Ramakrishnan. An Approach for Realizing Privacy-preserving Web-based Services **World Wide Web conference (WWW '05)** (Refereed poster presentation), Chiba, Japan, May 2005.

[C45] V.N. Venkatakrishnan, Wei Xu, I.V. Ramakrishnan and R. Sekar. A Secure Composition Framework for Trustworthy Personal Information Assistants. **IEEE conference on Integration of Knowledge Intensive Multi-Agent Systems (KIMAS 05)**, Boston, April 2005.

[C46] W. Sun, Z. Liang, R. Sekar and V.N. Venkatakrishnan. One-way Isolation: An effective approach for realizing safe execution environments. **Network and Distributed Systems Security (NDSS 05)**, San Diego, February 2005. (Acceptance rate 13%).

[C47] Z. Liang, V.N. Venkatakrishnan and R. Sekar. Isolated Program Execution: An application transparent approach for executing untrusted programs. **19th Annual Computer Application Security Conference (ACSAC 03)**, Las Vegas, December 2003.
Note: This paper won the best paper award in the conference.

[C48] R. Sekar, V.N. Venkatakrishnan, S. Basu, S. Bhatkar and Daniel DuVarney. Model Carrying Code: A practical approach for safe execution of untrusted applications. **19th ACM Symposium on Operating System Principles (SOSP 03**), Bolton Landing, New York, October 2003. (Acceptance rate 17%).

[C49] Daniel DuVarney, V.N. Venkatakrishnan and Sandeep Bhatkar. SELF: A transparent security extension for ELF binaries. **12th New Security Paradigms Workshop (NSPW 03)**, Ascona, Switzerland, August 2003. (Acceptance rate 30% 13/43).

[C50] V.N. Venkatakrishnan, R. Sekar, T. Kamat, S. Tsipa and Z. Liang. An approach for secure software installation. **16th USENIX System Administration Conference (LISA 02)**, Philadelphia, November 2002.

[C51] V.N. Venkatakrishnan, R. Peri and R. Sekar. Empowering mobile code using expressive security policies. **11th ACM New Security Paradigms Workshop (NSPW 02)**, Virginia beach, 2002.

[C52] C.R. Ramakrishnan, I.V. Ramakrishnan, S. A. Smolka, Y. Dong, X. Du, A. Roychoudhury and V.N. Venkatakrishnan. XMC: A logic programming-based verification toolset. **12th International conference on Computer Aided Verification (CAV 00)**, Chicago, Illinois, June 2000.

[C53] S. Wei, V. Tsaoussidis and V.N. Venkatakrishnan. QoS tradeoffs using partially reliable application-oriented transport protocol for multimedia applications over IP. **3rd IEEE Conference in Computational Intelligence and Multimedia Applications (ICCIMA 99)**, New Delhi, India, September 1999.

Journal Papers

[J1] Pratik Narang*, Chittaranjan Hota and V.N. Venkatakrishnan. PeerShark: Flow-clustering and conversation-generation for malicious peer-to-peer traffic identification. **EURASIP Journal on Information Security.** 2014.

[J2] Phu H. Phung†, Maliheh Monshizadeh*, Meera Sridhar, Kevin Hamlen and V.N. Venkatakrishnan. *Between Worlds: Securing Mixed JavaScript/ActionScript Multi-party Web Content*. **IEEE Transactions on Dependable and Secure Computing**. Accepted for publication. 2014.

[J3] Prithvi Bisht*, Tim Hinrichs†, Nazari Skrupsky*and V.N. Venkatakrishnan. *Automated Detection of Parameter Tampering Opportunities and Vulnerabilities in Web Applications*. **Journal of Computer Security**. Volume 22 pp415-465. 2014.

[J4] John C. Pendergrass$^{\mathcal{I}}$, Karen Heart$^{\mathcal{I}}$*, C. Ranganathan, V.N. Venkatakrishnan. **A Threat Table based Approach for Telemedicine Security**. **and Information Management (HiiM)** (special issue of International Journal of Healthcare Information Systems and Informatics). Transactions of International Conference on Health Information Technology Advancement., October 2013. (Journal version of telemedicine paper).

[J5] Nazari Skrupsky*, Maliheh Monshizadeh*, Prithvi Bisht†, Tim Hinrichs†, V.N. Venkatakrishnan. **WAVES: Automatic Synthesis of Client-side Validation Code for Web Applications**, **ASE Science Journal**, Vol. 1, Issue 3, pp. 121-136, December 2012.

