

PROJECTS
PUBLICATIONS

PROJECTS

<p>Cloud systems and Big Data</p> <ul style="list-style-type: none">• Providing QoS in multi-tenant cloud environments through virtual network embedding• Enabling Distributed Optimization (Algorithms and Practice)• Scalable, high-performance networking stack, services, and applications
<p>Internet/System Security</p> <ul style="list-style-type: none">• Intel SGX [SGX reading list]• OpenSGX: We recently released the [source code] of an Intel SGX emulator!• High-performance intrusion detection using many-core systems• Automatic protocol and behavior analysis of Android Apps using binary analysis [tech report]
<p>Internet Content Delivery</p> <ul style="list-style-type: none">• VDN: Enabling Software-defined, Near-Real Time Control for Content Delivery Networks• Understanding the Internet video Quality of Experience (QoE) and QoE engineering• Enhancing HTTP Adaptive Streaming with Network-level Predictions• Reliable Real-time Communication on Content-aware Networks

PUBLICATIONS

KI-Mon ARM: A Hardware-assisted Event-triggered Monitoring Platform for Mutable Kernel Object

Hojoon Lee, Hyungon Moon, Ingoo Heo, Daehee Jang, Jinsoo Jang, Kihwan Kim, Yunheung Paek, Brent Byunghoon Kang

IEEE TDSC 2017 (Awarded Best Paper) [\[PDF\]](#) [\[BIBTEX\]](#)

Invi-server: Reducing the attack surfaces by making protected server invisible on networks

Jaehyun Park, Jiseong Noh, Myungchul Kim, Brent Byunghoon Kang

Computers & Security 2017 [\[PDF\]](#) [\[BIBTEX\]](#)

PrivateZone: Providing a Private Execution Environment using ARM TrustZone

Jinsoo Jang, Changho Choi, Jaehyuk Lee, Nohyun Kwak, Seongman Lee, Yeseul Choi, Brent Byunghoon Kang

IEEE TDSC 2016 [\[PDF\]](#) [\[BIBTEX\]](#)

On-demand Bootstrapping Mechanism for Isolated Cryptographic Operations on Commodity Accelerators

Yonggon Kim, Ohmin Kwon, Jinsoo Jang, Seongwook Jin, Hyeongboo Baek, Brent Byunghoon Kang, Hyunsoo Yoon

Computers & Security 2016 [\[PDF\]](#) [\[BIBTEX\]](#)

OpenSGX: An Open Platform for SGX Research

Prerit Jain† Soham Desai† Seongmin Kim★ Ming-Wei Shih†

Jaehyuk Lee★ Changho Choi★ Young Shin★ Taesoo Kim† Brent Byunghoon Kang★ Dongsu Han★

NDSS Symposium 2016 (15.4%) [\[PDF\]](#) [\[BIBTEX\]](#)

Vulnerabilities of network OS and mitigation with state-based permission system

J. Noh, S. Lee, J. Park, S. Shin, and B. Kang

Security and Communication Networks 2015 [\[PDF\]](#) [\[BIBTEX\]](#)

Detecting and Preventing Kernel Rootkit Attacks with Bus Snooping

H. Moon, H. Lee, I. Heo, K. Kim, Y. Paek and B. Kang

IEEE Transactions on Dependable and Secure Computing [\[PDF\]](#) [\[BIBTEX\]](#)