

# Inho Cho

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## Work Experience

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### Google LLC

SOFTWARE ENGINEER

Improving the performance of network infrastructures of Google's datacenter.

*Sunnyvale, CA, USA*

*Oct. 2023 - Current*

### Google Inc.

SOFTWARE ENGINEERING INTERN

Contributed to a low latency network congestion control in Google datacenter [P-1].  
Developed a prototype for credit-based congestion control in Google datacenter.  
Hosted by Dr. Keon Jang (network infrastructure group)

*Mountain View, CA, USA*

*Feb. 2017 - Aug. 2017*

### Smatoos Inc.

WEB & MOBILE APPLICATION DEVELOPER INTERN

Developed educational mobile applications for iOS.  
Developed websites using WordPress.

*Seoul, Korea*

*Aug. 2011 - Feb. 2012*

## Education

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### Ph.D. Computer Science

MASSACHUSETTS INSTITUTE OF TECHNOLOGY (MIT)

Thesis title: "Mitigating Compute Congestion for Low Latency Datacenter RPCs"  
Computer Science and Artificial Intelligence Laboratory (CSAIL)  
Advisors: Prof. Adam Belay and Prof. Mohammad Alizadeh

*Cambridge, MA*

*Sep. 2018 - Aug. 2023*

### M.S. Electrical Engineering

KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY (KAIST)

Thesis title: "ExpressPass: Credit-scheduled delay-bounded congestion control for datacenters"  
Advisor: Prof. Dongsu Han

*Daejeon, Korea*

*Aug. 2015 - Feb. 2018*

### B.S. Electrical Engineering

KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY (KAIST)

Summa Cum Laude

*Daejeon, Korea*

*Feb. 2008 - Aug. 2015*

## Publications

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### CONFERENCE PROCEEDINGS

#### [C-6] LDB: An Efficient Latency Profiling Tool for Multithreaded Applications

Inho Cho, Seo Jin Park, Ahmed Saeed, Mohammad Alizadeh, Adam Belay  
NSDI 2024, Santa Clara, CA, US (to appear)

#### [C-5] FlexPass: A Case for Flexible Credit-based Transport for Datacenter Networks

Hwijoon Lim, Jaehong Kim, Inho Cho, Keon Jang, Wei Bai, Dongsu Han  
EuroSys 2023, Rome, Italy

#### [C-4] Protego: Overload Control for Applications with Unpredictable Lock Contention

Inho Cho, Ahmed Saeed, Seo Jin Park, Mohammad Alizadeh, Adam Belay  
NSDI 2023, Boston, MA

#### [C-3] Overload Control for $\mu$ s-scale RPCs with Breakwater

Inho Cho, Ahmed Saeed, Joshua Fried, Seo Jin Park, Mohammad Alizadeh, Adam Belay  
OSDI 2020, Virtual Conference

## [C-2] Credit-scheduled Delay-bounded Congestion Control for Datacenters

Inho Cho, Keon Jang\*, Dongsu Han\*

\*co-corresponding authors

ACM SIGCOMM 2017, Los Angeles, CA, US

## [C-1] Practical Message-passing Framework for Large-scale Combinatorial Optimization

Inho Cho\*, Soya Park\*, Sejun Park, Dongsu Han, Jinwoo Shin

\* co-first authors

IEEE International Conference on Big Data 2015, Santa Clara, CA, US

## PATENTS

### [P-1] Congestion Control for Low Latency Datacenter Networks

Gautam Kumar, Nandita Dukkkipati, Keon Jang, Inho Cho

US 10,999,206 B2, May. 2021

Owned by Google LLC

## SOFTWARE

### [S-3] Breakwater implementation on Shenango

Main contributor

<https://inchocho89.github.com/breakwater>

### [S-2] ExpressPass ns-2 simulator

Main contributor

<https://github.com/kaist-ina/ns2-xpass>

### [S-1] Belief Propagation-based Combinatorial Optimization Tool

Main contributor

[https://github.com/kaist-ina/bp\\_solver](https://github.com/kaist-ina/bp_solver)

## Honors & Awards

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2018 **Fellowship**, The Irwin Mark Jacobs and Joan Klein Jacobs Presidential Fellowship

MIT

2015 **Dean's list**, Outstanding Scholastic Achievement in KAIST College of Engineering

KAIST

2015 **Grand Prix**, 2015 Winter/Spring KAIST Undergraduate Research Project Workshop

KAIST

## Teaching Experience

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### 6.828: Operating System Engineering

Teaching Assistant

MIT

Fall 2020

### EE817B: Special Topics in Advanced Networking and Cloud Computing

Teaching Assistant

KAIST

Fall 2016

## Volunteer Experience

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### Victor Francisco Rosales Ortega (Public School)

Piura, Peru

KOREA INTERNATIONAL COOPERATION AGENCY (KOICA) VOLUNTEER

Jun. 2012 - May 2014

Taught office automation (OA), programming, and maintenance to students and teachers.