[J6] Prithvi Bisht*, P. Madhusudan and V.N. Venkatakrishnan. CANDID: Dynamic Candidate Evaluations for Automatic Prevention of SQL Injection Attacks, **ACM Transactions on Information and Systems Security (TISSEC)**, Volume 13, Issue 2, pages February 2010. ISSN: (Invited paper).

[J7] W. Sun, Z. Liang, V.N. Venkatakrishnan and R. Sekar. Alcatraz: A virtual environment for experimenting with untrustworthy Software. **ACM Transactions on Information and Systems Security (TISSEC)**, Volume 12, Issue 3, January 2009. ISSN: 1094-9224.

[J8] Mike Ter Louw*, Jin Soon Lim*and V.N. Venkatakrishnan. Enhancing Web Browser Security Against Malware Extensions. **Journal of Computer Virology**, Springer, Vol 4, Number 3, ISSN: 1772-9880. 2008. (Invited Paper).

Edited Volumes

[V1] V.N. Venkatakrishnan and Diganta Goswami. **Proceedings of the Eighth International Conference on Information Systems Security (ICISS)**. December 2012. Springer.

[V2] Francois Murgadella and V.N. Venkatakrishnan. **Proceedings of the 3rd U.S.-France Young Engineering Scientists Symposium (YESS)**. July 2009.

Book Chapters

[B1] R. Sekar, V.N. Venkatakrishnan, S. Basu, S. Bhatkar and D.C. DuVarney. Model Carrying Code: A New Approach to Mobile Code Security . Book Chapter. **New Methods for Protecting Against Cyber Threats**. Wiley Publishing Inc., July 2007. pp:496-520.

Technical Reports/Manuscripts

[R1] A. Mikva, T. Anjali, X. Jia, I. Robertson, V.N. Venkatakrishnan, C. Walker and K. McDermott. Report of the Election Review Panel on the Nov 7, 2006 Cook County Election Delays. Released to the press and general public, Jan 2007.

[R2] V.N. Venkatakrishnan. Recent approaches to ensure safe execution of untrusted code. Technical report. Department of Computer Science, SUNY at Stony Brook, August 2001.

[R3] V.N. Venkatakrishnan, D. Dhurjati, R. Peri and G. Srikumar. Java Stack Inspection: Eager evaluation revisited. Manuscript. Jan 2001.

PATENTS

[PT1] V.N. Venkatakrishnan, Prithvi Bisht*and A. Prasad Sistla. Apparatus for Enhancing Web Ap-

plication Security and Method Therefor. **US Patent Number: 20120192280**, published Jul 2012.

[PT2] V.N. Venkatakrishnan, Prithvi Bisht[†]and Tim Hinrichs[†]. Methods for Automatically Discovering Parameter Tampering Exploits in Web Applications. **Full Patent Application Filed**. September 2012.

[PT3] V.N. Venkatakrishnan, Rashid Ansari, Rigel Gjomemo[†], Hafiz Malik and Nilesh Sumb. Methods for Countering Fraud In Remote Deposit Schemes. **U.S. Provisional Patent application**. U.S. Provisional Patent. Nov 2012.

EXTERNAL GRANTS **My research has been funded by NSF, Department of Defense (DARPA, AFOSR), Department of Homeland Security, Department of Energy. I have obtained over 14M in grants (as PI/Co-PI), with more than 10M as Lead-PI over the past 10 years.**

[G1] Sole-P.I. U.S. Department of Defense. $1,100,248. Recommended for funding for 3 years starting in 2018.

[G2] Co-P.I. *Industrial Assessment Center for Energy Efficiency, Smart Manufacturing and Cyber Security*. U.S. Department of Energy. $1,575,000. PI: Lin Li (UIC). My contribution: 20%.

[G3] Co-P.I. *Self-Certifying Compilation and its Applications*. National Science Foundation. $845,000. 09/2016-08/2019. PI: Lenore Zuck, Co-PI: A. Prasad Sistla. My contribution: 33%.

[G4] P.I. *MALDIVES: Developing a Comprehensive Understanding of Malware Delivery Mechanisms*. National Science Foundation. $550,000. 09/201508/2019. Sole-PI. My contribution: 100% for UIC portion. (This is a collaborative proposal with Vinod Yegneswaran (SRI) and Long Lu (Stony Brook University) for a total grant of 1.5 million).

