

Taejoong (Tijay) Chung

Assistant Professor (tjc@cs.rit.edu, <https://taejoong.github.io>)

Education

- 09/2009–02/2015 **Ph.D.**, Computer Science and Engineering, Seoul National University, Seoul, Korea.
- Thesis: “*Analytic Approach of Understanding Crowd Phenomena on the Internet: Case Studies of MMORPG and BitTorrent*”
 - Supervisors: Prof. Yanghee Choi and Prof. Ted “Taekyoung” Kwon
- 03/2005–09/2009 **B.S.**, Computer Science and Engineering, POSTECH (Pohang University of Science and Technology), Pohang, Korea.

Professional Experiences

- 08/2018–present **Assistant Professor**, B. Thomas Golisano College of Computing and Information Sciences, Rochester Institute of Technology (RIT), Rochester, NY, United States.
- 09/2015–08/2018 **Postdoctoral Researcher**, Northeastern University, Boston, MA, United States.
- 03/2015–02/2016 **Postdoctoral Researcher**, Seoul National University, Seoul, Korea.
- 06/2013–03/2014 **Research Intern**, Cisco Systems, Cambridge, MA, United States.
- 08/2011–02/2015 **Research Assistant**, Seoul National University, Seoul, Korea.

Honors and Awards

- 2019 Applied Networking Research Prize at IETF
- 2017 Distinguished Paper Award, USENIX Security'17
- 2015 Microsoft Azure Research “Award Program: Microsoft Azure for Research Supports \$20,000”
- 2010 Best Paper Award, Korea Information and Communication Society (KICS)
- 2010 Best Paper Award, IEEE Communication Society Seoul Chapter

Grants

- 2019 CRII: SaTC: Measuring and Improving the Management of Resource Public Key Infrastructure (RPKI)
- National Science Foundation. CNS-1850465, 10/2019 – 09/2021. Primary Investigator. \$166,561
- 2015 Personal Recommendation System and Privacy Protection through Big Data Analysis on Online Social Networks
- National Research Foundation of Korea (NRF). NRF-2016018668, 03/2015 – 02/2016. Primary Investigator. ₩50,000,000 (≈ \$44,000)

Refereed Conference Publications

- NDSS'19 **maTLS: How to Make TLS middlebox-aware?**
Hyunwoo Lee, Zachary Smith, Junghwan Lim, Gyeongjae Choi, Selin Chun, **T. Chung**, and Ted "Taekyoung" Kwon
NDSS, San Diego, USA, Feb. 2019
- IMC'18 **Is the Web Ready for OCSP Must Staple?**
T. Chung, Jay Lok, Balakrishnan Chandrasekaran, David Choffnes, Dave Levin, Bruce M. Maggs, Alan Mislove, John Rula, Nick Sullivan, and Christo Wilson
IMC, Boston, USA, Nov. 2018
- CSCW'18 **Privacy Leakage in Event-based Social Networks: A Meetup Case Study**
T. Chung, J. Han, D. Choi, T. Kwon, J. Rha, and H. Kim
CSCW, Jersey City, USA, Nov. 2018
- IMC'17 **Understanding the Role of Registrars in DNSSEC Deployment**
T. Chung, R. van Rijswijk-Deij, D. Choffnes, A. Mislove, C. Wilson, D. Levin, and B. M. Maggs
IMC, London, UK, Nov. 2017
- USENIX Security'17 **A Longitudinal, End-to-End View of the DNSSEC Ecosystem**
T. Chung, R. van Rijswijk-Deij, B. Chandrasekaran, D. Choffnes, D. Levin, B. M. Maggs, A. Mislove, and C. Wilson
USENIX Security, Vancouver, Canada, Aug. 2017
- IMC'16 **Measuring and Applying Invalid SSL Certificates: The Silent Majority**
T. Chung, Y. Liu, D. Choffnes, D. Levin, B. M. Maggs, A. Mislove, and C. Wilson
IMC, Santa Monica, CA, USA, Nov. 2016
- IMC'16 **Tunneling for Transparency: A Large-Scale Analysis of End-to-End Violations in the Internet**
T. Chung, D. Choffnes, and A. Mislove
IMC, Santa Monica, CA, USA, Nov. 2016
- CCS'16 **Measurement and Analysis of Private Key Sharing in the HTTPS Ecosystem**
F. Cangialosi, **T. Chung**, D. Choffnes, D. Levin, B. M. Maggs, A. Mislove, and C. Wilson
CCS, Vienna, Austria, Oct. 2016
- COSN'15 **Characterizing Conversation Patterns in Reddit: From the Perspectives of Content Properties and User Participation Behaviors**
D. Choi, J. Han, **T. Chung**, Y. Ahn, B. Chun, and T. Kwon
COSN, