Biographical Sketch: Taesoo Kim

■ Professional Preparation

Massachusetts Institute of Technology	EECS	Ph.D.	2014	Cambridge, MA
Massachusetts Institute of Technology	EECS	S.M.	2011	Cambridge, MA
Korea Advanced Institute of Science and Technology	CS	B.S.	2009	Daejeon, South Korea
Korea Advanced Institute of Science and Technology	EE	B.S.	2009	Daejeon, South Korea

■ Appointments

08/2014–present	Assistant Professor, School of Computer Science, Georgia Institute of Technology
06/2014–08/2014	Visiting Scholar, Computer Science and Engineering, University of Washington
07/2012–08/2012	Research Intern, Samsung Electronics
01/2012–05/2012	Co-founder & Programmer, Nerati (now Compass)
06/2010–09/2014	Research Intern, Microsoft Research

■ Teaching

02/2016–08/2016	Design Operating Systems (scheduled, CS 3210)
08/2015–12/2015	Information Security Lab (scheduled, CS 6265)
08/2014–12/2014	Topics in Building Secure Systems (8803-BSS, eval: 4.8/5.0, link)
09/2012–12/2012	Teaching Assistant: Computer Systems Security (MIT 6.858, eval: 6.3/7.0, link)

■ Products

Five Products Most Closely Related to the Proposed Project:

1. Kangjie Lu, Chengyu Song, Byoungyoung Lee, Simon P. Chung, Taesoo Kim, and Wenke Lee. ASLR-Guard: Stopping Address Space Leakage for Code Reuse Attacks (to appear). In *Proceedings of The 22nd ACM Conference on Computer and Communications Security (CCS 2015),* Denver, CO, October 2015.

2. Byoungyoung Lee, Chengyu Song, Taesoo Kim, and Wenke Lee. Type Casting Verification: Stopping an Emerging Attack Vector. In *Proceedings of the 24th USENIX Security Symposium (Security 2015),* Washington, DC, August 2015.

3. Byoungyoung Lee, Chengyu Song, Yeongjin Jang, Tielei Wang, Taesoo Kim, Long Lu, and Wenke Lee. Preventing Use-after-free with Dangling Pointers Nullification. In *Proceedings of the 2015 Network and Distributed System Security Symposium (NDSS 2015),* San Diego, CA, February 2015.

4. Byoungyoung Lee, Long Lu, Tielei Wang, Taesoo Kim, and Wenke Lee. From Zygote to Morula: Fortifying Weakened ASLR on Android. In *Proceedings of the 35th IEEE Symposium on Security and Privacy (Oakland 2014),* San Jose, CA, May 2014.

5. Taesoo Kim, Marcus Peinado, and Gloria Mainar-Ruiz. System-Level Protection Against Cache-based Side Channel Attacks in the Cloud. In *Proceedings of the 21st USENIX Security Symposium (Security 2012),* Bellevue, WA, August 2012.

Five Other Significant Products:

1. Changwoo Min, Sanidhya Kashyap, Byoungyoung Lee, Chengyu Song, and Taesoo Kim. Cross-checking Semantic Correctness: The Case of Finding File System Bugs. In *Proceedings of the 25th ACM Symposium on Operating Systems Principles (SOSP 2015),* Monterey, CA, October 2015 (to appear).

2. Haogang Chen, Taesoo Kim, Xi Wang, M. Frans Kaashoek, and Nickolai Zeldovich. Identifying Information Disclosure in Web Applications with Retroactive Auditing. In *Proceedings of the 11th Symposium on Operating Systems Design and Implementation (OSDI 2014)*, Broomfield, CO, October 2014.

3. Ramesh Chandra, Taesoo Kim, and Nickolai Zeldovich. Asynchronous Intrusion Recovery for Interconnected Web Services. In *Proceedings of the 24th ACM Symposium on Operating Systems Principles (SOSP 2013),* Farmington, PA, November 2013.

4. Taesoo Kim, Ramesh Chandra, and Nickolai Zeldovich. Efficient Patch-based Auditing for Web Application Vulnerabilities. In *Proceedings of the 10th Symposium on Operating Systems Design and Implementation (OSDI 2012)*, Hollywood, CA, October 2012.

5. Taesoo Kim, Xi Wang, Nickolai Zeldovich, and M. Frans Kaashoek. Intrusion Recovery using Selective Re-execution. In *Proceedings of the 9th Symposium on Operating Systems Design and Implementation (OSDI 2010)*, Vancouver, Canada, October 2010.

■ Synergistic Activities

1. **Advising and research.** I founded and lead the *Systems Software & Security Lab*. We have made all of our projects publicly available, and actively contributed to open source communities, including CRIU, Firefox, LLVM, Android and Linux. For example, our recent bug-finding tools found 140 previously unknown bugs in Linux file-systems, and several in Firefox and GNU Libc. As a result, we have been awarded several bug bounties from Mozilla and other companies, and awarded 2015 Internet Defense Prize ($100k prize) from Facebook and USENIX.
2. **Industrial impacts.** Dr. Kim's thesis work become a basis of a startup company that he and three other colleagues at MIT and Stanford started with $2 millions initial investment from Bain Capital Ventures in 2011.
3. **Program committee.** SYSTOR 2016, INFOCOM 2016, CCS 2015, Usenix Security 2015, APSys 2015, WISA 2013.
4. **Journal reviewer.** ACM Transactions on information and System Security (TOISS 2014/2015), IEEE/ACM Transactions on Networking (ToN 2013), Security and Communication Networks (SCN 2014)
5. **Web admin.** Eurosys 2012

■ Collaborators & Other Affiliations

1. **Collaborators (26 total):**Thomas Anderson (University of Washington), Alexandra Boldyreva (Georgia Tech), Soham Desai (Intel), Young Ik Eom (Sungkyunkwan University), Hadi Esmaeilzadeh (Georgia Tech), Dongsu Han (KAIST), Bill Harris (Georgia Tech), Prerit Jain (Oracle), M. Frans Kaashoek (MIT), Brent Kang (KAIST), Yongdae Kim (KAIST), Arvind Krishnamurthy (University of Washington), Sang-Won Lee (Sungkyunkwan University), Wenke Lee (Georgia Tech), Long Lu (SUNY), Gloria Mainar-Ruiz (Microsoft Research), Robert Morris (MIT), Todd C Mowry (CMU), Onur Mutlu (CMU), Mayur Naik (Georgia Tech), Marcus Peinado (Microsoft Research), Tielei Wang (Georgia Tech), Xi Wang (University of Washington), David Wetherall (Google), Xinyu Xing (Pennsylvania State University), Nickolai Zeldovich (MIT).
2. **Graduate Advisors (2 total):** Nickolai Zeldovich (MIT), M. Frans Kaashoek (MIT)
3. **Thesis Advisor and Postgraduate-Scholar Sponsor (10 total):** Changwoo Min (Georgia Tech, Postgraduate-Scholar), Sanidhya Kashyap (Georgia Tech, PhD), Yang Ji (Georgia Tech, PhD), Meng Xu (Georgia Tech, PhD), Steffen Maass (Georgia Tech, PhD), Insu Yun (Georgia Tech, PhD), YeongJin Jang (Georgia Tech, PhD, co-advised), Chengyu Song (Georgia Tech, PhD, co-advised), Kangjie Lu (Georgia Tech, PhD, co-advised), and Byoungyoung Lee (Georgia Tech, PhD, co-advised).

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