[G5] P.I. *MARPLE: Mitigating APT Damage by Reasoning with Provenance in Large Enterprise Networks*. Defense Advanced Research Projects Agency. $1,000,000. 07/2015-06/2019. Sole-PI. My contribution: 100% for UIC-only portion. This is a collaborative proposal with IBM Research as Lead (J.R. Rao, PI, Suresh Chari, Xiaoqui Shu and Hequing Huang), Stony Brook University (R. Sekar, Scott Stoller and Leman Akoglu as PIs), Northwestern University (Yan Chen, PI).

[G6] Lead P.I. DHS *HS-STEM Fellowships*. U.S. Department of Homeland Security. $250,000. 09/2012-09/2015. (Co-PIs: Robert Sloan, Jon Solworth. My Contribution: 60%)

[G7] Lead P.I. and Director. *SFS Scholarships in Information Assurance*. National Science Foundation. $2,021,669. 09/2013 - 08/2018. (Co-PI: Robert Sloan. My Contribution: 60%)

[G8] Co-P.I.: *Defensive Optimizing Compilation*. Defense Advanced Research Projects Agency. $1,390,000. 06/2012 - 06/2015. (other P.I.s Lenore Zuck (UIC), Jens Palsberg (UCLA) and Kedar Namjoshi (Bell Labs). My contribution 50%)

[G9] Sole P.I. *I-Corps: Web Application Analysis*. $50,000. 06-2012- 12/2012.

[G10] Lead P.I. and Director *IGERT: Electronic Security and Privacy: Technological, Human / Social, Enterprise and Legal Considerations*. National Science Foundation. $3,200,000. 09/2011-08-2016. Lead PI of a multi-disciplinary team of 15 faculty spread across six departments and four colleges (engineering, liberal arts, business and applied health sciences) of UIC. (Co-PIs: Ranga Chandrasekaran, Steve Jones, Robert Sloan, Annette Valenta. My contribution: 17%)

[G11] Sole-P.I. *A series of workshops on security in Emerging Areas*. National Science Foundation. $29,369. 08/2011-08/2012.

[G12] Co-P.I. *EAGER: From Development Tools to Secure Web Applications*. National Science Foundation. $228,175. 08/2011-08-2013. (PI: Lenore Zuck. My contribution: 10%)

[G13] Sole-P.I. *TC:Medium: Securing Web Advertisements: Fixing the Short-term Crisis and Addressing Long-term Challenges*. National Science Foundation. $615,823. 09/2011-08/2014. (Note: This is a joint project with UT Dallas for a total of 1.2 million)

[G14] Co-PI. *A proposal for an Industry-University Collaborative Research Center in Security and Software Engineering*. National Science Foundation. $13,000. 01/2010-01/2011. (PI: Ugo Buy. My contribution: 50%)

[G15] Lead P.I. *TC: Keeping Jack in the Box: Confining the role of Untrusted Inputs in Web Scenarios*. National Science Foundation. $450,000. 09/02009-08/2012. My contribution: 50%.

[G16] Single-Investigator. *TC: A U.S.-France Symposium of Young Engineering Scientists (YESS)*. National Science Foundation. $49,936. 09/2009-08/2010.

[G17] Co-P.I. *HS-STEM Fellowships*. U.S. Department of Homeland Security. $200,000. 09/2009 - 08/2012.

[G18] Single-Investigator. *CAREER: A Framework for Defending Web-based Attacks*. National Science Foundation. $400,000. 09/2009 to 08/2014.

[G19] Single-Investigator. *CT: Runtime Techniques for Protecting Confidential Information In Large Scale Software*. National Science Foundation. $250,000. 08/2007 to 07/2009.
- Single-Investigator. *Research Experiences for Undergraduates (REU)* Supplement. $6,000. 06/2007 to 05/2008.
- Single-Investigator. *Research Experiences for Undergraduates (REU)* Supplement. $16,000. 08/2009 to 07/2010.

