

VITALY FORD

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EDUCATION

Tennessee Tech University – Cookeville, TN

Ph.D. in Engineering, Computer Science, Cybersecurity, May 2017.

GPA: 4.0

Tennessee Tech University – Cookeville, TN

Masters in Computer Science. August 2015.

GPA: 4.0

Ural Federal University – Yekaterinburg, Russia

Information Systems and Technologies Engineer. Sep 2007 – Jun 2012.

GPA: 5.0

EXPERIENCE

Assistant Professor, Computer Science

Arcadia University, Glenside, PA. **August 2017 – Present.**

Director of Chapter Development, National Cybersecurity Students Association

Worked on chapter development, strategic plan, association policies, blog posts, outreach and education resource management. **June 2016 – Present.**

Instructor of Record

Taught Principles of Computing course, 2 sections. Fall 2016.

Taught OO Programming, Introduction to Penetration Testing courses. Spring 2017.

Graduate Research Assistant

Security of the Cyber-Physical Systems, Cybersecurity Education Research and Outreach Center, Tennessee Tech University (TTU). Center for Energy Systems Research.

January 2013 – Present.

GenCyber Cybersecurity Lead Instructor

Developed curriculum and taught K-12 students and teachers at GenCyber Camp, TTU.

January – August 2016.

Vice President & Founding Member

Led and managed the CyberEagles Cyber Security club at TTU. Developed a Mentor Internship Program, resources, training seminars, social activities, and organized conference trips. August 2013 – August 2016.

Web-programmer

Analyzed the requirements and developed websites for the CyberEagles Cyber Security Club and Engineering Joint Council, TTU. Spring 2014 – Spring 2016.

Teaching Assistant

Tutored students and managed labs (C++) at CS Department, TTU. Fall 2012.

IT support for the Engineering Department

Computer Science Department, TTU. Fall 2012.

Technician, Software Developer

Laboratory of Distant Monitoring Methods, Yekaterinburg, Russia. Ural Federal University. October 2009 – May 2012.

Was responsible for designing and developing the following software/hardware products according to the set requirements:

- A compact computer vision system for precise (error: 0.2 mm) measuring the distance between rolls of a continuous casting machine.
- A computer vision system for measuring 3D coordinates of moving objects.
- An accurate semi-automatic calibration technique for the above-mentioned systems.

RESEARCH PROFILE

Smart grid security, smart meter security, consumer data privacy, fraud detection, smart meter data analysis, machine learning, cybersecurity education.

Publications (can be accessed at <http://vford.me/publications>)

- V. Ford, A. Siraj, A. Haynes, and E. L. Brown, “Capture the Flag Unplugged: An Offline Cyber Competition”, ACM SIGCSE 2017.
- V. Ford, A. Siraj, and M. A. Rahman, “Secure and Efficient Protection of Consumer Privacy in Advanced Metering Infrastructure Supporting Fine-grained Data Analysis”, *Journal of Computer and System Sciences (Rank A*)*, 83.1 (2017): 84-100.

- V. Ford and A. Siraj, “POSTER: Reliable and efficient protection of consumer privacy in Advanced Metering Infrastructure”, Institute for Computer Sciences, Social Informatics and Telecomm. Engineering: SecureComm 2015, LNICST 164, pp. 563–566, 2015.
- C. Cody, V. Ford, and A. Siraj, “Decision Tree Learning for Fraud Detection in Consumer Energy Consumption”, in *Proceedings of the 14th IEEE International Conference on Machine Learning and Applications*, December 9-11, 2015.
- V. Ford, A. Siraj, and W. Eberle, “Smart Grid Energy Fraud Detection Using Artificial Neural Networks”, in *Proceedings of the 2014 IEEE Symposium Series on Computational Intelligence*, December 9-12, 2014.
- V. Ford and A. Siraj, “Applications of Machine Learning in Cyber Security”, in *Proceedings of the 27th International Conference on Computer Applications in Industry and Engineering*, October 13-15, 2014.
- V. Ford and A. Siraj, “Clustering of smart meter data for disaggregation”, in *Proceedings of IEEE Global Conference on Signal and Information Processing*, December 3-5, 2013.

