Dave (Jing) Tian

Curriculum Vitae (2020-10-25)

Interests

Embedded System Security, Operating System Security, Trusted/Confidential Computing

Work

- 2019.08- **Assistant Professor**, *Purdue University*, West Lafayette, IN, Department of Computer Science. System Security
- 2018.05- Security Research Engineer Intern, Fortanix, Mountain View, CA, Runtime Encryption.
- 2018.08 Intel SGX for Containers
- 2017.05- Security Research Engineer Intern, Samsung Research America (SRA), Mountain View, CA, KNOX Security.
- 2017.08 Android USB Security
- 2009.07- Software Engineer, Nokia R&D, Qingdao, China, Linux Control Platform (LCP).
- 2012.08 Software Development for Linux
- 2008.12- Software Engineer Intern, Nokia R&D, Qingdao, China, Linux Control Platform (LCP).
- 2009.06 Software Development for Linux
- 2006.03- POS Tester Intern, Hisense R&D, Qingdao, China, POS Testing.
- 2006.04 POS Testing

Education

- 2015.01- Ph.D., University of Florida, Gainesville, FL, Computer & Information Science & Engineering.
- 2019.08 System Security and Trusted Computing
- 2012.08- Ph.D. student, University of Oregon, Eugene, OR, Computer & Information Science.
- 2014.07 Machine Learning and Systems Security
- 2006.08- ME, Ocean University of China, Qingdao, China, Electrical Engineering.
- 2009.06 Digital Signal Processing and Machine Learning
- 2002.08- BS, Qingdao University of Technology, Qingdao, China, Electrical & Information Science.
- 2006.06 Electrical Engineering

Publications

Journals:

- 5 **ProXray: Protocol Model Learning and Guided Firmware Analysis**; Farhaan Fowze, Dave (Jing) Tian, Grant Hernandez, Kevin Butler, Tuba Yavuz; IEEE Transactions on Software Engineering (TSE'19), 2019; International Conference on Software Engineering (ICSE'20, Journal First), 2020
- 4 **Towards Automated Firmware Analysis in the IoT Era**; Grant Hernandez, Dave (Jing) Tian, Farhaan Fowze, Tuba Yavuz, Patrick Traynor, Kevin Butler; IEEE Security & Privacy, 2019
- 3 Characterizing the Security of the SMS Ecosystem with Public Gateways; Bradly Reaves, Luis Vargas, Nolen Scaife, <u>Dave Tian</u>, Logan Blue, Patrick Traynor, Kevin Butler; ACM Transactions on Privacy and Security (TOPS), 2018
- 2 Securing ARP/NDP From the Ground Up; Dave (Jing) Tian, Kevin R. B. Butler, Joseph I. Choi, Patrick D. McDaniel, Padma Krishnaswamy; IEEE Transactions on Information Forensics and Security (TIFS), 2017
- 1 Taming the Costs of Trustworthy Provenance through Policy Reduction; Adam Bates, Dave (Jing) Tian, Grant Hernandez, Thomas Moyer, Kevin R. B. Butler, Trent Jaeger; ACM Transactions on Internet Technology (TOIT), 2017

Conferences:

24 **Generic, Sparse Tensor Core for Neural Networks**; Xiaolong Wu, Yang Yi, <u>Dave Tian</u>, Jiajia Li; International Workshop on Machine Learning for Software Hardware Co-Design (MLSH'20), 2020; Acceptance Rate = TBD%

- Vessels: Efficient and Scalable Deep Learning Prediction on Trusted Processors; Kyungtae Kim, Chung Hwan Kim, Junghwan Rhee, Xiao Yu, Haifeng Chen, <u>Dave Tian</u>, Byoungyoung Lee; ACM Symposium on Cloud Computing 2020 (SoCC'20), 2020; Acceptance Rate = 24.5%
- 22 Logging to the Danger Zone: Race Condition Attacks and Defenses on System Audit Frameworks; Riccardo Paccagnella, Kevin Liao, <u>Dave Tian</u>, Adam Bates; ACM Conference on Computer and Communications Security (CCS'20), 2020; Acceptance Rate = TBD%
- 21 **BLESA:** Spoofing Attacks against Reconnections in Bluetooth Low Energy; Jianliang Wu, Yuhong Nan, Vireshwar Kumar, Dave (Jing) Tian, Antonio Bianchi, Mathias Payer, Dongyan Xu; USENIX Workshop on Offensive Technologies (WOOT'20), 2020; Acceptance Rate = 33.3%, Best Paper Award
- 20 From Control Model to Program: Investigating Robotic Aerial Vehicle Accidents with MAYDAY; Taegyu Kim, Chung Hwan Kim, Altay Ozen, Fan Fei, Zhan Tu, Xiangyu Zhang, Xinyan Deng, Dave (Jing) Tian, Dongyan Xu; USENIX Security Symposium, 2020; Acceptance Rate = 16.3%
- 19 **Custos:** Practical Tamper-Evident Auditing of Operating Systems Using Trusted Execution; Riccardo Paccagnella, Pubali Datta, Wajih UI Hassan, Adam Bates, Christopher Fletcher, Andrew Miller, Dave (Jing) Tian; The Network and Distributed System Security Symposium (NDSS'20), 2020; Acceptance Rate = 17.4%
- 18 **BigMAC: Fine-Grained Policy Analysis of Android Firmware**; Grant Hernandez, Dave (Jing) Tian, Anurag Swarnim Yadav, Byron J. Williams, Kevin Butler; USENIX Security Symposium, 2020; Acceptance Rate = 16.3%
- 17 **Examining DES-based Cipher Suite Support within the TLS Ecosystem**; Vanessa Frost, <u>Dave Tian</u>, Christie Ruales, Vijay Prakash, Kevin Butler, Patrick Traynor; ACM ASIA Conference on Computer and Communications Security (ASIACCS'19), 2019; Acceptance Rate = 22% short paper
- 16 **A Hybrid Approach to Secure Function Evaluation using SGX**; Joseph Choi, <u>Dave Tian</u>, Grant Hernandez, Christopher Patton, Benjamin Mood, Thomas Shrimpton, Kevin Butler, Patrick Traynor; ACM ASIA Conference on Computer and Communications Security (ASIACCS'19), 2019; Acceptance Rate = 17%
- A Practical Intel SGX Setting for Linux Containers in the Cloud; Dave (Jing) Tian, Joseph Choi, Grant Hernandez, Patrick Traynor, Kevin Butler; ACM Conference on Data and Application Security and Privacy (CODASPY'19), 2019; Acceptance Rate = 23.5%
- 14 LBM: A Security Framework for Peripherals within the Linux Kernel; Dave (Jing) Tian, Grant Hernandez, Joesph Choi, Vanessa Frost, Peter Johnson, Kevin Butler; IEEE Symposium on Security and Privacy (S&P'19), 2019; Acceptance Rate = 12.5%
- 13 ATtention Spanned: Comprehensive Vulnerability Analysis of AT Commands Within the Android Ecosystem; Dave (Jing) Tian, Grant Hernandez, Joesph Choi, Vanessa Frost, Christie Ruales, Patrick Traynor, Hayawardh Vijaykumar, Lee Harrison, Amir Rahmati, Mike Grace, Kevin Butler; USENIX Security Symposium, 2018; Acceptance Rate = 19.1%
- 12 SoK: "Plug & Pray" Today Understanding USB Insecurity in Versions 1 through C; Dave (Jing) Tian, Nolen Scaife, Deepak Kumar, Michael Bailey, Adam Bates, Kevin Butler; IEEE Symposium on Security and Privacy (S&P'18), 2018; Acceptance Rate = 11.5%
- 11 **FirmUSB: Vetting USB Device Firmware using Domain Informed Symbolic Execution**; Grant Hernandez, Farhaan Fowze, <u>Dave Tian</u>, Tuba Yavuz, Kevin Butler; ACM Conference on Computer and Communications Security (CCS'17), 2017; Acceptance Rate = 18.1%
- 10 **CPAC: Securing Critical Infrastructure with Cyber-Physical Access Control**; Sriharsha Etigowni, <u>Dave Tian</u>, Grant Hernandez, Kevin Butler, Saman Zonouz; Annual Computer Security Applications Conference (ACSAC'16), 2016; Acceptance Rate = 22.8%
- 9 **ProvUSB:** Block-level Provenance-Based Data Protection for USB Storage Devices; Dave (Jing) Tian, Adam Bates, Kevin Butler, Raju Rangaswami; ACM Conference on Computer and Communications Security (CCS'16), 2016; Acceptance Rate = 16.5%
- 8 **Making USB Great Again with USBFILTER**; Dave (Jing) Tian, Nolen Scaife, Adam Bates, Kevin Butler, Patrick Traynor; USENIX Security Symposium, 2016; Acceptance Rate = 15.5%
- 7 **Detecting SMS Spam in the Age of Legitimate Bulk Messaging**; Bradley Reaves, Logan Blue, <u>Dave Tian</u>, Patrick Traynor, Kevin Butler; ACM Conference on Security and Privacy in Wireless and Mobile Networks (WiSec'16), 2016; Acceptance Rate = 35.0%
- 6 Sending out an SMS: Characterizing the Security of the SMS Ecosystem with Public Gateways; Bradley Reaves, Nolen Scaife, <u>Dave Tian</u>, Logan Blue, Patrick Traynor, Kevin Butler; IEEE Symposium on Security and Privacy (S&P'16), 2016; Acceptance Rate = 13.3%
- 5 **Defending Against Malicious USB Firmware with GoodUSB**; Dave (Jing) Tian, Adam Bates, Kevin Butler; Annual Computer Security Applications Conference (ACSAC'15), 2015; Acceptance Rate = 24.3%
- 4 Trustworthy Whole-System Provenance for the Linux Kernel; Adam Bates, <u>Dave Tian</u>, Kevin Butler, Thomas Moyer; USENIX Security Symposium, 2015; Acceptance Rate = 15.7%

- 3 More Guidelines Than Rules: CSRF Vulnerabilities from Noncompliant OAuth 2.0 Implementations; Ethan Shernan, Henry Carter, Dave Tian, Patrick Traynor, Kevin Butler; International Conference on Detection of Intrusions and Malware & Vulnerability Assessment (DIMVA'15), 2015; Acceptance Rate = 22.7%
- Securing ARP from the Ground Up; Jing (Dave) Tian, Kevin R.B. Butler, Patrick D. McDaniel, Padma Krishnaswamy; ACM Conference on Data and Application Security and Privacy (CODASPY'15), 2015; Acceptance Rate = 33.3%
- 1 Securing SSL Certificate Validation through Dynamic Linking; Adam Bates, Joe Pletcher, Tyler Nichols, Braden Hollembaek, Jing (Dave) Tian, Abdulrahman Alkhelaifi, Kevin R. B. Butler; ACM Conference on Computer and Communications Security (CCS'14), 2014; Acceptance Rate = 19.5%

Patents:

1 Method and Apparatus For Vetting Universal Serial Bus Device Firmware; United States Patent Application 20190286817

Service

Organizing

Committee • Midwest Security Workshop (MSW): '20

Poster Chair

o EAI SecureComm: '20

Program

Committee

- USENIX Security: '19, '21
- USENIX RAID: '20
- o ISOC NDSS: '21
- o ISOC NDSS BAR: '20
- ESORICS: '20
- EAI SecureComm: '20
- o ACM AsiaCCS: '21

Conference

- External IEEE S&P: '16,'17,'18,'20
- Review USENIX Security: '14,'15,'17,'18,'20
 - o ISOC NDSS: '16,'17,'18,'19
 - o ACM CCS: '14,'15,'16
 - USENIX OSDI: '16
 - ACM AsiaCCS: '15,'17,'18
 - USENIX Woot: '16
 - ACSAC: '16
 - o PETS: '15
 - o IEEE MOST: '15
 - o IEEE CNS: '17

Journal

- Review Security and Communication Networks (SCN): '18
 - Journal of Network and Systems Management (JONS): '18
 - Journal of Information Security and Applications (JISA): '20
 - Journal of Information Science and Engineering (JISE): '20
 - Journal of Computer & Security (JCS): '20
 - IEEE Internet of Things Journal (IoT): '19
 - o IEEE Transactions on Dependable and Secure Computing (TDSC): '20

Fundings

ONR Bringing Fuzzing to the Cyber-Physical World; \$800K, co-PI

DARPA DICER: Directed Compilation for Assured Patching; \$3.9M, co-PI

Invited Talks

Nov 2018 Defending Operating Systems from Malicious Peripherals, Pennsylvania State University, Host: Patrick McDaniel

- Nov 2018 Defending Operating Systems from Malicious Peripherals, University of Illinois Urbana-Champaign, Host: Adam
- Feb 2019 Defending Operating Systems from Malicious Peripherals, Drexel University, Host: Dario Salvucci
- Feb 2019 Defending Operating Systems from Malicious Peripherals, Duke University, Host: Benjamin Lee
- Feb 2019 Defending Operating Systems from Malicious Peripherals, Purdue University, Host: Dongyan Xu
- Feb 2019 Defending Operating Systems from Malicious Peripherals, Virginia Tech, Host: Matthew Hicks
- Mar 2019 Defending Operating Systems from Malicious Peripherals, University of California Santa Cruz, Host: Owen Arden
- Mar 2019 Defending Operating Systems from Malicious Peripherals, University of Texas Dallas, Host: Murat Kantarcioglu
- Mar 2019 Defending Operating Systems from Malicious Peripherals, Georgetown University, Host: Clay Shields

Awards

- 2020 USENIX Workshop on Offensive Technologies Best Paper Award, USENIX
- 2019 IEEE Symposium on Security and Privacy Student Travel Grant, IEEE
- 2019 Distinguished Poster Award, The 9th ACM Conference on Data and Application Security and Privacy
- 2018 Second Place Award, SEC Academic Conference (Cybersecurity) Student Poster Presentation
- 2017 Best Poster Award, FICS Annual Research Conference
- 2017 Gartner Group Info Tech Scholarship, University of Florida
- 2016 Best Poster Award, FICS Annual Research Conference
- 2015 ACSAC Student Conferenceship Award, ACSA
- 2015 CISE Travel Grant, University of Florida
- 2015 USENIX Security Student Grant, USENIX
- 2014 Gartner Group Graduate Fellowship, University of Florida
- 2011 Alcatel-Lucent R&D Well Done Award, Alcatel-Lucent
- 2009 Alcatel-Lucent R&D Innovation Award, Alcatel-Lucent
- 2009 Comprehensive Award of Excellent Graduate Scholarship, Ocean University of China
- 2009 Excellent Graduate Student Scholarship, Ocean University of China
- 2006 Full Graduate Scholarship, Ocean University of China
- 2004 Outstanding Student Cadre Scholarship, Qingdao Technological University

Teaching

2019.08- Assistant Professor, Dept. of Computer Science, Purdue University, West Lafayette, IN.

- CS59000-OSS Operating System Security (Fall 2019)
- CS52800 Network Security (Spring 2020)
- CS59100 CERIAS Security Seminar (Spring 2020)
- CS50300 Operating Systems (Fall 2020)
- CS42600 Computer Security (Spring 2021)

2018.09- Guest Lecturer, Dept. of Computer & Information Science & Engineering, University of Florida, Gainesville, FL.

- 2019.07 CNT 5410 Computer and Network Security (Fall 2018) CIS 5370 Computer and Information Security (Spring 2019)
- 2012.09- Graduate Teaching Fellow, Dept. of Computer & Information Science, University of Oregon, Eugene, OR.

2013.06 • CIS 122 Intro to Programming & Problem Solving Using Python (Fall 2012, Winter 2013, Lab)

CIS 415 Operating Systems (Spring 2013, Lab)

Book Review

2013.12- **Technical Reviewer**, Packt Publishing, Birmingham, UK.

- Present Mastering Python Regular Expressions Python 3 Text Processing with NLTK 3 Cookbook
 - Building Probabilistic Graphical Models with Python
 - Mastering Probabilistic Graphical Models with Python
 - Embedded Linux Projects Using Yocto Project Cookbook
 - Yocto for Raspberry Pi
 - LLVM Cookbook

Certifications

- 2011 AIX certification (AN10, AN12), IBM
- 2010 Project Management, ChoiZe Management Consulting

- 2010 Linux Debugging and Performance, JOHN BRYCE
- 2008 Sun Certified Java Programmer (SCJP), Sun Microsystems
- 2008 Solaris OS Architecture, Sun ERI & OpenTech
- 2008 Solaris 10 Admin Training, Sun Developer Network (China) & Unix-Center
- 2007 Sun Studio Hands-on Training with Unix/Linux Commands, Sun Developer Network (China) & Unix-Center
- 2004 National Computer Rank Examination (NCRE), Rank 2, C programming, China Education Ministry
- 1998 Microcomputer Operation Certification for Adult (DOS, Foxbase), Pute Computer Training Center of Qingdao Technological University

Media Coverage

- Slashdot "Billions of Devices Vulnerable To New 'BLESA' Bluetooth Spoofing Attack", https://it.slashdot.org/story/20/09/16/220211/billions-of-devices-vulnerable-to-new-blesa-bluetooth-spoofing-attack
- ZDNet "Billions of devices vulnerable to new 'BLESA' Bluetooth security flaw", https://www.zdnet.com/article/billions-of-devices-vulnerable-to-new-blesa-bluetooth-security-flaw/
- NetSec.news "Billions of Devices Vulnerable to 'BLESA' Bluetooth Spoofing Vulnerability", https://www.netsec.news/billions-of-devices-vulnerable-to-blesa-bluetooth-spoofing-vulnerability/
- ThreatPost "Bluetooth Spoofing Bug Affects Billions of IoT Devices", https://threatpost.com/bluetooth-spoofing-bug-iot-devices/159291/
- Tom's Guide "Billions of Android phones and smart devices open to attack what to do now", https://www.tomsguide.com/news/blesa-bluetooth-attack
 - SysDVD "Billions of Bluetooth Devices Vulnerable to BLESA Attack Hacker", http://sysdvd.com/billions-of-bluetooth-devices-vulnerable-to-blesa-attack-hacker/
 - TechRadar "Critical Bluetooth security vulnerability could affect billions of devices worldwide", https://www.techradar.com/news/critical-bluetooth-security-vulnerability-could-affect-billions-of-devices-worldwide
- International "What Is BLESA? Hackers Can Potentially Target Billions of Devices with Bluetooth Security Business Flaw", https://www.ibtimes.sg/what-blesa-hackers-can-potentially-target-billions-devices-Times bluetooth-security-flaw-51582
- Silicon Angle "Vulnerability in the Bluetooth software stack opens the door to hackers", https://siliconangle.com/2020/09/16/vulnerability-bluetooth-software-stack-opens-door-hackers/
- Sensors Tech "Bluetooth Low Energy Spoofing Attack Endangers Billions of Devices", https://sensorstechforum.com/ Forum blesa-attack-endangers-billions-devices/
- How To Fix "Experts discovered BLESA attack, to which are vulnerable billions of Bluetooth devices", https://howtofix.guide/experts-discovered-blesa-attack-to-which-are-vulnerable-bluetooth-devices/
- Google News "Critical Bluetooth safety vulnerability may just have an effect on billions of gadgets international", Post http://googlenewspost.com/2020/09/16/critical-bluetooth-security-vulnerability-could-affect-billions-of-devices-worldwide/
 - Cyware "Cyware Daily Threat Intelligence, September 16, 2020", https://cyware.com/daily-threat-briefing/cyware-daily-threat-intelligence-september-16-2020-bc5d
- Threats Hub "Billions of devices vulnerable to new 'BLESA' Bluetooth security flaw", https://www.threatshub.org/blog/billions-of-devices-vulnerable-to-new-blesa-bluetooth-security-flaw/
- Editorials 360 "Billions of Units Susceptible To New 'BLESA' Bluetooth Spoofing Assault", https://www.editorials360.com/2020/09/17/billions-of-units-susceptible-to-new-blesa-bluetooth-spoofing-assault/
 - Sec News "BLESA: billions of devices vulnerable to Bluetooth security flaw", https://en.secnews.gr/267536/bluetooth-flash/
- Remark Board "Billions of devices vulnerable to new 'BLESA' Bluetooth security flaw", https://remarkboard.com/m/researchers-unveil-a-bluetooth-le-attack-impacting-billions/leztwiylfko6v
 - Security "Bluetooth Reconnection Flaw Could Lead to Spoofing Attacks", https://securityboulevard.com/2020/07/Boulevard bluetooth-reconnection-flaw-could-lead-to-spoofing-attacks/
 - ESET "ESET discovers Attor, a spy platform with curious GSM fingerprinting", https://www.welivesecurity.com/ 2019/10/10/eset-discovers-attor-spy-platform/
 - Firmware "USB Fuzzing: A USB Perspective", https://firmwaresecurity.com/2019/07/20/usb-fuzzing-a-usb-Security perspective/
- Hacker News "USB Fuzzing: A USB Perspective", https://news.ycombinator.com/item?id=20478548

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LWN.net "Revenge of the modems", https://lwn.net/Articles/766766/
       Wired "Exploiting Decades-Old Telephone Tech to Break into Android Devices", https://www.wired.com/story/at-
              commands-android-vulnerability/
  Threatpost "AT Command Hitch Leaves Android Phones Open to Attack", https://threatpost.com/at-command-hitch-
              leaves-android-phones-open-to-attack/136938/
             "Smartphone security risk compared to 'having a ghost user on your phone'", http://news.ufl.edu/articles/
    UF News
              2018/08/smartphone-security-risk-compared-to-having-a-ghost-user-on-your-phone.php
             "What the hack: UF research reveals smartphones can be hacked via USB", https://www.alligator.org/
 independent
      florida
             news/what-the-hack-uf-research-reveals-smartphones-can-be-hacked/article_4480693e-aced-
     alligator 11e8-b68e-675760f71388.html
             "Smartphones From 11 OEMs Vulnerable to Attacks via Hidden AT Commands", https://www.
     Bleeping
   Computer bleepingcomputer.com/news/security/smartphones-from-11-oems-vulnerable-to-attacks-via-
             hidden-at-commands/
How-To Geek "How to Protect Yourself From Public USB Charging Ports", https://www.howtogeek.com/364032/how-to-
             protect-yourself-from-public-usb-charging-ports/
    Slashdot "Smartphones from 11 OEMs, Including Google, Samsung, HTC, Lenovo and Sony, Vulnerable to Attacks Via
             Hidden AT Commands", https://mobile.slashdot.org/story/18/08/26/1910246/smartphones-from-
             11-oems-including-google-samsung-htc-lenovo-and-sony-vulnerable-to-attacks-via-hidden-
              at-commands
 Hacker News "ATtention Spanned: Comprehensive Android Vulnerability Analysis of AT Commands", https://news.
             ycombinator.com/item?id=17837035
             "Android mobile devices from 11 vendors are exposed to AT Commands attacks", https://securityaffairs.
     Security
      Affairs co/wordpress/75683/hacking/at-commands-attacks-android.html
     Fudzilla "Android at the mercy of AT Commands", https://www.fudzilla.com/news/mobile/47037-android-at-
              the-mercy-of-at-commands
  Tech Worm "Android smartphones can be hacked with AT commands attacks", https://www.techworm.net/2018/08/
              android-smartphones-hacked-at-commands-attacks.html
             "How These Android Smartphone Can Be Hacked With Simple AT commands", https://fossbytes.com/
    Fossbytes
              android-smartphone-can-be-hacked-with-at-commands/
Kim Komando
             "Modern smartphones vulnerable to old-school attack", https://www.komando.com/happening-now/483269/
       Show
             modern-smartphones-vulnerable-to-old-school-attack
      Hacker
             "Open AT Commands: a Huge Loophole Exploit in Android Revealed", https://hackercombat.com/open-at-
     Combat commands-a-huge-loophole-exploit-in-android-revealed/
 SecurePoint
             "Vulnerability Found in Major Manufacturers of Android Phones", https://www.securepointtech.com/2018/
              09/07/vulnerability-found-in-major-manufacturers-of-android-phones/
             "Smartphones are vulnerable to hacking commands for ancient modems", https://hybridtechcar.com/2018/
      Hybrid
             08/28/smartphones-are-vulnerable-to-hacking-commands-for-ancient-modems/
     Techcar
             "New security risk for smartphones brings you a "ghost user"", https://androidcommunity.com/new-security-
     Android
  Community risk-for-smartphones-brings-you-a-ghost-user-20180827/
       SANS "AT Commands", https://isc.sans.edu/podcastdetail.html?id=6140
    golem.de "Android-Smartphones durch Modem-Befehle verwundbar", https://www.golem.de/news/at-commands-
              android-smartphones-durch-modem-befehle-verwundbar-1808-136205.html
     Tproger "11 manufacturers of Android smartphones have discovered a vulnerability to AT-commands", https://tproger.
             ru/news/at-commands-deface-smartphones/
             "Attackers can get full remote access to the Android device through a public USB charging port", https:
             //habr.com/company/crossover/blog/421295/
Niebezpiecznik "Miliony smartfonów można zhackować ukrytymi komendami AT", https://niebezpiecznik.pl/post/
             miliony-smartfonow-mozna-zhackowac-ukrytymi-komendami-at/
 Trails of Bits "Binary Analysis: Identifying bugs in binary-only USB firmware", https://www.trailofbits.com/expertise/
             binary-analysis/
Helpnetsecurity "USBFILTER: Packet-level firewall for blocking USB-based threats", https://www.helpnetsecurity.com/
             2016/08/12/usbfilter-blocking-threats/
      ePlace "USB Related Cyber Attacks and How to Defend Against Them", https://blog.eplaceinc.com/cyber/2016/
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BankInfo "A New Way to Mitigate USB Risks", https://www.bankinfosecurity.com/make-usb-great-again-a-

6/7

Solutions 09/08/usb-devices-exposing-organizations/

Security 9350

- RedesZone "USBfilter, un concepto de firewall para los puertos USB", https://www.redeszone.net/2016/08/16/usbfilter-concepto-firewall-los-puertos-usb/
- Hacker News "No one, not even the Secret Service, should randomly plug in a strange USB stick", https://news.ycombinator.com/item?id=19609239
 - Serman "La revolución USB contra los malware", https://serman.com/blog-recuperacion-datos/la-revolucion-usb-contra-los-malware/

Students

Ph.D. Taegyu Kim (ECE, Fall 2019 -, co-advised with Prof. Dongyan Xu), Arslan Khan (CS, Fall 2019 -, co-advised Students with Prof. Dongyan Xu), Kyungtae Tim (CS, Fall 2019 -, co-advised with Prof. Byoungyoung Lee), Hui Peng (CS, Fall 2020 -, co-advised with Prof. Mathias Payer), Ertza Warraich (CS, Spring 2020 -), Muqi Zou (CS, Fall 2020 -), Xiaolong Wu (ECE, Fall 2020 -), Jiwon Kim (CS, Fall 2020 -)

Master Benjamin Nwachukwu (Fall 2019 - Spring 2020), Arushi Arora (Summer 2020), Muqi Zou (Summer 2020), Mark Students Mikhail (Fall 2020)

Undergrads Steven Dellamore (Fall 2019)

Committees Jianliang Wu (Fall 2019 -), Le Yu (Fall 2019 -), Rohit Bhatia (Fall 2019 - Spring 2020), Imtiaz Karim (Fall 2020 -), Reham Aburas (Fall 2020 -), Hyungsub Kim (Fall 2020 -), Ruoyu Wu (Fall 2020 -)

Interns Sungwoo Kim (Fall 2020 -), Gisu Yeo (Fall 2020 -)

Links

My web https://davejingtian.org
My code https://github.com/daveti
AT command https://atcommands.org/
Provenance https://linuxprovenance.org/
FW analysis https://firmware-analysis.org/
OS Sec https://ossec.home.blog
OS https://os1.home.blog
Network Sec https://netsec.travel.blog

PurSec Lab https://pursec.cs.purdue.edu