[G20] Co-PI: *The Seclab at UIC*. National Science Foundation: Computing Research Infrastructure. $159,000. 05/2006 to 05/2009. (PI: Jon Solworth. Co-PIs: D.J Bernstein, Prasad Sistla, Robert Sloan and Lenore Zuck. My contribution: 13%)

INTERNAL GRANTS

- ❑ Single-Investigator. *Security Analysis of Online Enterprise Websites*. UIC Chancellor's Proof-of-Concept Award. $50,000. 10/2013 to 9/2014. Status Awarded. Six proposals funded out of 70 campus-wide submissions.
- ❑ Single-Investigator. *Techniques for Security Analysis and Retrofitting of Password Programs*. Campus Research Board, UIC. $12,376. 05/2006 to 08/2007. Ranked 1st out of 18 Science and Engineering proposals at UIC).

PROFESSIONAL ACTIVITIES

Journal Editorial Board

- ❑ Member, IEEE Transactions on Dependable and Secure Computing (TDSC).
- ❑ Member, Editorial Board. Encyclopedia on CyberSecurity and Public Policy. Springer. (To be published in 2015)
- ❑ Member, Editorial Board. IEEE Systems Journal (Special Issue on Security and Privacy in Complex Systems). June 2013.

Conference Steering committees

- ❑ Steering Committee Member, International Conference on Information Systems Security (ICISS), 2013 onwards.

Conference Program Chair

- ❑ PC Co-Chair, 8th International Conference on Information Systems Security (ICISS), Guwahati, India, 2012.
- ❑ Program Chair, Sixth Midwest Security Workshop. Indianapolis, April 2008.

Conference Program committees

- ❑ Program Committee Member, Network and Distributed Systems Security (NDSS), 2017, 2016, 2015, 2013, 2012.
- ❑ Program Committee Member, IEEE Symposium on Security and Privacy. 2014, 2013, 2012, 2011, 2010.
- ❑ Program Committee Member, 16th ACM Conference on Computer and Communications Security, (CCS 2009), Chicago, IL.
- ❑ Program Committee Member, IEEE Computer and Network Security. 2014.
- ❑ Program Committee Member, Secure Knowledge Management Conference. 2014.
- ❑ NSF Proposal Review Panelist. 2014,2013,2012,2011,2010,2009.
- ❑ Program Committee Member, Web 2.0 Security and Privacy Workshop (W2SP), 2013.

- ❑ Program Committee Member, European Symposium on Research in Computer Security (ESORICS), 2013.
- ❑ Program Committee Member, Web 2.0 Security and Privacy Workshop, 2012, 2011.
- ❑ Program Committee Member, Privacy, Security and Trust, 2012.
- ❑ Program Committee Member, IEEE Systems Journal - Special Issue on Security and Privacy in Complex Systems, Dec 2012.
- ❑ Program Committee Member, 21st World Wide Web Conference (WWW) (Security, Privacy and Abuse Track), Madrid, Spain, Apr 2012.
- ❑ Program Committee Member, 7th International Conference on Information Systems Security (ICISS), Calcutta, India, 2011.
- ❑ Program Committee Member, Intl. Symposium on Engineering Secure Software and Systems (ESSoS), Madrid, Spain, Feb 2011.
- ❑ Program Committee Member, 6th International Conference on Information Systems Security (ICISS), Gandhinagar, India, 2010.
- ❑ Program Committee Member, Network Security Symposium (NSS), Melbourne, Australia, Sept 2010.
- ❑ Program Committee Member, Recent Advances in Intrusion Detection (RAID 2010), Ottawa, Canada, Sept 2010.
- ❑ Program Co-chair. 3rd U.S.-France Young Engineering Scientists Symposium (YESS), July 2009.
- ❑ Program Committee Member, 29th International Conference on Distributed Computing Systems (ICDCS 2009).
- ❑ Program Committee Member, 18th World Wide Web Conference (WWW), Madrid, Spain, Apr 2009.
- ❑ NSF proposal review panel, 2008.
- ❑ Program Committee Member, 4th International Conference on Information Systems Security (ICISS), Hyderabad, India 2008.
- ❑ Program Committee Member, ASCA Computer Applications Security Conference, (ACSAC) 2011, 2010, 2009, 2008.
- ❑ Tutorial Chair, International Conference on Information Systems Security (ICISS), Hyderabad, India, December 2008.
- ❑ Program committee member: 3rd International Conference on Distributed Computing and Internet Technology (ICDCIT) 2006.
- ❑ Program committee Member, New Security Paradigms Workshop, 2004, 2003. website).

