

Taejoong Chung

CONTACT INFORMATION	Building 138, Room 414 Seoul National University 599 Gwanak-ro, Gwanak-gu, Seoul 151-742, Korea	<i>Office:</i> +82-2-880-9147 <i>Fax:</i> +82-2-872-2045 <i>E-mail:</i> tjchung@mmlab.snu.ac.kr <i>WWW:</i> http://mmlab.snu.ac.kr/~tjchung
RESEARCH INTERESTS	Data Science; Measurement; Online Social Network; Crowd Phenomena; P2P network; Information-Centric or Content-Centric Network	
EDUCATION	Ph.D. , Feb. 2015, Computer Science and Engineering, Seoul National University Thesis: “Analytic Approach of Understanding Crowd Phenomnea on the Internet: Case Studies of MMORPG and BitTorrent” Supervisors: <i>Prof. Yanghee Choi</i> and <i>Prof. Ted “Taekyoung” Kwon</i> B.S. , Aug. 2009, Computer Science and Enginnering, POSTECH (Pohang University of Science and Technology)	
PROFESSIONAL EXPERIENCES	Postdoctoral Researcher: Mar. 2015 - present at Seoul National University . <ul style="list-style-type: none">Analyzing and identifying potential privacy leakage problem in the large-scale online social networks (OSNs) Intern: Jun. 2013 - Mar. 2014 at Cisco Systems in Cambridge, MA USA <ul style="list-style-type: none">Design and implement a scalable NDN (Named Data Networking) router with unique forwarding and caching mechanism featuring terabyte-scale caching with solid-state drives on ISM (ASR9K) platform Research Assistance: Aug. 2009 - Feb. 2015 at Seoul National University . <ul style="list-style-type: none">Analyzing and modeling social interactions and crowd phenomena in OSNs and Virtual World (e.g., MMORPG)Analyzing and improving BitTorrent performanceMeasuring and modeling content dissemination phenomena in BitTorrentDesigning NDN architecture to solve routing scalability issues Teaching Assistance: Spring 2010 / Fall 2010 / Fall 2011 at Seoul National University <ul style="list-style-type: none">Computer Networks (4190.411, Fall 2011)Engineering Math I (400.001A, Spring 2010)Engineering Math II (400.002A, Fall 2010) Intern: Dec. 2007 - Mar. 2008 at NomadConnection in Seoul, Korea (http://www.nomadconnection.com) <ul style="list-style-type: none">Developed a plugin on the <i>chameleo</i>, which is an extensible open-source media framework Intern: Dec. 2008 - Mar. 2009 at Company100 in Seoul, Korea (http://www.company100.com) <ul style="list-style-type: none">Developed a proxy server based on <i>RabbIT</i>, which supports the content compression and caching for mobile devices	
AWARDS	1. Microsoft Azure Research “Award Program: Microsoft Azure for Research Supports \$20,000”, Apr. 2015 <ul style="list-style-type: none">Project Title: Group Dynamics in Group based Social Network	

2. Best paper award from Korea Information and Communication Society (KICS), Jul. 2010.
 - Paper title: Analysis on Availability Metrics in BitTorrent Swarming System
3. Best paper award from IEEE Communication Society Seoul Chapter, Apr. 2010.
 - Paper title: Analysis on BitTorrent Performance Based on the Number of Unchoked Peers

