

CURRICULUM VITAE OF ANDREW G. WEST

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EDUCATION

Ph.D.	Computer and Information Science	University of Pennsylvania	Spring 2013
M.S.E.	Computer and Information Science	University of Pennsylvania	Spring 2010
B.Sc.	Computer Science (w/honors)	Washington & Lee University	Spring 2007

CURRENT POSITION

Verisign, Strategy & Analytics / Verisign Labs – Sr. Research Scientist – *June 2016 onward*
Verisign, Verisign Labs – Sr. Research Scientist / Research Scientist – *June 2013-June 2016*

In my role with the Strategy & Analytics group I apply deep learning, machine learning, forecasting, and other data science techniques across Verisign’s domain name business and associated marketing efforts. While now more focused on internal insights, I continue to publish research and pursue intellectual property via my affiliation with Verisign Labs.

RESEARCH INTERESTS

Current Specializations

Deep learning, machine learning, forecasting, domains, domain name lifecycle, crowdsourcing, Internet measurement, NLP, big data, data science, Web 2.0 security, anti-abuse, underground economies, reputation management, Wikipedia.

Dissertation Focus

Leveraging machine-learning and behavioral modeling for anti-abuse (*e.g.*, vandalism, spam, copyright violation) analysis and detection in Web 2.0 information systems, particularly those with user-generated and collaborative semantics (*e.g.*, wikis).

INTELLECTUAL PROPERTY

- [1] “Detecting and Mitigating Registrar Collusion in Drop-Add Acquisitions of Domain Names”. Arah Molavi Kakhki, Andrew G. West, Nipun Jawalkar, and Vincenzo Russo. *U.S. Patent Application 14/985569 (December 31, 2015), Publication 2017/0195285 (July 6, 2017)*. Patent Pending.

PUBLICATIONS

Conference and Workshop Papers

- [1] “Analyzing the Keystroke Dynamics of Web Identifiers”. Andrew G. West. In *WebSci ’17: Proc. of the 9th Intl. ACM Web Science Conf.*, pp. 181–190. Troy, NY, USA. June 2017.
- [2] “Chatter: Classifying Malware Families using System Event Ordering”. Aziz Mohaisen, Andrew G. West, Allison Mankin, and Omar Olrawi. In *CNS ’14: Proc. of the 2nd IEEE Conf. on Comm. and Network Security*, pp. 283–291. San Francisco, CA, USA. Oct. 2014.

