

CONTACT INFORMATION	College of Information Science and Technology Pennsylvania State University, PA, US	guanle.ustc@hotmail.com <a href="http://guanle.org/">http://guanle.org/</a>
RESEARCH INTERESTS	Computer Systems Security, Mobile Security, Cyber-physical Systems Security	
EDUCATION	<b>Institute of Information Engineering, Chinese academy of Sciences, China</b> <i>Ph.D. / Computer Science</i> <i>Dissertation: “Research on the Protection of Cryptographic Keys on Commodity Platforms”</i> <i>Advisors: Jiwu Jing</i> 2009 - 2015  <b>University of Science and Technology of China, China</b> <i>B.Eng. / Computer Science and Engineering</i> 2005 - 2009	
HONORS AND AWARDS	National Scholarship (Institute of Information Engineering, CAS, 2013) Institute Director Award (Institute of Information Engineering, CAS, 2013) Merit Student (University of Chinese Academy of Sciences, CAS, 2012) Outstanding Undergraduate Thesis Award (University of Science and Technology of China, 2009) Outstanding Graduate (University of Science and Technology of China, 2009) National Endeavor Scholarship (University of Science and Technology of China, 2008) Outstanding Student Scholarship (University of Science and Technology of China, 2007) Outstanding Freshman Scholarship (University of Science and Technology of China, 2005)	
WORK EXPERIENCE	<i>Postdoctoral Researcher, (Pennsylvania State University, State College, US)</i> <i>Advisors: Peng Liu</i>	<i>April. 2015 - Present</i>
PUBLICATIONS	[J2] Jingqiang Lin, <b>Le Guan</b> , Ziqiang Ma, Bo Luo, Luning Xia, and Jiwu Jing, “Copker: A Cryptographic Engine against Cold-Boot Attacks”, <i>IEEE Transactions on Dependable and Secure Computing</i> , vol. PP, no. 99, pp. 1-1, 2016  [J1] Jingqiang Lin, Bo Luo, <b>Le Guan</b> , and Jiwu Jing, “Secure Computing Using Registers and Caches: The Problem, Challenges, and Solutions”, <i>IEEE Security &amp; Privacy</i> , vol. 14, no. 6, pp. 63-70, Nov.-Dec. 2016  [C10] <b>Le Guan</b> , Jia Shijie, Bo Chen, Fengwei Zhang, Bo Luo, Jingqiang Lin, Peng Liu, Xinyu Xing and Luning Xia, “Supporting Transparent Snapshot for Bare-metal Malware Analysis on Mobile Devices”, <i>Proceedings of the 33rd Annual Conference on Computer Security Applications, ACSAC ’17, 2017. Acceptance rate: 48/224=19.7%</i> .  [C9] <b>Le Guan</b> , Peng Liu, Xinyu Xing, Xinyang Ge, Shengzhi Zhang, Meng Yu, and Trent Jaeger, “TrustShadow: Secure Execution of Unmodified Applications with ARM TrustZone”, <i>Proceedings the 15th ACM International Conference on Mobile Systems, Applications, and Services (MobiSys ’17), 2017. Acceptance rate: 34/188=18.1%</i> .  [C8] <b>Le Guan</b> , Sadegh Farhang, Yu Pu, Pinyao Guo, Jens Grossklags, and Peng Liu, “VaultIME: Regaining User Control For Password Managers through Auto-correction”, in <i>Security and Privacy in Communication Networks: 13th International Conference, SecureComm 2017, 2017</i> .  [C7] Pinyao Guo, Hunmin Kim, <b>Le Guan</b> , Minghui Zhu and Peng Liu, “VCIDS: Collaborative Intrusion Detection of Sensor and Actuator Attacks on Connected Vehicles”, in <i>Security and Privacy in Communication Networks: 13th International Conference, SecureComm 2017, 2017</i> .  [C6] <b>Le Guan</b> , Jun Xu, Shuai Wang, Xinyu Xing, Lin Lin, Heqing Huang, Peng Liu and Wenke Lee, “From Physical to Cyber: Escalating Protection for Personalized Auto Insurance”, in <i>Proceedings</i>	

of the 14th ACM Conference on Embedded Network Sensor Systems, *SenSys '16*, pp. 42-55, 2016. Acceptance rate: 21/119=17.6%.