INTERNATIONAL
CONFERENCE
PUBLICATIONS

1. Won So, **Taejoong Chung**, Haowei Yuan, David Oran, and Mark Stapp, “Toward Terabyte-scale Caching with SSD in a Named Data Networking Router” In ACM/IEEE ANCS 2014 conference (accepted as a poster), Marina del Rey, CA, USA, October 2014.
2. Hoon-gyu Choi, Jungmin Yoo, **Taejoong Chung**, Nakjung Choi, Ted “Taekyoung” Kwon, and Yanghee Choi, “CoRC: Coordinated Routing and Caching for Named Data Networking” In ACM/IEEE ANCS 2014 conference, Marina del Rey, CA, USA, October 2014.
3. **Taejoong Chung**, Jinyoung Han, Daejin Choi, Ted “Taekyoung” Kwon, Huy Kang Kim and Yanghee Choi, “Unveiling Group Characteristics in Online Social Games: A Socio-Economic Analysis” In International World Wide Web Conference (WWW), Seoul, Korea, April 2014. (acceptance rate: $84/650 = 12.9\%$)
4. **Taejoong Chung**, Jinyoung Han, Hojin Lee, Jussi Kangasharju, Ted “Taekyoung” Kwon, and Yanghee Choi, “Spatial and Temporal Locality of Content in BitTorrent: A Measurement Study” In IFIP NETWORKING 2013, Brooklyn, Newyork, USA, May. 2013. (acceptance rate = $50 / 191 = 26.1\%$)
5. **Taejoong Chung**, Jinyoung Han, Hojin Lee, Nakjung Choi, Ted “Taekyoung” Kwon, and Yanghee Choi, “Spatial and Temporal Locality of Swarm Dynamics in BitTorrent” In PAM 2013 (Passive and Active Measurement Conference) (accepted as a poster), Hong Kong, March. 2013.
6. Jinyoung Han, Seungbae Kim, **Taejoong Chung**, Ted “Taekyoung” Kwon, Hyun-chul Kim, and Yanghee Choi, “Bundling Practice in Bittorrent: What, How, and Why,” In *ACM SIGMETRICS*, Jun. 2012. (acceptance rate = $31/203 = 15.3\%$)
7. Seungbae Kim, Jinyoung Han, **Taejoong Chung**, Hyun-chul Kim, Ted “Taekyoung” Kwon, and Yanghee Choi, “Content Publishing and Downloading Practice in BitTorrent,” In *IFIP NETWORKING*, May. 2012. (acceptance rate = $64/225 = 28.4\%$)
8. Jaeyoung Choi, Jinyoung Han, **Taejoong Chung**, Eunsang Cho, Ted “Taekyoung” Kwon, and Yanghee Choi, “Bandwidth Allocation for BitTorrent under Multi-Torrent Environments,” In *IEEE GLOBECOM*, Dec. 2011. (acceptance rate = $1070/2923 = 36.6\%$)
9. Jinyoung Han, **Taejoong Chung**, Seungbae Kim, Ted “Taekyoung” Kwon, Hyun-chul Kim, and Yanghee Choi, “How Prevalent is Content Bundling in BitTorrent?,” In *ACM SIGMETRICS*, Jun. 2011. (accepted as a poster) (acceptance rate = $(\text{regular } 26 + \text{poster } 20) / 177 = 26\%$)
10. Jinyoung Han, **Taejoong Chung**, Seungbae Kim, Hyun-chul Kim, Ted “Taekyoung” Kwon, and Yanghee Choi, “An Empirical Study on Content Bundling in BitTorrent Swarming System,” In *AsiaFI Summer School*, Aug. 2010. arXiv:1008.2574v1

11. Jinyoung Han, **Taejoong Chung**, Hyun-chul Kim, Ted “Taekyoung” Kwon, and Yanghee Choi, “Systematic Support for Content Bundling in BitTorrent Swarming,” In *IEEE INFOCOM Student Workshop*, Mar. 2010. (acceptance rate = $20/63 = 31.7\%$)

