

CURRICULUM VITAE OF ANDREW G. WEST

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EDUCATION

Doctoral – University of Pennsylvania (Philadelphia, PA)

- Ph.D. candidate in Computer and Information Science, 2012/2013 anticipated graduation.

Master’s – University of Pennsylvania (Philadelphia, PA)

- Master of Science in Engineering – Computer and Information Science, Spring 2010.

Undergraduate – Washington and Lee University (Lexington, VA)

- Bachelor of Science with honors – Computer Science, Spring 2007.

RESEARCH INTERESTS

- Collaborative application security, spam/vandalism mitigation, cyber economics, reputation management, trust management, network security, social computing, applied machine learning, computer science education, technical writing.

PUBLICATIONS

Conference and Workshop Papers

- [1] “Spamming for Science: Active Measurement in Web 2.0 Abuse Research”. Andrew G. West, Pedram Hayati, Vidyasagar Potdar, and Insup Lee. In *WECSR ‘12: Proc. of the Third Workshop on Ethics in Computer Security Research*, Bonaire. March 2012.
- [2] “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.
- [3] “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.
- [4] “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).
- [5] “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.
- [6] “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.

- [7] “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.
- [8] “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 Tech. Report UPENN-MS-CIS-10-25).
- [9] “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.
- [10] “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 Technical Report UPENN-MS-CIS-10-04).
- [11] “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 Technical Report UPENN-MS-CIS-10-05).
- [12] “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

- [13] “Analyzing and Defending Against Web-based Malware”. Jian Chang, Krishna K. Venkatasubramanian, Andrew G. West, and Insup Lee. To appear in an forthcoming issue of *ACM Computing Surveys*, 2012.
- [14] “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.
- [15] “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*, Elsevier Press. (Based in part on Technical Report UPENN-MS-CIS-10-33. Publication pending).
- [16] “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 Reports

- [17] “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).

- [18] “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.
- [19] “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.
- [20] “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.
- [21] “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

- [22] “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.
- [23] “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)

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

Undergraduate Writings

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

MEDIA ATTENTION

- “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 & REVIEWING

Program Committees

- TrustID ‘12: 2nd Intl. Symposium on Trust and Identity in Mobile Internet, Computing, and Communications (symposium of IEEE TrustCom). June 2012. Liverpool, UK.
- iThings ‘12: The IEEE International Conference on Internet of Things. TRACK: *Reliability, Security, Privacy, and Trust*. September 2012. Besançon, France.
- 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

- 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

Guest and Delegated Journal/Book Reviews

- *IET Information Security* (IET-IFS). IET Press, 2012.
- *Security and Communication Networks* special issue on Spam, Phishing, and Countermeasures for Undesirable Electronic Communications. Wiley, 2012.
- *Future Generation Computer Systems* (FGCS) special section on Trusting Software Behavior. Elsevier Press, 2011.
- *Transactions on Intelligent Systems and Technology* (TIST) special issue on Search and Mining User Generated Content. ACM Press, 2011.
- *Trust Modeling and Management in Digital Environments*. IGI Global Press, 2010.

TEACHING EXPERIENCE

- CIS400 – TA – Senior Design Projects (1st half) – *Fall 2008, 2009, 2010, 2011.*
- CIS401 – TA – Senior Design Projects (2nd half) – *Spring 2009, 2010, 2011, 2012.*

INSTITUTIONAL INVOLVEMENT (PENN)

- GSCSG Chair – (Graduate Student Computer Science Group)
Social planning and organization at department granularity. *Spring 2009 until present.*
- GSEG Representative – (Graduate Student Engineering Group)
Student advocacy and programming at college granularity. *Fall 2008 until present.*
- CIS Happy Hour Coordinator – Bi-weekly planning. *Fall 2009, Fall 2010 until present.*

RELEVANT EMPLOYMENT (EXTERNAL TO ACADEMIA)

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

- SQL and .NET programming in support of the Alsos Project (<http://alsos.wlu.edu>)

WV-DEP (*Summer 2005*) – Website Design/Computer Assistant

- Website and media design, MS Visual-Basic programming, AutoCAD plotting

PROFESSIONAL AND SOCIAL MEMBERSHIPS

- ACM (Association for Computing Machinery) – Professional organization
- IIME (Pi Mu Epsilon) – Math honorary fraternity
- ΣN (Sigma Nu) – Social fraternity

AWARDS AND HONORS

- **2012:** Partial scholarship to attend *Wikimania 2012* (Washington D.C. - USA) – “...criteria are: level of activity within Wikimedia ...other free knowledge projects ...[and] future goals for participating in the Wikimedia movement.”
- **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).
- **2011:** Partial scholarship to attend *Wikimania 2011* (Haifa, Israel) – “...selected based on your dedication and participation in the Wikimedia movement or other free knowledge and educational initiatives and your potential to add great value ... going forward.”
- **2003-2007:** J. Edward Lewis Scholarship – Merit-based scholarship providing full tuition, room, and board to Washington and Lee University (Lexington, VA).