[C5] **Le Guan**, Jingqiang Lin, Bo Luo, Jiwu Jing and Jing Wang, “Protecting private keys against memory disclosure attacks using hardware transactional memory”, in *2015 IEEE Symposium on Security and Privacy (Oakland)*, pp. 3-19, 2015. Acceptance rate: 55/407=13.5%.

[C4] **Le Guan**, Jingqiang Lin, Bo Luo and Jiwu Jing, “Copker: Computing with Private Keys without RAM”, in *21st Annual Network and Distributed System Security Symposium, NDSS '14*, 2014. Acceptance rate: 55/295=18.6%.

[C3] **Le Guan**, Fengjun Li, Jiwu Jing, Jing Wang and Ziqiang Ma, “virtio-ct: A Secure Cryptographic Token Service in Hypervisors”, *International Workshop on Data Protection in Mobile and Pervasive Computing (DAPRO) in conjunction with the 13th Security and Privacy in Communication Networks, SecureComm 2014*, 2014.

[C2] Jing Wang, **Le Guan**, Limin Liu and Daren Zha, “Implementing a Covert Timing Channel Based on Mimic Function”, in *Information Security Practice and Experience: 10th International Conference, ISPEC 2014, Fuzhou, China, May 5-8, 2014. Proceedings*, pp. 247-261, 2014.

[C1] Jing Wang, Peng Liu, Limin Liu, **Le Guan**, and Jiwu Jing, “Fingerprint Embedding: A Proactive Strategy of Detecting Timing Channels”, in *Information and Communications Security: 15th International Conference, ICICS 2013, Beijing, China, November 20-22, 2013. Proceedings*, pp. 229-244, 2013.

#### CONFERENCE PRESENTATIONS

*IEEE Symposium on Security and Privacy, San Jose, CA. May 18, 2015*

*Protecting Private Keys against Memory Disclosure Attacks using Hardware Transactional Memory*

*ACM Conference on Embedded Networked Sensor Systems, Stanford, CA. Nov. 14, 2016*

*From Physical to Cyber: Escalating Protection for Personalized Auto Insurance*

*ACM International Conference on Mobile Systems, Applications, and Services, Niagara Falls, NY. Jun. 22, 2017*

*TrustShadow: Secure Execution of Unmodified Applications with ARM TrustZone*

#### TALKS

*Zhejiang University, Hangzhou, China. Sep. 2017*

*Building Hardware-assisted Secure Systems (host: Kui Ren)*

*Institute of Information Engineering, Chinese Academy of Sciences, Beijing, China. Sep. 2017*

*System Security Built on the Integration of Hardware and Software (host: Jingqiang Lin)*

*Institute of Software, Chinese Academy of Sciences, Beijing, China. Sep. 2017*

*Building Secure Systems with ARM TrustZone (host: Yu Qin)*

#### MENTORING EXPERIENCE

*PhD candidate, (University of Chinese Academy of Sciences, Beijing, China)*

*Wei Zhou*

*Jun. 2017 - Present*

*PhD candidate, (University of Chinese Academy of Sciences, Beijing, China)*

*Congwu Li*

*Aug. 2016 - Present*

#### ACADEMIC SERVICE

*PC member for EAI International Conference on Security and Privacy in Communication Networks (SecureComm) 2017*

*Review for IEEE Transactions on Dependable and Secure Computing (TDSC)*

*Review for Journal of Software (in Chinese) 2017*

*Review for European Symposium on Research in Computer Security (ESORICS) 2016, 2017*

*Review for Financial Cryptography (FC) 2016*

*Review for IEEE International Conference On Trust, Security And Privacy In Computing And Communications (TrustCom) 2016*

*Review for International Conference on Security and Cryptography (SECRYPT) 2015*

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