- [3] “ADAM: Automated Detection and Attribution of Malicious Webpages”. Ahmed E. Kosba, Aziz Mohaisen, Andrew G. West, Trevor Tonn, and Huy Kang Kim. In *WISA '14: Proc. of the 15th International Workshop on Information Security Applications, LNCS 8909 (K.H. Rhee and J.H. Yi eds.)*, pp. 3–16. Jeju Island, South Korea, August 2014.
- [4] “Metadata-driven Threat Classification of Network Endpoints Appearing in Malware”. Andrew G. West and Aziz Mohaisen. In *DIMVA '14: Proceedings of the 11th Conference on Detection of Intrusions and Malware & Vulnerability Assessment, LNCS 8550 (S. Dietrich ed.)*, pp. 152–171. Egham, UK. July 2014.
- [5] “On the Privacy Concerns of URL Query Strings”. Andrew G. West and Adam Aviv. In *W2SP '14: Proc. of the 8th Wkshp. on Web 2.0 Sec. and Privacy*. San Jose, CA. May 2014.
- [6] “Towards Content-driven Reputation for Collaborative Code Repositories”. Andrew G. West and Insup Lee. In *WikiSym '12: Proceedings of the Eighth International Symposium on Wikis and Open Collaboration*, pp. 13:1–13:4. Linz, Austria. August 2012.
- [7] “Spamming for Science: Active Measurement in Web 2.0 Abuse Research”. Andrew G. West, Pedram Hayati, Vidyasagar Potdar, and Insup Lee. In *WECSR '12: Proceedings of the Third Workshop on Ethics in Computer Security Research, LNCS 7398 (J. Blythe, S. Dietrich, and L.J. Camp eds.)*, pp. 98-111. Kralendijk, Bonaire. March 2012.
- [8] “Autonomous Link Spam Detection in Purely Collaborative Environments”. Andrew G. West, Avantika Agrawal, Phillip Baker, Brittney Exline, and Insup Lee. In *WikiSym '11: Proceedings of the Seventh International Symposium on Wikis and Open Collaboration*, pp. 91–100. Mountain View, CA, USA. October 2011.
- [9] “What Wikipedia Deletes: Characterizing Dangerous Collaborative Content”. Andrew G. West and Insup Lee. In *WikiSym '11: Proceedings of the Seventh International Symposium on Wikis and Open Collaboration*, pp. 25–28. Mountain View, CA, USA. October 2011.
- [10] “Link Spamming Wikipedia for Profit”. Andrew G. West, Jian Chang, Krishna Venkatasubramanian, Oleg Sokolsky, and Insup Lee. In *CEAS '11: Proceedings of the Eighth Annual Collaboration, Electronic Messaging, Anti-Abuse, and Spam Conference*, pp. 152–161. Perth, AUS. September 2011. (co-Best Paper Award).
- [11] “Towards the Effective Temporal Association Mining of Spam Blacklists”. Andrew G. West and Insup Lee. In *CEAS '11: Proceedings of the Eighth Annual Collaboration, Electronic Messaging, Anti-Abuse, and Spam Conference*, pp. 73–82. Perth, AUS. September 2011.
- [12] “Multilingual Vandalism Detection using Language-Independent & Ex Post Facto Evidence”. Andrew G. West and Insup Lee. In *PAN-CLEF '11: Notebook Papers on Uncovering Plagiarism, Authorship, and Social Software Misuse*, Amsterdam. Sept. 2011.
- [13] “ToMaTo: A Trustworthy Code Mashup Development Tool”. Jian Chang, Krishna K. Venkatasubramanian, Andrew G. West, Sampath Kannan, Oleg Sokolsky, Myuhng Joo Kim, and Insup Lee. In *MASHUPS '11: Proceedings of the 5th International Workshop on Web APIs and Service Mashups*, Lugano, Switzerland. September 2011.
- [14] “AS-TRUST: A Trust Quantification Scheme for Autonomous Systems in BGP”. Jian Chang, Krishna Venkatasubramanian, Andrew G. West, Sampath Kannan, Boon Thau Loo, Oleg Sokolsky, and Insup Lee. In *TRUST '11: Proc. of the 4th International Conference on Trust and Trustworthy Computing, LNCS 6740*, pp. 262–276. Pittsburgh, PA, USA. June 2011. (A preliminary version was published as UPenn Technical Report MS-CIS-10-25).

- [15] “Wikipedia Vandalism Detection: Combining Natural Language, Metadata, and Reputation Features”. B. Thomas Adler, Luca de Alfaro, Santiago M. Mola-Velasco, Paolo Rosso, and Andrew G. West. In *CICLing ‘11: Proceedings of the 12th International Conference on Intelligent Text Processing and Computational Linguistics, LNCS 6609*, pp. 277–288. Tokyo, Japan. February 2011.
- [16] “Spam Mitigation using Spatio-Temporal Reputations from Blacklist History”. Andrew G. West, Adam J. Aviv, Jian Chang, and Insup Lee. In *ACSAC ‘10: Proceedings of the 26th Annual Computer Security Applications Conference*, pp. 161–170. Austin, TX, USA. Dec. 2010. (A preliminary version was published as UPenn Technical Report MS-CIS-10-04).
- [17] “Detecting Wikipedia Vandalism via Spatio-Temporal Analysis of Revision Metadata”. Andrew G. West, Sampath Kannan, and Insup Lee. In *EUROSEC ‘10: Proceedings of the Third European Workshop on System Security*, pp. 22–28. Paris, France. April 2010. (A preliminary version was published as UPenn Technical Report MS-CIS-10-05).
- [18] “QuanTM: A Quantitative Trust Management System”. Andrew G. West, Adam J. Aviv, Jian Chang, Vinayak S. Prabhu, Matt Blaze, Sampath Kannan, Insup Lee, Jonathan M. Smith, and Oleg Sokolsky. In *EUROSEC ‘09: Proceedings of the Second European Workshop on System Security*, pp. 28–35. Nuremberg, Germany. March 2009.

