

# Insu Yun

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## RESEARCH INTERESTS

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Binary analysis, system security and applied cryptography.

## EDUCATION

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### Georgia Institute of Technology

Aug. 2015 –

Ph.D. in Computer Science

Advisor: Dr. Taesoo Kim

### Korea Advanced Institute of Science and Technology (KAIST)

Sep. 2008 – Feb. 2015

B.S. in Computer Science & Mathematics

## PUBLICATIONS

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### 1. REPT: Reverse Debugging of Failures in Deployed Software

Weidong Cui, Xinyang Ge, Baris Kasikci, Ben Niu, Upamanyu Sharma, Ruoyu Wang, and **Insu Yun** (alphabetical)

In Proceedings of the 13th USENIX Symposium on Operating Systems Design and Implementation (OSDI 2018)

Carlsbad, CA, October, 2018

**\* Jay Lepreau Best Paper Award**

### 2. QSYM: A Practical Concolic Execution Engine Tailored for Hybrid Fuzzing

**Insu Yun**, Sangho Lee, Meng Xu, Yeongjin Jang, and Taesoo Kim

In Proceedings of the 27th USENIX Security Symposium (Security 2018)

Baltimore, MD, August, 2018

**\* Distinguished Paper Award**

### 3. AVPASS: Leaking and Bypassing Antivirus Detection Model Automatically

Jinho Jung, Chanil Jeon, Max Wolotsky, **Insu Yun**, Taesoo Kim

BlackHat USA 2017

Las Vegas, NV, August 2017

### 4. CAB-Fuzz: Practical Concolic Testing Techniques for COTS Operating Systems

Su Yong Kim, Sangho Lee, **Insu Yun**, Wen Xu, Byoungyoung Lee, Youngtae Yun, Taesoo Kim

In Proceedings of the 2017 USENIX Annual Technical Conference (ATC 2017)

Santa Clara, CA, July 2017

### 5. APISan: Sanitizing API Usages through Semantic Cross-checking

**Insu Yun**, Changwoo Min, Xujie Si, Yeongjin Jang, Taesoo Kim, Mayur Naik.

In Proceedings of the 25th USENIX Security Symposium (Security 2016),

Austin, TX, August, 2016.

**\* Nominated as a finalist in CSAW Best Applied Research Paper Award 2016.**

### 6. HDFI: Hardware-Assisted Data-flow Isolation

Chengyu Song, Hyungon Moon, Monjur Alam, **Insu Yun**, Byoungyoung Lee, Taesoo Kim, Wenke Lee, and Yunheung Paek.

In Proceedings of the 37th IEEE Symposium on Security and Privacy (Oakland 2016),

San Jose, CA, May, 2016.

## 7. Kargus: a Highly-scalable Software-based Intrusion Detection System

Muhammad Jamshed, Jihyung Lee, Sangwoo Moon, **Insu Yun**, Deokjin Kim, Sungryoul Lee, Yung Yi and KyoungSoo Park.

In Proceedings of The 19th ACM Conference on Computer and Communications Security (CCS 2012), Raleigh, NC, October, 2012.

## WORK EXPERIENCE

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**Microsoft Research**, Research Intern, Seattle, WA May. 2017 – Aug. 2017

Contributed to REPT, a system that utilizes Intel Processor Trace to diagnose production failures

Mentor: Weidong Cui

**Georgia Tech**, Research Assistant, Atlanta, GA

Aug. 2015 –

**Korean Cyber Command**, Software Developer, Seoul, Korea

Apr. 2012 – Jan. 2014

Served for the mandatory military service

## HONORS & AWARDS

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### Capture-the-flag(CTF) contests

DEFCON 26 CTF, 1st place (Team DEFKOR00T) Aug. 2018

DARPA Cyber Grand Challenge (Team Disekt) Aug. 2016

Hungry Hungry Hacker CTF 2016, 1st place Apr. 2016

DEFCON 24 CTF, 3rd place (Team DEFKOR) Aug. 2016

DEFCON 23 CTF, 1st place (Team DEFKOR) Aug. 2015

DEFCON 22 CTF, 10th place (Team GoN) Aug. 2014

Codegate CTF 2012, 3rd place (Team GoN) Apr. 2012

ISEC CTF, 1st place (Team GoN) Sep. 2011

Secuinside CTF, 3rd place (Team GoN) Oct. 2011

DEFCON 18 CTF, 3rd place (Team GoN) Aug. 2010

Codegate CTF 2010, 5th place (Team GoN) Apr. 2010

KISA HDCON, Gold Medal, 2nd place (Team GoN) May 2009

Codegate CTF 2009, 4th place (Team GoN) Apr. 2009

### Bug Bounties

Three integer overflow vulnerabilities in PHP (\$1,500), the Internet Bug Bounty Jun. 2016

An Integer Overflow in Python zipimport (\$1,000), the Internet Bug Bounty Apr. 2016

### Scholarships

National Research Foundation of Korea Scholarship for Undergraduate Mar. 2008 – Dec. 2013

## TEACHING EXPERIENCE

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Teaching Assistant, Information Security Lab (CS8803 at Georgia Tech) Fall 2017

Teaching Assistant, Information Security Lab (CS6265 at Georgia Tech) Fall 2016

Teaching Assistant, Information Security Lab (CS6265 at Georgia Tech) Fall 2015

Head Instructor, Information Security class for freshmen (KAIST) Mar. 2009 – Aug. 2011