

CURRICULUM VITAE

Rigel Gjomemo

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EDUCATION PhD. Computer Science, University of Illinois at Chicago 2012
M.S. Electrical Engineering, University of Illinois at Chicago 2006
M.S. Information Engineering, Politecnico di Torino 2005
B.S. Information Engineering, Politecnico di Torino 2004

RESEARCH AND TEACHING EXPERIENCE **Dept. of Computer Science, University of Illinois at Chicago** Aug 2014 – present
Visiting Research Assistant Professor

Dept. of Computer Science, University of Illinois at Chicago May 2012 – Aug 2014
Associate Director, IGERT Program in Electronic Security and Privacy

RESEARCH INTERESTS Software Analysis and Security
Web Application Security
Attacks Detection and Prevention
Application of Compiler Techniques to Security

AWARDS AND HONORS Best Paper Award at the 2016 IEEE Conference on Quality, Reliability and Security (QRS), 2016

First place at the Cyberdefense Competition, Argonne National Laboratory, 2017

*PUBLICATIONS***Conference Papers**

1. Md Nahid Hossain, Sadegh M. Milajerdi, Junao Wang, Birhanu Eshete, Rigel Gjomemo, R. Sekar, Scott Stoller, V. N. Venkatakrisnan. *SLEUTH: Real-time Attack Scenario Reconstruction from COTS Audit Data*. **USENIX Security Symposium 2017**.
2. Abeer Alhuzali, Birhanu Eshete, Rigel Gjomemo, V. N. Venkatakrisnan. *Chainsaw: Chained Automated Workflow-based Exploit Generation*. **ACM Conference on Computer and Communications Security 2016 (CCS 2016)**.
3. Rigel Gjomemo, Phu H. Phung, Edmund Ballou, Kedar S. Namjoshi, V. N. Venkatakrisnan, Lenore D. Zuck. *Leveraging Static Analysis Tools for Improving Usability of Memory Error Sanitization Compilers*. **IEEE Conference on Quality, Reliability and Security (QRS 2016)**. Best Paper Award!
4. Daniele Galligani, Rigel Gjomemo, V. N. Venkatakrisnan, Stefano Zanero. *Practical Exploit Generation for Intent Message Vulnerabilities in Android*. **5th ACM Conference on Data and Application Security and Privacy (CODASPY 2015)**.
5. Rigel Gjomemo, Kedar S. Namjoshi, Phu H. Phung, V. N. Venkatakrisnan, Lenore D. Zuck. *From Verification to Optimizations*. **International Conference on Verification, Model Checking, and Abstract Interpretation (VMCAI 2015)**.
6. Rigel Gjomemo, Hafiz Malik, Nilesh Sumb, V. N. Venkatakrisnan, Rashid Ansari. *Digital Check Forgery Attacks on Client Check Truncation Systems*. **Financial Cryptography 2014**.
7. Isabel F. Cruz, Rigel Gjomemo, Greg Jarzab. *An interoperation framework for secure collaboration among organizations*. **ACM SIGSPATIAL International Workshop on Security and Privacy in GIS and LBS (SPRINGL 2010)**.
8. Isabel F. Cruz, Rigel Gjomemo, Benjamin Lin, Mirko Orsini. *A Constraint and Attribute Based Security Framework for Dynamic Role Assignment in Collaborative Environments*. **International Conference on Collaborative Computing: Networking, Applications and Worksharing (CollaborateCom 2008)**.
9. Isabel F. Cruz, Rigel Gjomemo, Mirko Orsini. *A Secure Mediator for Integrating Multiple Level Access Control Policies*. **Knowledge-Based Intelligent Information & Engineering Systems (KES 2008)**.

Technical Reports/Manuscripts

1. Birhanu Eshete, Rigel Gjomemo, Md Nahid Hossain, Sadegh Momeni, R. Sekar, Scott Stoller, V. N. Venkatakrisnan, Junao Wang. *Attack Analysis Results for Adversarial Engagement 1 of the DARPA Transparent Computing Program*. **Computer Research Repository (CoRR abs/1610.06936)**.

Book Chapters

1. Rigel Gjomemo, Isabel F. Cruz. *Location-Based Access Control Using Semantic Web Technologies*. **Geospatial Semantics and the Semantic Web 2011**.

Patents

1. V.N. Venkatakrisnan, 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.

GRANTS

I have been a senior researcher and Co-PI in several security-related and interdisciplinary grants funded primarily by NSF and DARPA.

1. Co-PI. *EDU: CySec: A Cybersecurity Collectable Card Game for Children*. National Science Foundation. \$296,000. PI: Michael Thompson.
2. Senior Researcher. *Self-Certifying Compilation and its Applications*. National Science Foundation. \$845,000. 09/2016-08/2019. PI: Lenore Zuck, Co-PIs: A. Prasad Sistla, V.N. Venkatakrishnan, Kedar. A. Namjoshi.
3. Senior Researcher. *MARPLE: Mitigating APT Damage by Reasoning with Provenance in Large Enterprise Networks*. Defense Advanced Research Projects Agency. 07/2015-06/2019. This is a project with IBM Research as Lead (J.R. Rao, PI, Suresh Chari, Xiaoqui Shu and Heqing Huang), University of Illinois at Chicago (V.N. Venkatakrishnan, PI), Stony Brook University (R. Sekar, Scott Stoller and Leman Akoglu as PIs), Northwestern University (Yan Chen, PI).
4. Project Coordinator and Student Advisor. *HS-STEM*. U.S. Department of Homeland Security. \$250,000. 09/2012-09/2015. (PI, V.N. Venkatakrishnan. Co-PIs: Robert Sloan, Jon Solworth.)
5. Project Coordinator and Student Advisor. *SFS Scholarships in Information Assurance*. National Science Foundation. \$2,021,669. 09/2013 - 08/2018.
6. Senior Researcher. *Defensive Optimizing Compilation*. Defense Advanced Research Projects Agency. 06/2012 - 06/2015. (P.I.s Lenore Zuck, V.N. Venkatakrishnan (UIC), Jens Palsberg (UCLA) and Kedar Namjoshi (Bell Labs).)
7. Associate Director. *IGERT: Electronic Security and Privacy: Technological, Human / Social, Enterprise and Legal Considerations*. National Science Foundation. \$3,200,000. 09/2011-08-2016. The IGERT program is composed of a inter-disciplinary team of 15 faculty spread across six departments and four colleges (engineering, liberal arts, business and applied health sciences) of UIC. (P.I. V.N. Venkatakrishnan. Co-PIs: Ranga Chandrasekaran, Steve Jones, Robert Sloan, Annette Valenta.)

PROFESSIONAL ACTIVITIES

External Reviewer

- Network and Distributed Systems Security Symposium (NDSS'16)
- Network and Distributed Systems Security Symposium (NDSS'15)
- European Symposium on Research in Computer Security (ESORICS' 2013)