Book Chapters, Journal Papers, and Periodicals

- [19] “Wikipedia and Medicine: Quantifying Readership, Editors, and the Significance of Natural Language”. James M. Heilman and Andrew G. West. *Journal of Medical Internet Research*, 17(3): pp. e62. March 2015.
- [20] “Measuring Privacy Disclosures in URL Query Strings”. Andrew G. West and Adam J. Aviv. *IEEE Internet Computing*, 18(6): pp. 52–59. November/December 2014.
- [21] “AS-CRED: Reputation and Alert Service for Inter-domain Routing”. Jian Chang, Krishna K. Venkatasburamanian, Andrew G. West, Sampath Kannan, Insup Lee, Boon Thau Loo, and Oleg Sokolsky. *IEEE Systems, special issue on Security and Privacy in Complex Systems*, 7(3): pp. 396–409. September 2013. (A preliminary version was published as UPenn Technical Report MS-CIS-10-17).
- [22] “Analyzing and Defending Against Web-based Malware”. Jian Chang, Krishna K. Venkatasburamanian, Andrew G. West, and Insup Lee. *ACM Computing Surveys*, 45(4): pp. 49:1–49:35. August 2013.
- [23] “Trust in Collaborative Web Applications”. Andrew G. West, Jian Chan, Krishna K. Venkatasubramanian, and Insup Lee. *Future Generation Computer Systems, special section on Trusting Software Behavior*, 28(8): pp. 1238–1251. Elsevier Press, October 2012. (A preliminary version was published as UPenn Technical Report MS-CIS-10-33).
- [24] “Open Wikis and the Protection of Institutional Welfare”. Andrew G. West and Insup Lee. *Research Bulletin, EDUCAUSE Center for Applied Research*, Boulder, CO, USA, Feb. 2012.
- [25] “An Evaluation Framework for Reputation Management Systems”. Andrew G. West, Insup Lee, Sampath Kannan, and Oleg Sokolsky. Book chapter in *Trust Modeling and Management in Digital Environments: From Social Concept to System Development* (Zheng Yan, ed.), pp. 282–308. Information Science Reference, Hershey, PA, USA, 2010.

Technical and Internal Reports

- [26] “Damage Detection and Mitigation in Open Collaboration Applications”. Andrew G. West. *PhD thesis, University of Pennsylvania*, May 2013.

- [27] “CleanURL: A Privacy Aware Link Shortener”. Daniel Kim, Kevin Su, Andrew G. West, and Adam J. Aviv. *Technical Report MS-CIS-12-12, University of Pennsylvania, Department of Computer and Information Science*, July 2012.
- [28] “Calculating and Presenting Trust in Collaborative Content”. Andrew G. West. *Technical Report MS-CIS-10-33, University of Pennsylvania, Department of Computer and Information Science*, October 2010 (In partial fulfillment of the WPEII requirement).
- [29] “AS-TRUST: A Trust Characterization Scheme for Autonomous Systems in BGP”. Jian Chang, Krishna K. Venkatasubramanian, Andrew G. West, Sampath Kannan, Boon Thau Loo, Oleg Sokolsky, and Insup Lee. *Technical Report MS-CIS-10-25, University of Pennsylvania, Department of Computer and Information Science*, August 2010.
- [30] “AS-CRED: Reputation Service for Trustworthy Inter-domain Routing”. Jian Chang, Krishna K. Venkatasubramanian, Andrew G. West, Sampath Kannan, Insup Lee, Boon Thau Loo, and Oleg Sokolsky. *Technical Report MS-CIS-10-17, University of Pennsylvania, Department of Computer and Information Science*, April 2010.
- [31] “Detecting Wikipedia Vandalism via Spatio-Temporal Analysis of Revision Metadata”. Andrew G. West, Sampath Kannan, and Insup Lee. *Technical Report MS-CIS-10-05, University of Pennsylvania, Dept. of Computer and Information Science*, February 2010.
- [32] “Mitigating Spam Using Spatio-Temporal Reputation”. Andrew G. West, Adam J. Aviv, Jian Chang, and Insup Lee. *Technical Report MS-CIS-10-04, University of Pennsylvania, Department of Computer and Information Science*, February 2010.