Reviewer for:

- ❑ Computers and Security, 2014.
- ❑ ACM Transactions on the web, 2013.
- ❑ Financial Cryptography and Data Security, 2012, IEEE Special Issue on Security and Privacy in Complex Information Systems, SPCIS, 2012, ACM Transactions on the Web 2012.
- ❑ Network and Distributed Systems Security, 2011.
- ❑ ACM Transactions on Information and Systems Security, 2010.
- ❑ Journal of Computer Security (JCS 2009), ACM Transactions on Computing Education (TOCE 2009), Computer Security Foundations Symposium 2009, Network and Distributed Systems Security 2009
- ❑ Wireless Networks 2008, Automated Technology for Verification and Analysis (ATVA) 2008 (ATVA), Recent Advances in Intrusion Detection (RAID) 2008, IEEE Symposium on Security and Privacy 2008, Network and Distributed Systems Security (2008)
- ❑ IEEE Symposium on Security and Privacy (2007), Transactions on Dependable and Secure Computing (TDSC) 2007,
- ❑ Journal of Wireless Networks 2006, ACM Symposium for Information, Communications and Computer Security (ASIACCS) 2006
- ❑ ACM Computer and Communications Security 2005, International Workshop on Distributed Computing (IWDC) 2005, International Conference on Logic Programming (ICLP) 2005
- ❑ ACM Computer and Communications Security (CCS) 2003, ACSA New Security Paradigms

Workshop (NSPW) 2003, Recent Advances in Intrusion Detection (RAID) 2003
- ACM New Security Paradigms Workshop (NSPW) 2002, ACM Computer and Communications Security (CCS) 2002, Recent Advances in Intrusion Detection (RAID) 2002
- Foundations of Software Technology and Theoretical Computer Science (FSTTCS) 2000.

Conference Organization

- General Chair, International Symposium on Security in Computing and Communications (SSCC13). Aug 2013.
- Lead, Cybersecurity research in Education, SaTC PI meeting. Nov 2012.
- Workshop Organizer. An Industry University Collaborative Research Center (I/UCRC) Planning Workshop. University of Illinois at Chicago, Sep 2011.
- Local Arrangements Committee member. ACM Conference on Computer and Communications Security 2010 in Chicago, IL.
- Local Arrangements Committee member. ACM Conference on Computer and Communications Security 2009 in Chicago, IL.
- General Chair for the fourth Midwest Security Workshop, Chicago, UIC campus, October 2007.

Invited Participant

- Invited Tutorial talk on Web Application Security. 24th Annual Computer Applications Security Conference (ACSAC) 2008.
- Invited Tutorial talk on Web Application Security. 23rd Annual Computer Applications Security Conference (ACSAC) 2007.

Teaching Reviews

- UIC Award for Excellence in Teaching. 2015. (University-level teaching award, about 3-4 of 2000 faculty at UIC receive it in any year.)
- Received a perfect 5.0 / 5.0 feedback score for teaching (Spring 2012).
- Awarded the UIC Teaching Recognition Program Award. 2010-11.
- Awarded the UIC College of Engineering Award for Excellence in Teaching, 2007.

Program Creation

Led to the creation of three programs at the Ph.D., M.S. and B.S. levels at UIC.
- Lead a team of 15 faculty to establish the NSF-funded PhD program on Electronic Security and Privacy. Currently the program has 12 students. Three PhDs have graduated, and three students have received faculty job offers at universities in the US.
- Established the DHS-STEM funded M.S. program (with Robert Sloan and Rigel Gjomemo).
- Established the NSF funded Scholarships for Service program (with Robert Sloan and Rigel Gjomemo). Currently, the program has graduated about a dozen students.

Research Lab and Center Establishment

- Co-founded the Center for RITES (Research and Instructions for Technologies for Electronic Security). Currently serving as director. The center has 14 associated faculty.
- Founded the Systems & and Internet Security Laboratory (SISL) at UIC (`http://www.sisl.rites.uic.edu`).

Curriculum contributions

- Developed and co-taught an interdisciplinary class on "Electronic Security and Privacy Foundations" (with C. Ranganathan of CBA), in Fall 2013.
- Developed and taught an advanced graduate course titled "Advanced Web and E-voting Security", Spring 2009. First enrollment of 20 students.
- Designed and taught an undergraduate course in Computer Security (titled Building Secure Systems) starting Fall 2005 semester.
- Completely revised the class on Compiler Design and refocused it on "hands-on" practical compiler implementation.
- Led a successful effort on CNSS curriculum certification for computer security courses at UIC. UIC curriculum now complies with CNSS standards 4011 and 4014E, certified up to 2014.

