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 (https://www.arcadia.edu/profile/vitaly-ford)
Arcadia University, Glenside, PA. **August 2017 – Present.**

Director of Chapter Development, National Cybersecurity Students Association
Worked on chapter development, strategic plan, association policies, web development, 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 – May 2017.

GenCyber Cybersecurity Lead Instructor
Developed curriculum and taught K-12 students and teachers at GenCyber Camp, TTU.
January – August 2016, January – August 2017.

Vice President & Founding Member
Led and managed the CyberEagles Cybersecurity 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 Cybersecurity 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)

- K. Rabieh, M. Pan, Z. Han, and V. Ford, "SRPV: A Scalable Revocation Scheme for Pseudonyms-based Vehicular Ad Hoc Networks", in *Proceedings of the IEEE ICC 2018 Communication and Information Systems Security Symposium*, May 2018.
- V. Ford, A. Siraj, A. Haynes, and E. L. Brown, "Capture the Flag Unplugged: An Offline Cyber Competition", in *Proceedings of the ACM SIGCSE (Rank A)*, March 8-11, 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

- NSF Cyberinfrastructure Proposal, Co-PI, January 2017, under review.
- Arcadia University Summer Camp Grant, "Artificial Intelligence: Exploring a Smart World", Project Director, funding: $9,000.00. December 2017.
- Arcadia University ITC Grant, "Obtaining State-of-the-Art Tech Equipment for Curriculum Enrichment", Project Director, funding: $3,734.00. November 2017.
- 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, 2014-2017: NCL, CSAW, CONFidence, NotSoSecure.
- Participated as one of the top 8 teams in the southeast region in the Southeast Collegiate Cyber Defense Competition, 2014-2015. 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 Cybersecurity Conference, member of the organizing committee, 2014 – 17.
- 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

- Grant proposal reviewer: "New University Researchers Start up Program", Quebec, Canada. January 2018.
- 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 Installment and Beyond*, Dallas, TX.
- Paper reviewer: ACM SafeConfig automated decisions 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; SIGCSE, September 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.