

# BYUNGJIN JUN

COMPUTER SCIENCE PH.D. CANDIDATE

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## EDUCATION

### Northwestern University, Evanston, IL

- » *Ph.D., Computer Science* 2017 ~ present
- » *Master of Science, Computer Science* 2014
- » Advisor: Fabián E. Bustamante

### Korea Military Academy, Seoul, Republic of Korea

- » *Bachelor of Science, Information Science and Military Science* 2009

## PROFESSIONAL EXPERIENCES

### Full-time Internship, Telefónica research, Barcelona

Oct. 2018 ~ Dec. 2018, Nov. 2019 ~ Feb. 2020

- » Research about Roaming and IPX

### Full-time Instructor, Department of Computer Science, Korea Military Academy (KMA)

Aug. 2014 ~ Jul. 2017

- » Taught CS subjects and wrote book chapters
- » Research on Cybersecurity and Army network systems

### Organizing Committee, Hwarangdae International Symposium 2015

Jun. 2015 ~ Nov. 2015

- Organized a Cybersecurity symposium (Title: *Cyber Security Threats and Countermeasures*)

### Programming mentor, student's Programming Club in KMA

Mar. 2015 ~ Jan. 2016

- Provided cadets with computer programming education

### Journal Editing Officer, Hwarangdae Research Institute, KMA

Nov. 2014 ~ Nov. 2015

- Managed general works for Korean Journal of Military Arts and Science (KJMAS)

### Signal Officer, ROK Army

Mar. 2009 ~ Aug. 2012

- » Network managing officer: Operated large-scale networks of an Army Division
- » Signal platoon leader: Provided portable wireless connectivity to an Army Division and managed 30 signal soldiers

## PUBLICATIONS

### 8. A first look at the IP eXchange Ecosystem

Oct. 2020

- » *Andra Lutu, Byungjin Jun, Fabián E. Bustamante, Diego Perino, Marcelo Bagnulo, and Carlos Gamboa Bontje*
- » To appear in Sigcomm Computer Communication Review, Volume 50 Issue 4 (October 2020)

### 7. Where Things Roam: Uncovering Cellular IoT/M2M Connectivity

Oct. 2020

- » *Andra Lutu, Byungjin Jun, Alessandro Finamore, Fabián E. Bustamante, and Diego Perino*
- » To appear in Proc. of ACM IMC 2020

### 6. AMP Up Your Mobile Web Experience: Characterizing the Impact of Google's Accelerated Mobile Project

Oct. 2019

- » *Byungjin Jun, Fabián E. Bustamante, S. Y. Whang, and Z. S. Bischof*
- » Proc. of ACM Mobicom 2019

### 5. An Analysis of IPv6 Transition Status and Efficient Address Allocation for the Defense Information Systems

Oct. 2017

- » *Byungjin Jun, K. Shin, J. Kang, J. Yoo*
- » Korean Journal of Military Arts and Science. Volume 73 Issue 2, pp. 227~248

### 4. Introduction to Java Programming, 2nd Edition (Korean)

Jan. 2017

- » *J. Yoo, C. Han, K. Shin, J. Kang, I. Lee, Byungjin Jun, K. Park, D. Yoo, Y. Eom*
- » Chapter 1. Basic concept of computer programming

### 3. A Study on the Current Status and Future Direction of Cyber Warfare Education in KMA toward Effective Conduct of Cyber Warfare

Jun. 2016

- » *Kyuyong Shin, Byungjin Jun, Jungho Kang, Pokki Park, Insoo Lee, Jincheol Yoo*
- » Korean Journal of Military Arts and Science. Volume 72 Issue 2, pp. 131~167

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**2. Introduction to Cyber Warfare**, 2nd Edition (Korean) Feb. 2016  
» *M. Oh, et al, including Byungjin Jun*  
» Chapter 6. Comparative study of capabilities in cyber warfare, Chapter 9. Technologies of cyber threats

**1. Mobile AD(D): Estimating Mobile App Session Times for Better Ads** Feb. 2015  
» *John P. Rula, Byungjin Jun, Fabián E. Bustamante*  
» Proc. of HotMobile 2015

## OTHER PROJECTS

**Effectiveness of Permission Policy**, *Researcher* Aug. 2020 ~  
» Analyzing potential performance benefits of each policy

**Indirect estimation of Covid-19 confirmed cases with CDN demand**, *Researcher* Mar. 2020 ~  
» Inferring the causality and correlation of CDN demand with Covid-19 confirmed cases

**Ecosystem of IP eXchange**, *Researcher* Jul. 2019 ~ Feb. 2020  
» Characterized the role of IPX networks and its providers in the cellular interconnection ecosystem

**QUIC for the challenged networks**, *Researcher* Jan. 2019 ~ Aug. 2019  
» Built a proxy server that translates TCP traffic on ground to QUIC for in-flight/satellite users

**Requirement analysis of integrating military weapon system networks for the future Tactical Communications Network**,  
*Research Assistant* Dec. 2016 ~ Oct. 2017  
» Analyzed network systems connecting sensors and shooters in battlefields  
» Supported by *Agency for Defense Development, Korean government*  
» An umbrella project of Publications No.5

**Utilization of Google Glass for advertisements on the street**, *Developer* Feb. 2014 ~ Aug. 2014  
» Developed server-client system (Django - Android for Google Glass)

## TEACHING EXPERIENCES

**Distributed Systems**, *Northwestern University* Spring 2019, Spring 2020  
» Teaching Assistant

**Intro to Computer Science**, *KMA* Fall 2014, Spring 2015, Fall 2015, Fall 2016, Spring 2017  
» Co-taught (parallel teaching)

**Intro to Cyber Warfare**, *KMA* Fall 2014, Fall 2015, Fall 2016  
» Co-taught (parallel teaching)

**Data Structures**, *KMA* Spring 2015, Spring 2017  
» Designed and taught

**Intro to Database**, *KMA* Fall 2015  
» Designed and taught

## SELECTED AWARDS AND RECOGNITIONS

First place Award in Signal Officers' Advanced Course, *Army Chief of Staff* 2016  
Commendation for the extensive contribution to promote KJMAS to a KCI journal, *Superintendent of KMA* 2015  
Golden recognition for 50 times of blood donation, *Korean Red Cross* 2015  
Commendation for establishing stable network in the annual Joint Forces Exercise, *20<sup>th</sup> Division Commander* 2011  
Summa Cum Laude (6/212), *KMA* 2009