

# Dokyung Song

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## Research Interests

I am interested in static and dynamic program analysis techniques that discover software vulnerabilities. Among others, I am specifically interested in vulnerabilities in system software including, but not limited to, operating systems, web browsers, and compilers.

## Education

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|-----------------|--|--|
| Sep. 2016 – now | Ph.D. Student, Computer Science  | University of California, Irvine       |
|                 | <ul style="list-style-type: none"><li>• Advisor: Prof. Dr. Michael Franz</li><li>• Graduate Student Researcher at Secure Systems Lab</li><li>• GPA: 3.985/4.000, 104 units</li></ul> |  |
| Feb. 2014       | B.S., Electrical and Computer Engineering  | Seoul National University, South Korea |
|                 | <ul style="list-style-type: none"><li>• GPA: 3.74/4.30, 142 credits (Cum Laude)</li><li>• Major GPA: 3.79/4.30, 64 credits</li></ul>   |  |

## Employment

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|-----------------------|--|
| Jun. 2018 – Sep. 2018 | Software Engineering Intern at Google      |
| Jun. 2017 – Sep. 2017 | Interim Engineering Intern at Qualcomm     |
| Feb. 2014 – Aug. 2016 | Senior Member of Technical Staff at Oracle |
| Oct. 2013 – Dec. 2013 | Research Intern at SAP Labs Korea          |
| Feb. 2010 – Feb. 2013 | Associate Programmer at Smilegate          |

## Publications

1. **Dokyung Song**, Julian Lettner, Prabhu Rajasekaran, Yeoul Na, Stijn Volckaert, Per Larsen, and Michael Franz; “SoK: Sanitizing for Security.” In *Proceedings of the 40th IEEE Symposium on Security and Privacy (S&P)*, May 2019. (To appear)
2. **Dokyung Song**, Felicitas Hetzelt, Dipanjan Das, Chad Spensky, Yeoul Na, Stijn Volckaert, Giovanni Vigna, Christopher Kruegel, Jean-Pierre Seifert, and Michael Franz; “PeriScope: An Effective Probing and Fuzzing Framework for the Hardware-OS Boundary.” In *Proceedings of the 26th Network and Distributed System Security Symposium (NDSS)*, February 2019. (Accepted for publication)
3. Julian Lettner, **Dokyung Song**, Taemin Park, Per Larsen, Stijn Volckaert, and Michael Franz; “PartiSan: Fast and Flexible Sanitization via Run-time Partitioning.” In *Proceedings of the 21st International Symposium on Research in Attacks, Intrusions and Defenses (RAID)*, September 2018.

## Talks

1. Fuzzing Fuchsia IPC (Intern Talk). Google, Mountain View, CA, August 2018.
2. Spatial Memory Safety beyond AddressSanitizer (Intern Talk). Qualcomm, San Diego, CA, July 2017.

3. Reproducing Bug 19259446. Oracle, Redwood City, CA, October 2014.

## Professional Service

1. Student Program Committee, *IEEE Symposium on Security and Privacy (S&P)*, 2019.

## Honors and Awards

1. Student Travel Grant Award, *Network and Distributed System Security Symposium (NDSS)*, January 2019.
2. Member of Vulnerability Rewards Program, Qualcomm, September 2018.
3. Member of Hall of Fame, Code Aurora Forum, September 2018.
4. Recipient of National Scholarship for Science and Engineering, KOSAF, 2007 – 2009, 2014.

## Discovered Vulnerabilities

1. CVE-2018-11902, CVE-2018-11947, Qualcomm, 2018.
2. SVE-2018-12029, SVE-2018-11783, SVE-2018-11784, SVE-2018-11785, Samsung Mobile, 2018.

## Teaching Experience

1. Teaching Assistant, Data Structure Implementation and Analysis (ICS 46), University of California, Irvine, Spring 2017.
2. Teaching Assistant, Data Structure Implementation and Analysis (ICS 46), University of California, Irvine, Fall 2018.