UNIVERSITY SERVICE

- ❑ University Library Committee, 2015 onwards.
- ❑ Chair, Faculty Recruiting Committee, 2015-16.
- ❑ Member, Faculty Recruiting Committee, 2014-15, 2012-13.
- ❑ Graduate Committee, Department of Computer Science, UIC. 08-2012 - 07-2013.
- ❑ Chair, Computer Committee, Dept of Computer Science, UIC. 08/2010 - 07-2013.
- ❑ Reviewer for UIC OVCR Internal Proposal Competition. March 2012.
- ❑ Member, Department advisory committee, Dept. of Computer Science, UIC. 2010-11. (Elected member).
- ❑ Presenter and Panelist, OVCR Workshop on NSF CAREER Proposal writing, 2010.
- ❑ Faculty Advisor, ACM-Sigmobile student chapter.
- ❑ College Representative, UIC Faculty Senate, 08/2005 - 05/2008 (Elected member).
- ❑ University Senate External Relations Committee 08-2005 - present. (Elected member)
- ❑ Faculty-in-Residence, UIC, 2007-09.
- ❑ Faculty Associate, UIC Campus Housing, 08/2005 - 15/2006
- ❑ Member, Colloqium Committee, Dept of Computer Science, UIC. 01/2005 - Present.
- ❑ Member, Undergraduate Committee, Dept of Computer Science, UIC. 01/2005 - Present.
- ❑ Member, Computer Committee, Dept of Computer Science, UIC. 01/2005 - Present.
- ❑ Member, Department advisory committee, Dept. of Computer Science, UIC. 08-2008-07-2009, 08-2005 -07-2006. (Elected member).
- ❑ Computer Science Grad student Executive Council member, Dept. of Computer Science, Stony Brook University. 08/2000 - 07/2001 (Elected member).

POST-DOCTORAL SUPERVISION

- ❑ Birhnau Eshete. Feb 2013 onwards.

PAST POST-DOCTORAL SUPERVISION

- ❑ Prithvi Bisht. June 2011- Sept 2012.
- ❑ Tim Hinrichs. Sep 2011 - May 2013. (jointly with Lenore Zuck).
- ❑ Phu H. Phung. Nov 2012 - Aug 2015. Now Assistant Professor of Computer Science at University of Dayton.
- ❑ Rigel Gjomemo. Jan 2012 - Aug 2014. Now Visiting Research Assistant Professor at University of Illinois at Chicago.

PH.D. STUDENT ADVISING

- ❑ Abeer Alhuzhali. Thesis topic: Automated exploit generation for web applications. Expected graduation. Dec 2017.
- ❑ Sadegh Momeni. Thesis topic: Advanced and Persistent Threat Detection and Forensics. Expected graduation. May 2018.
- ❑ Aishah Aseeri. Expected graduation. 2019.

PAST PH.D. ADVISEES

- ❑ Maliheh Monshizadeh. (Thesis title: Inferring Specifications for Web Applications) graduation: December 2016. (Offered an assistant professor of computer science position at University of Albany.) First employment: Post-doctoral Associate, University of Wisconsin.
- ❑ Pratik Narang. (co-adivsed with Prof. Chittaranjan Hota from BITS, Pilani, Hyderabad).
- ❑ Kalpana Gondi. (co-advised with A. Prasad Sistla). (Thesis title: Program Transformation Techniques for Erasing Sensitive Data in Sequential and Concurrent Applications). October 2013. Current Employment: Security Engineer, Amazon.
- ❑ Prithvi Bisht. Ph.D. Thesis title: *Improving Web Security by Automated Extraction of Web Application Intent*. May 2011. Current Employment: Web Security Researcher. Adobe Systems Inc. (Honors: Nationwide top 10 finalist for Research award from NYU at CSAW 2010).
- ❑ Mike Ter Louw. Ph.D. Thesis title: *Towards Safe Rendering of Untrusted Third-Party Content in Existing Web Browsers*. October 2010. First Employment: Network Security Research Engineer, LGS Innovations. (Honors at UIC: Best Applied Cybersecurity Paper Award from NYU at CSAW 2009, AEFCA Fellow 2009-10, Caterpillar Homeland Security Scholar 2008-09).