INTERNATIONAL
JOURNAL
PUBLICATIONS

1. Jinyoung Han, **Taejoong Chung**, Seungbae Kim, Hyun-chul Kim, Jussi Kangasharju, Ted “Taekyoung” Kwon, and Yanghee Choi, “Strategic Bundling for Content Availability and Fast Distribution in BitTorrent”, accepted in *Elsevier Computer Communications (COMCOM)*.
2. Jinyoung Han, Nakjung Choi, **Taejoong Chung**, Ted “Taekyoung” Kwon, and Yanghee Choi, “A Target-centric Surveillance System based on Localization and Social Networking,” In *Springer Multimedia Tools and Applications (MTAP)*. (SCIE, IF in 2010 = 0.885)
3. Jinyoung Han, Seungbae Kim, **Taejoong Chung**, Ted “Taekyoung” Kwon, Hyun-chul Kim, and Yanghee Choi, “Bundling Practice in Bittorrent: What, How, and Why,” In *ACM SIGMETRICS Performance Evaluation Review*, vol. 40, no. 1, Jun. 2012. (SCOPUS, SNIP in 2010 = 1.835, Fast-tracked from ACM SIGMETRICS 2012)
4. Jinyoung Han, **Taejoong Chung**, Seungbae Kim, Ted “Taekyoung” Kwon, Hyun-chul Kim, and Yanghee Choi, “How Prevalent is Content Bundling in BitTorrent?,” In *ACM SIGMETRICS Performance Evaluation Review*, vol. 39, no. 1, Jun. 2011. (SCOPUS, SNIP in 2010 = 1.835, Fast-tracked from ACM SIGMETRICS 2011)

DOMESTIC
CONFERENCE
PUBLICATIONS

1. **Taejoong Chung**, Ted “Taekyoung” Kwon, and Yanghee Choi, “Bloom filter-based Routing for CCN” In *Korea Information and Communication Society (KICS) Summer Conference*, July. 2012
2. Jimin Lee, **Taejoong Chung**, Ted “Taekyoung” Kwon, and Yanghee Choi, “A study on Flooding-based Routing Designs for CCNx Testbed” In *Korea Information and Communication Society (KICS) Fall Conference*, Nov. 2011
3. **Taejoong Chung**, Jinyoung Han, Seungbae Kim, Ted “Taekyoung” Kwon, and Yanghee Choi, “A Study on How to Measure the Topology of Swarm in BitTorrent,” In *Korea Information and Communication Society (KICS) Fall Conference*, Nov. 2011.
4. **Taejoong Chung**, Jinyoung Han, Ted “Taekyoung” Kwon, and Yanghee Choi, “Analysis on BitTorrent Performance Based on the Piece-Size,” In *Korea Information and Communication Society (KICS) Winter Conference*, Feb. 2011.
5. **Taejoong Chung**, Jinyoung Han, Hyun-chul Kim, Ted “Taekyoung” Kwon, and Yanghee Choi, “Analysis on Availability Metrics in BitTorrent Swarming System,” In *Korea Information and Communication Society (KICS) Summer Conference*, Jul. 2010. (Best Paper Award from Korea Information and Communication Society)
6. **Taejoong Chung**, Jinyoung Han, Hyun-chul Kim, Ted “Taekyoung” Kwon, and Yanghee Choi, “An Analysis on BitTorrent Performance Based on the Number of Unchoked Peer,” In *The 20th Joint Conference on Communication & Information (JCCI)*, Jul. 2010. (Best Paper Award from IEEE Communication Society Seoul Chapter)

DOMESTIC
JOURNAL
PUBLICATIONS

1. **Taejoong Chung**, Jinyoung Han, Hyunchul Kim, Ted “Taekyoung” Kwon, and Yanghee Choi, “An Analysis on BitTorrent Performance Based on the Number of Unchoked Peer,” In *Journal of Korea Information and Communication Society (KICS)*, vol. 35, no. 8, pp. 1197-1203, Aug. 2010. (Korea Citation Index (KCI), forward from JCCI 2010 Conference)

FELLOWSHIPS

1. Ph.D Industrial Scholarship From SAMSUNG, (2012 - present)
2. Hajung (HYUNDAI) Scholarship, (2010 - 2012)
3. Student exchange program to UCLA from POSTECH, (2007)
4. National Science & Technology Scholarship, KOSAF(Korea Student Aid Foundation), (2005 - 2008)