Demonstrations, Tutorials, and Posters (with proceedings)

- [33] “ADAM: Automated Detection and Attribution of Malicious Webpages”. Ahmed E. Kosba, Aziz Mohaisen, Andrew G. West, and Trevor Tonn. Poster. In *CNS 13: Proc. of the First IEEE Conf. on Comm. and Network Sec.*, pp. 399–400. Washington D.C., USA. Oct. 2013.
- [34] “Babble: Identifying Malware by Its Dialects”. Aziz Mohaisen, Omar Alrawi, Andrew G. West, Allison Mankin, and Trevor Tonn. Poster. In *CNS 13: Proc. of the First IEEE Conf. on Comm. and Network Sec.*, pp. 407–408. Washington D.C., USA. Oct. 2013.
- [35] “STiki: An Anti-Vandalism Tool for Wikipedia Using Spatio-Temporal Analysis of Revision Metadata”. Andrew G. West, Sampath Kannan, and Insup Lee. Formal demonstration. In *WikiSym ‘10: Proceedings of the Sixth International Symposium on Wikis and Open Collaboration*, Gdańsk, Poland. July 2010.
- [36] “Spatio-Temporal Analysis of Wikipedia Metadata and the STiki Anti-Vandalism Tool”. Andrew G. West, Sampath Kannan, and Insup Lee. Poster. In *WikiSym ‘10: Proceedings of the Sixth Intl. Symposium on Wikis and Open Collaboration*, Gdańsk, Poland. July 2010.

Presentations and Talks (without proceedings)

- [37] “Measuring Privacy Disclosures in URL Query Strings”. Presented at *United States Naval Academy*. Annapolis, MD, USA. September 2014.
- [38] “Measuring Privacy Disclosures in URL Query Strings”. Poster at *USENIX Security Symposium*. San Diego, CA, USA. August 2014.
- [39] “Wikipedia and Medicine”. Presented with James Heilman at *Wikimania ‘14: The International Wikimedia Conference*. London, UK. August 2014.
- [40] “Securing Wiki Platforms Against Malicious Contributions”. Presented at *WikiSym ‘12 – Doctoral Symposium*. Linz, Austria. August 2012.
- [41] “Securing Wiki Platforms Against Malicious Contributions”. Presented at *Polytechnic University of Catalonia*. Barcelona, Spain. June 2012.

- [42] “Anti-Vandalism Research: The Year in Review”. Presented at *Wikimania ‘11: The International Wikimedia Conference*. Haifa, Israel. August 2011.
- [43] “Autonomous Detection of Collaborative Link Spam”. Presented at *Wikimania ‘11: The International Wikimedia Conference*. Haifa, Israel. August 2011.
- [44] “Protecting Wikipedia from Vandalism, Spam, and Dangerous Content”. Presented at *Columbia University Security Seminar*. New York, NY, USA. March 2011.
- [45] “Spatio-Temporal Analysis of Revision Metadata and the STiki Anti-Vandalism Tool”. Presented at *Wikimania ‘10: The Intl. Wikimedia Conference*. Gdańsk, Poland. July 2010.
- [46] “An Introduction to L^AT_EX”. Presented at *UPenn, School of Engineering and Applied Science, Technical Communication Program*. Philadelphia, PA, USA. October 2008.

Undergraduate Writings

- [47] “Bound Optimization for Parallel Quadratic Sieving Using Large Prime Variations”. Andrew G. West. *Undergraduate Honor’s Thesis, Washington & Lee University*. May 2007.
- [48] “Optimized Parallel Implementation of the Quadratic Sieve Factorization Algorithm”. Andrew G. West. *Washington and Lee Journal of Science*, 8(2):25–26, 2007.