IGERT PH.D. STUDENTS

Note: These students are fellows / associates of the IGERT program that I direct at UIC.

- ❑ Federica Fornaciari. Department of Communication. May 2014. Now Assistant Professor at National University, San Diego.
- ❑ John C. Pendergrass. Department of Management Information Sciences. May 2014. Now Assistant Professor at Northern Illinois University.
- ❑ Hale Thompson. Applied Health Sciences. Dec 2015. Now tenure-track assistant professor at Rush university school of Medicine.
- ❑ Stacy Blasiola. Department of Communciation. May 2017 (expected).
- ❑ Renee Powers. Department of Communication. May 2017. (expected)
- ❑ Peter Snyder. Department of Computer Science. May 2017. (expected)
- ❑ Ivan Brugere. Department of Computer Science. May 2017. (expected)
- ❑ Nathaniel Bassett. Department of Communication. May 2020 (expected)
- ❑ Jason Archer. Department of Communication. May 2020 (expected).
- ❑ Atiya Avery. Department of Management Information Sciences. May 2020 (expected).
- ❑ Carrie O'Connell. Department of Communication. May 2021 (expected).

PAST M.S. AND B.S. ADVISEES

- ❑ Vijay Sai Prashanth Kommini. M.S. (with project). Project title*Vulnerability Detection in CMS extensions*. Dec 2016 (expected.)
- ❑ Edmund Ballou. M.S. (with project). Project title *Leveraging Static Analysis Tools for Improving Usability of Memory Error Sanitization Compilers*. Dec 2015.
- ❑ Sohaib Choudhary. B.S. (with undergraduate project). Project title*Trend-based Web Crawler to Harvest Potentially Malicious URLs*. May 2014.
- ❑ Neha Jayaprakash. M.S. (with project). Project title *Automatic Detection of Vulnerabilities in Android Apps via Input Validation Analysis* . Dec 2014.
- ❑ Siddhesh Kulkarni. M.S. (with project). Project title *Analysis of Android applications for cloning vulnerabilities*.
- ❑ Danielle Gallingani. M.S. (with thesis). May 2013.
- ❑ Sriram Manoharan. M.S. (with project). May 2013.
- ❑ Visagan Vaithyanathan. M.S. (with project). May 2013.
- ❑ Swati Gore. M.S. (with project). Project title: *A Social Bargaining Application for Android*. Oct 2012.
- ❑ Karthik Thotta Ganesh. M.S. (with project). Project title: *Ad Policy Generator for the AdJail Framework*. May 2011. First employment: Cigital Inc.
- ❑ Praveen Venkatachari. M.S. (with project). Project title: *Evaluation of SWIPE: A tool for sensitive data lifetime reduction*. Nov 2011.
- ❑ Nazari Skrupsky. B.S. (with senior project). Project title: *NoTamper: Automated Blackbox detection of Parameter Tampering Vulnerabilities*. Aug 2010. (REU supported).
- ❑ Radoslaw Borbowicz. B.S. (with senior project). Project title: *NoTamper: Automated Blackbox detection of Parameter Tampering Vulnerabilities*. Aug 2010. (REU supported).
- ❑ Rohini Krishnamurthi, M.S. (with project). Project title: *Methods and Applications for Safe Execution of Untrusted JavaScript*. Graduation: Spring 2010. First Employment: Photon Infotech, India.
- ❑ Balasubramanian Ramachandran. M.S. (with project). Project title: *Autograder: A system for automatic grading of programming assignments*. Graduation: Dec 2009. First Employment: Microsoft Corporation.
- ❑ Chris Erickson, B.S. (with senior project). Dec 2010. (REU supported).
- ❑ Chris Pable, B.S. (with senior project). Dec 2010.
- ❑ Megha Chauhan, M.S. (project option). Project title: *An Efficient Implementation of Candidate Evaluation in a Java Environment*. Dec 2008. First employment: Polymedia Inc.
- ❑ Tanushree Varshney, M.S. (project option). Project title: *Supporting Character-level tracking in Dynamic Candidate Evaluation*. Aug 2008. First employment: Faculty member, KK Education Institute, Jabalpur, India.
- ❑ Jimish Jobanputra, M.S. (project option). Project title: *Robust Enforcement of Confidentiality Policies*. July 2008. First employment: Morning Star Inc.
- ❑ Antonio Longo. M.S. (with thesis). Thesis title: *Techniques for addressing confidentiality threats by*