HONORS

- Research Poster Co-Winner, 1st National Women in Cyber Security Conference. *Statistical Analysis for Fraud Detection in Smart Meters*. April 2014.
- Best Ph.D. Research Paper Award, Tennessee Tech University, April 2014.
- Research Day Poster Winner, Tennessee Tech University, April 2013, April 2015.
- Research Poster Winner, Ural Federal University, April 2011.
- Winner of the “Youth Scientific-Innovation Contest”, Yekaterinburg, Russia, Oct. 2011.

GRANT ACTIVITY

- Travel grants for attending Special Interest Group on Computer Science Education (SIGCSE) workshop, CISSE The Colloquium, CTSC cyberinfrastructure. 2016.
- Helped to write research proposals for NSF. Spring 2014, Fall 2015, Summer 2016.
- Trustworthy Cyber Infrastructure for the Power Grid (TCIPG) Summer School Scholarship, June 2013.
- Trusted Infrastructure Workshop Scholarship, the PSU. June 2013.

COMPETITIONS

- Capture The Flag participant: NCL, CSAW, CONFidence, NotSoSecure.
- Qualified as one of the top 8 teams in the southeast region and participated in the Southeast Collegiate Cyber Defense Competition (SE CCDC) in both 2014 and 2015. Was responsible for training the team, Incident Response, Maintaining Ecommerce and Web services, Linux administration.
- National Cyber League 2013. First place in the 1st individual game, Silver Bracket. Third place in the team game, Silver Bracket.
- Symantec Cyber Readiness Challenge, ISSA, October 2013.

VOLUNTEER ACTIVITY

- Community College Cyber Summit (3CS), lead volunteer, Summer 2016, 2017.
- Women in Cyber Security Conference, member of the organizing committee, 2014 – 16.
- ISSA InfoSec international conference volunteer, Fall 2013, Fall 2015.
- NCWIT Aspirations in Computing Award, Spring 2013, Spring 2014.
- STEM programming activities for middle school students volunteer, Spring 2014.
- South-East Women in Computing conference volunteer, Fall 2013.
- ACM programming contest volunteer, Fall 2012, Fall 2013, Fall 2014, Fall 2015.
- High School award ceremony volunteer, Spring 2013.

OTHER EXPERIENCE

- Workshop presenter at the National Women in Cybersecurity Conference 2017: *Business Acumen*, Tucson, AZ.
- Invited Center of Academic Excellence Tech Talk on Consumer Privacy vs Data Mining: Issues with Smart Meter Data, January 26, 2017.
- Invited seminar speaker at Rochester Institute of Technology: *Privacy- and Data-Aware Smart Grid Communication*, October 18, 2016.
- Workshop presenter at the National Women in Cybersecurity Conference 2016: *Cybersecurity Club 101: From Inception to Installation and Beyond*, Dallas, TX.
- Paper reviewer for ACM SafeConfig automated decision making for active cyber defense, July 2015; Journal of Supercomputing, June 2016; IEEE ISI, July 2016; IEEE Transactions on Industrial Informatics, February 2017; LCN, May 2017; ASE USENIX, June 2017.
- Guest Lecture Speaker: Information Assurance and Security at Tech. Spring 2014, 2016.

- Invited “Lightning Talk”: *Applying Machine Learning for Smart Meter Data Profiling*, TCIPG Summer School, Q Center – St. Charles, IL. June 20, 2013.

LANGUAGES

Native Russian, fluent written and verbal English.

**TECHNICAL
SKILLS**

Metasploit, BurpSuite, nmap, sqlmap, w3af, OpenVAS, ZAP, Nessus, Visual Studio, Omnet++, C/C++/C#, python, .Net, HTML, CSS, javascript, php, MySQL, XML, Java.
Familiar with: XPath, XSLT, XQuery, Lua as a result of the coursework.