SOFTWARE & DATA SETS

Most resources are available via the author’s website (otherwise, contact directly) and all will be shared to the greatest extent permissible. All code is released under open-source licensing:

- STIKI: A wiki anti-vandalism tool consisting of a back-end engine for real-time revision processing and a user-facing GUI that presents probable vandalism to end users. Also includes anti-spam logic. Has been used to remove 1.1+ *million* unconstructive contributions from English Wikipedia and remains in active development. *Software*.
- WIKIAUDIT: Provided an IP range this tool produces a report of wiki contributions from those addresses, with heuristics to detect unconstructive changes. Useful for network administrators and investigations into author bias. *Software*.
- REPUTATION SIMULATOR: A test framework for reputation management algorithms. New techniques can be easily interfaced into the test bed, where various attacks are simulated, with robustness/performance metrics produced as output. *Software*.
- VANDALISM CORPUS: 5.7 million automatically-parsed (per ex post facto evidence) and 5,000 manually-confirmed incidents of vandalism on English Wikipedia. *Corpus*.
- DATA COLLECTIONS: Extensive histories (and code to obtain/process/access data) from: (a) Spamhaus blacklists, (b) Google Safe Browsing, (c) Wikipedia’s metadata, hyperlink, and category infrastructure, and (d) Wikipedia page view statistics. *Data collections*.

MEDIA ATTENTION

- “Is Verisign about to change the expired domain drop catching game?”. Andrew Alleman. *Domain Name Wire*. July 2017.
- “Wikipedia announces their most viewed articles of 2016”. *SlashDot*. January 2017
- “The most challenging job of the 2016 race: Editing the candidates’ Wikipedia pages”. Chris Alcantara. *The Washington Post*. October 2016.
- “New from Verisign Labs – Measuring Privacy Disclosures in URL Query Strings”. *Between the Dots: Verisign Corporate Blog and CircleID* (sponsored), August 2014.

- “Examining the Popularity of Wikipedia Articles: Catalysts, Trends, and Applications”. Contribution to *Wikipedia Signpost*, 9(6), Feb. 2013 (coverage by R. Rosen for *The Atlantic*, J. Condliffe for *Gizmodo*, A. Toor at *TheVerge.com*, W. Fenlon at *Tested.com*, et al.).
- “What Wikipedia Deletes, and Why”. Alexandra Rice. *The Chronicle of Higher Education: The Wired Campus*, October 2011.
- “Link Spam on Wikis: Attack Models and Mitigation”. Invited contribution to *Follow the Crowd (crowd-computing research blog)*, October 2011.
- “Content Redaction on Wikipedia: Copyright is Biggest Threat”. Invited contribution to *Follow the Crowd (crowd-computing research blog)*, October 2011.
- “Link Spam Research with Controversial Genesis but Useful Results”. *Wikimedia Research Newsletter*, 1(3), September 2011.
- “Deleted Revisions in the Wikipedia”. *Wikimedia Research Newsletter*, 1(2), August 2011.
- “Vandalism Detectors Collaborate”. *Wikipedia Signpost*, 7(8), February 2011.