candidate evaluations. May 2008. First Employment: TechEdge Inc., Italy.
- ❑ Roberto Capizzi. M.S. (with thesis). Thesis title: *Protecting Confidentiality through shadow executions*. May 2008. First Employment: Accenture Inc., Italy.
- ❑ Doo San Sim, M.S. (project option). Project title: *A distributed safe execution environment for system administration trials*. November 2007. First employment: VMware Inc., Palo Alto, CA.
- ❑ Jin Soon Lim, M.S. (project option). Project title: *Policy-based Runtime Monitor for Browser Extensions*. July 2007. First Employment: Microsoft Coroporation, Redmond, WA.
- ❑ Raj Swaminathan. Project Title: *A Static Information Flow Analysis Tool for Identifying Sensitive Program Regions*. First employment: Motorola Research Labs, Schaumburg, IL.
- ❑ Tejas Khatiwala. M.S. (With thesis). Thesis title: *A Program Partitioning Approach for Enforcement of Confidentiality Policies*. Thesis defense date: Oct 30, 2006. First employment: VMWare Inc.
- ❑ Michael Leonhard, B.S. (with senior project) December 2006. Project title: *A comparison of three random password generators.* First appointment: Amazon Inc.

PAST M.S. AND B.S. ADVISEES

Note: Each of these students was advised by me in the junior and senior years about curriculum, internships as well as their post-graduation employment.
- ❑ Michael Cueno. May 2013.
- ❑ Michael Thompson. May 2013.
- ❑ Charles Myers. May 2014.
- ❑ Devina Dhawan. May 2014.
- ❑ Miguel Chavarria. May 2014.
- ❑ Sergio Barajas. May 2014.
- ❑ Mikael Son. May 2014.
- ❑ Jaime Ramirez. May 2014.
- ❑ Anna Anderson. May 2015.
- ❑ Bridget Basan. Dec 2015.
- ❑ David Pisanki. Currently in the program.
- ❑ Wesley Clark. Currently in the program.
- ❑ Janki Patel. Currently in the program.
- ❑ Erik Thorsen. Currently in the program.
- ❑ Kunal Shah. Currently in the program.
- ❑ Michael Baccia. Currently in the program.
- ❑ Oliver Hui. Currently in the program.
- ❑ Tony Wong. Currently in the program.
- ❑ Daniel Moreno. Currently in the program.

SELECTED TALKS / PANELS
- ❑ Greater Chicago Systems Area Workshop. Apr 2015.
- ❑ Internation Workshop on Cybercrime. May 2014.
- ❑ Northwestern University, May 2013.
- ❑ University of Texas at Austin, May 2013.
- ❑ BITS Pilani-Hyderabad, India, January 2013.
- ❑ Pondicherry University, December 2012.
- ❑ IGERT PI Meeting, June 2012.
- ❑ Indian Institute of Science, Bangalore,India, December 2011.
- ❑ Illinois Institute of Technology, November 2011.
- ❑ Chalmers University of Technology, Sweden, October 2011.
- ❑ Keynote Speaker, International Conference on Information Systems Security (ICISS), Dec 2010.
- ❑ Invited Panelist, NSF Workshop on Cyber-security Data for Experimentation (CSDE), Airlington VA, Aug 2010.
- ❑ University of Texas at Dallas, Aug 2010.
- ❑ University of Michigan, Oct 2009.
- ❑ Stony Brook University, Sep 2009.
- ❑ Symposium on Usable Security and Privacy (USP), National Academy of Sciences, July 2009.

- ❑ Office of Science and Technology, France, July 2009.
- ❑ Accenture Research Labs, May 2009.
- ❑ Dagstuhl Seminar on Web Security. Mar 2009.
- ❑ Center for Education and Research in Information Assurance and Security (CERIAS), Purdue University, Nov 2007.
- ❑ Motorola Research Labs Security group. October 18, 2007.
- ❑ Ebay Information Security Strategy Group. October 2007.
- ❑ Department of Computer Science, University of Missouri, Kansas city. April 2005.
- ❑ Invited panel speaker: 18th Annual Computer Applications Security Conference (ACSAC) 2002.
- ❑ Several talks (more than 20) between 2001 and 2006.

SERVICE TO GENERAL PUBLIC

- ❑ Served in the blue ribbon technical panel that investigated delays in the Cook County election in November 2006.

REFERENCES

Available on request.