PATENTS

1. Ted “Taekyoung” Kwon, **Taejoong Chung**, Youngbin Im, Dookyoon Han, Hyungho Lee, Jicheol Lee, Hanna Lim, “METHOD AND APPRATUS FOR PRVENTING DUPLICATED TRANSMISSION UNDER STREAMING SERVICE” (pending, Korean application NO. P2013-0075777.), 2013
2. Ted “Taekyoung” Kwon, Youngbin Im, **Taejoong Chung**, Dookyoon Han, Hyungho Lee, Jicheol Lee, Hanna Lim, “METHOD AND APPARATUS FOR ASSIGNING VIDEO BITRATE IN MOBILE COMMUNICATION SYSTEM” (pending, Korean application NO. P2013-0065634.), 2013
3. Ted “Taekyoung” Kwon, Dookyoon Han, Youngbin Im, **Taejoong Chung**, Hyungho Lee, Jicheol Lee, Hanna Lim, “METHOD FOR PROVIDING FOR A VIDEO STREAMING SERVICE AN MOBILE DEVICE THEREOF” (pending, Korean application NO. P2013-0066062.), 2013

DEMO

1. Internet Video Diary, *Future Internet Service Demonstration*, 2010. (<http://mmlab.snu.ac.kr/projects/2010/2010demo/>)
2. Efficient Bandwidth Management Scheme under Multi-torrent Environment, *Future Internet Technology Demonstration/Exhibition*, 2009. (http://fif.kr/fidemo2009/summary/12_abstract.pdf)

PROJECT
EXPERIENCES

- Networking Content Delivery Optimization by *SAMSUNG, Korea* (2012. 09. - 2013.06)
- Fundamental Research on In-network Caching and Routing for Named-data Networking sponsored by *Korea Communications Agency (KCA), Korea* (2011. 3. - 2014.02)
- Future Internet Service Demonstration: Internet Video Diary sponsored by *Korea Internet & Security Agency (KISA), Korea* (2010. 7. - 2010. 12.)

PROFESSIONAL
SKILLS

- Committee - Poster Selection Committee of ACM/IEEE Symposium on Architectures for Networking and Communications Systems 2014
- Reviewer - ANCS 2014, ICTC 2012, IMCOM 2013, COMSNETS 2011

TALKS &
PRESENTATIONS

1. WWW 2014, “Unveiling Group Characteristics in Online Social Games: A Socio-Economic Analysis”, Seoul, Korea, April 2014.
2. IFIP NETWORKING 2013, “Spatial and Temporal Locality of Content in BitTorrent: A Measurement Study”, Brooklyn, Newyork, USA, May. 2013.
3. PAM 2013, “Spatial and Temporal Locality of Swarm Dynamics in BitTorrent”, Hong Kong, March. 2013.
4. IEEE GLOBECOM 2011, “Bandwidth Allocation for BitTorrent under Multi-Torrent Environments”, Houston, US, Dec 2012.

TECHNICAL SKILLS

- Programming languages: C, C++, Objective C, Java, Python
- OS: MS Windows, Linux, Unix, OSX
- Tools: MATLAB, SQL, CCNx, R, iGraph.

REFERENCES

Yanghee Choi (e-mail: yhchoi@snu.ac.kr; phone: +82-2-880-7303)

- Current Minister of Science, ICT and Future Planning, Korea
- Professor, School of Computer Science & Engineering, Seoul National University, Korea (leave of absence)

Ted “Taekyoung” Kwon (e-mail: tkkwon@snu.ac.kr; phone: +82-2-880-9105)

- Professor, School of Computer Science & Engineering, Seoul National University, Korea

David Oran (e-mail: oran@cisco.com)

- Fellow at Cisco Systems

Hyun-chul Kim (e-mail: hkim@smu.ac.kr; phone: +82-41-550-5403)

- Professor, Dept. of Computer Software Engineering, Sangmyung University, Korea