PROGRAM COMMITTEES, EDITORSHIPS, & OTHER SERVICE

Program Committees

- SIMPLEX ‘16: 8th Workshop on Simplifying Complex Networks for Practitioners (workshop of IEEE ICNP). November 2016. Singapore.
- ACSAC ‘15: 31st Annual Comp. Sec. Applications Conf. Dec. 2015. Los Angeles, CA.
- TrustCom ‘15: 14th IEEE International Conference on Trust, Security, and Privacy in Computing and Communications. August 2015. Helsinki, Finland.
- CSET ‘15: 8th Workshop on Cyber Security Experimentation and Test (workshop of the USENIX Security Symposium). August 2015. Washington DC, USA.
- SIMPLEX ‘15: 7th Workshop on Simplifying Complex Networks for Practitioners (workshop of WWW). May 2015. Florence, Italy.
- ACSAC ‘14: 30th Annual Comp. Sec. Applications Conf. Dec. 2014. New Orleans, LA.
- HotData ‘14: 1st International Workshop on Hot Topics in Big Data and Networking (workshop of ICCCN). August 2014. Shanghai, China.
- SIMPLEX ‘14: 6th Workshop on Simplifying Complex Networks for Practitioners (workshop of WWW). April 2014. Seoul, South Korea.
- TrustID ‘13: 3rd Intl. Symposium on Trust and Identity in Mobile Internet, Computing, and Communications (symposium of IEEE TrustCom). July 2013. Melbourne, Australia.
- iThings ‘12: The IEEE International Conference on Internet of Things. TRACK: *Reliability, Security, Privacy, and Trust*. November 2012. Besançon, France.
- TrustID ‘12: 2nd Intl. Symposium on Trust and Identity in Mobile Internet, Computing, and Communications (symposium of IEEE TrustCom). June 2012. Liverpool, UK.
- TrustID ‘11: 1st Intl. Workshop on Trust and Identity in Mobile Internet, Computing, and Communications (workshop of IEEE TrustCom). November 2011. Changsha, China.
- Joint special track for UIC ‘10 (7th International Conference on Ubiquitous Intelligence and Computing) and ATC ‘10 (Autonomic and Trusted Computing). TRACK: *Pervasive Social Computing*. October 2010. Xi’an, China.

Guest and Delegated Conference/Workshop Reviews

- ICWSM ‘14: Conference on Weblogs and Social Media
- WWW ‘14: World Wide Web Conference
- ACSAC ‘13: Annual Computer Security Applications Conference
- CSCW ‘13: Conference on Computer Supported Cooperative Work
- HEALTHTECH ‘13: Workshop on Health Information Technologies
- ATVA {‘12, ‘09}: Symposium on Automated Technology for Verification and Analysis
- ICCAD {‘12, ‘11}: Conference on Computer-Aided Design
- WH ‘11: Conference on Wireless Health
- ISORC ‘10: Symposium on Object/Component/Service Real-time Distributed Computing
- ICCPS ‘10: Conference on Cyber-Physical Systems
- RV ‘09: Workshop on Runtime Verification
- LCTES ‘09: Conference on Languages, Compilers, and Tools for Embedded Systems
- ICTAC ‘09: Colloquium on Theoretical Aspects of Computing

Journal and Book Editorships

- KSII Transactions on Internet and Info. Systems (KSII TIIS). Dec. 2014 – Jan. 2016.

Guest and Delegated Journal/Book Reviews

(Dates indicate when the review(s) occurred, not the publication year of any particular paper/issue/chapter)

- Expert Systems with Applications (ESWA). Elsevier Press, 2017.
- ACM Transactions on Intelligent Systems and Technology (ACM TIST). ACM Press, 2015.
- KSII Transactions on Internet and Information Systems (KSII TIIS). KSII Online, 2014.
- Future Generation Computer Systems (FGCS) special issue on Trustworthy Data Fusion and Mining in Internet of Things. Elsevier Press, 2014.
- IEEE Transac. on Knowledge and Data Eng. (IEEE TKDE). IEEE Comp. Society, 2014.
- IEEE Transactions on Reliability (IEEE TR) special section on Trustworthy Computing. IEEE Computer Society, 2014.
- ACM Transactions on Internet Technology (ACM TOIT). ACM Press, {2013, 2012}.
- IEEE Transactions on Parallel and Distributed Systems (IEEE TPDS) special issue on Trust, Security, and Privacy. IEEE Computer Society, 2013.
- Journal of the American Society for Info. Science and Tech. (JASIST). Wiley Press, 2013.
- IET Information Security (IET IFS). IET Press, 2012.
- Security and Communication Networks special issue on Spam, Phishing, and Countermeasures for Undesirable Electronic Communications. Wiley Press, 2012.
- ACM Transactions on Intelligent Systems and Technology (ACM TIST) special issue on Search and Mining User Generated Content. ACM Press, 2011.
- Future Generation Computer Systems (FGCS) special section on Trusting Software Behavior. Elsevier Press, 2011.
- Trust Modeling and Management in Digital Environments. IGI Global Press, 2009.

Dissertation Oversight

- “Detecting Vandalism on Wikipedia Across Multiple Languages”. Khoi-Nguyen Dao Tran. The Australian National University. May 2015. *External PhD committee member.*

Grant Review and Funding Dissemination

- Served as a “flow funder” for the Wikimedia Foundation (parent organization of Wikipedia) where “volunteers will be entrusted with decision-making power to fund projects aligned with the Wikimedia movement’s strategic goals.” Nov. 2012 – July 2013.

INTERNAL PRESENTATIONS & SERVICE (VERISIGN LABS)

Internal Research Presentations/Articles

- “Drop-Catch Price Elasticity Modeling”. Andrew G. West and Yannis Labrou. *Verisign Research Summit*. January 2017.
- “[presentation title redacted]”. Yannis Labrou and Andrew G. West. *Verisign Research Summit*. January 2017.
- “50 Shades of Grey: Measuring and Forecasting Organic Domain Token Popularity”. Andrew G. West. *Verisign Technical Symposium*. September 2015.
- “Measuring Privacy Disclosures in URL Query Strings”. Andrew G. West. *Verisign Data Symposium*. December 2014.
- “The Success is in the Name ...”. Vincent Raemy, Vincenzo Russo, and Andrew G. West. *Verisign Data Symposium*. December 2014.
- “World Cup Trends in Verisign Data”. Andrew G. West. *Internal article*. June 2014.
- “Web of Redirection: Measuring Domain Forwarding and Applications at Internet-scale”. Galileo Namata, Andrew G. West, and Aziz Mohaisen. *CTO Research Huddle*. June 2014.
- “Endpoint Analysis of HTTP Malware Communications”. Andrew G. West, Aziz Mohaisen, and Trevor Tonn. *Verisign Data Symposium*. September 2013.
- “Collaborative Security: Why Wikipedia Does Not Fail”. Andrew G. West. *CTO Research Huddle*. September 2013.

Internship Advising

- “Measuring the Individual Domain Buyer Market”. Xiaojia Ge (Master’s student; George Washington University). *Summer 2017*.
- “[title redacted]”. Mohammed Raihanul Islam (PhD student; Virginia Tech). *Summer 2017*.
- “[title redacted]”. Yaser Keneshloo (PhD student; Virginia Tech). *Summer 2017*.
- “Clustered Event Detection in a Domain Registration Feed”. Wei Wang (PhD student; Virginia Tech). *Summer 2015*.
- “Training Domain Name Categorization using Public Directory Data”. Chong Wang (PhD student; NJ Institute of Technology). *Summer 2015*.
- “Understanding the Domain Name Drop-catch Ecosystem”. Arash Molavi Kakhki (PhD student; Northeastern University). *Summer 2014*.
- “Correlating Domain Popularity with Naming Characteristics”. Vasudev Bhat (Master’s student; Stony Brook University). *Summer 2014*.
- “ADAM: Automated Detection and Attribution of Malicious Webpages”. Ahmed E. Kosba (PhD student; University of Maryland). *Summer 2013*.

Management, Recruitment, and Training

- Served as hiring manager for Verisign Labs Summer Intern Program, overseeing the recruitment, onboarding, and progress of a dozen graduate research interns. *2014-2016*.
- Completed Management “STEPS” training, a 6-day instructor-led course focusing on “self-awareness, teams, execution, people, and strategic thinking”. *June 2014*.

GRADUATE TEACHING, ADVISING, & LEADERSHIP (UPENN)

Teaching Assistantships

In 10 semesters as TA of the Senior Capstone course, 100+ student teams and their year-long research/implementation projects were advised and evaluated. Guiding project management, methodology, and technical writing components provided tremendous experience in planning towards successful research outcomes.

- CIS400 – Senior Design Projects (1st half). *Fall 2008–2012 (5 editions)*
- CIS401 – Senior Design Projects (2nd half). *Spring 2009–2013 (5 editions)*

Teaching Certification

Awarded Penn’s Center for Teaching and Learning (CTL) certificate, granted after: (1) pedagogical training, (2) sufficient teaching experience, (3) lecture observation and critique, and (4) review of teaching philosophy. *December 2012*.

Undergraduate Advising

- “Completing Categorical Ontologies with Graph-inference and Machine Learning”
Cristoforo Feo and Benjamin Perez. *2012–2013 academic year*.
- “A Comparative Evaluation of RFID Geolocation Techniques”
Preetam D’Souza, Max Guo, and David Wang. *2012–2013 academic year*.
- “CleanURL: A Privacy-aware Link Shortener”
Daniel Kim and Kevin Su. *2011–2012 academic year*.
- “Autonomous Link Spam Detection in Purely Collaborative Environments”
Avantika Agrawal, Phillip Baker, and Brittney Exline. *2010–2011 academic year*.

Institutional Involvement/Leadership

- GSCSG Chair – (Graduate Student Computer Science Group)
Social planning and organization at department granularity. *Spring 2009 until graduation*.
- GSEG Representative – (Graduate Student Engineering Group)
Student advocacy and programming at college granularity. *Fall 2008 until graduation*.

Technical Writing Consultant

Combined expert-level English with formal communications training as a sought-after resource for review of research/grant materials, content development, and ESL assistance. Work was conducted in various official and unofficial capacities in the form of individual counseling, class lectures, and document review sessions. *Summer 2007 until graduation*.

PRIOR EMPLOYMENT

Alsos Digital Library – Database Programmer/Engineer – *Summer 2006*

- SQL and .NET programming in support of the Alsos Project (<http://alsos.wlu.edu>)
- Improved search methodology and query efficiency; cooperated closely with content team

WV-DEP – GIS Programmer/Technical Assistant – *Summer 2005*

- Spatial analysis of environmental abuses, guiding targeted enforcement efforts
- MS Visual Basic programming; AutoCAD plotting; website and media design

COMPUTER SKILLS AND LANGUAGES

- Extremely proficient with development in Java, C/C++, and SQL
- Functional in BASH shell, C#, .NET, Python, Scheme
- Big data with HDFS, (streaming) MapReduce, HIVE/Impala, Hue
- Software: Weka (machine-learning), R (statistics), L^AT_EX (typesetting)
- Capable in UNIX/Linux, Mac OS X, and Windows operating environments

PROFESSIONAL AND SOCIAL MEMBERSHIPS

- ACM (Association for Computing Machinery) – Professional organization
- IEEE (Institute of Electrical and Electronics Engineers) – Professional organization
- USENIX (Advanced Computing Systems Association) – Professional organization
- ΠME (Pi Mu Epsilon) – Math honorary fraternity
- ΣN (Sigma Nu) – Social fraternity

AWARDS AND HONORS

- **2017 Q2:** Verisign “Above and Beyond Award” for “leveraging machine learning techniques . . . work[ing] effectively across various teams . . . [and] positive energy and work ethic”, in reference to two parallel data collection and modeling projects.
- **2014 Q3:** Verisign “Above and Beyond Award” for intern program coordination efforts.
- **2014-2011:** Scholarships to attend *Wikimania* (London, United Kingdom; 2014) (Hong Kong, China; 2013) (Washington D.C., USA; 2012) (Haifa, Israel; 2011) – “. . . selected based on your dedication and participation in the Wikimedia movement or other free knowledge . . . initiatives and your potential to add great value . . . going forward.”
- **2012:** Invitation and scholarship to attend the Google Graduate Researchers in Academia of Diverse backgrounds (GRAD) CS Forum (Mountain View, CA).
- **2011:** First place, PAN-CLEF 2011 Wikipedia vandalism detection competition – Winning approach for all language editions (German, English, and Spanish corpora).
- **2007-2003:** J. Edward Lewis Scholarship – Merit-based scholarship providing full tuition, room, and board to Washington and Lee University (Lexington, VA).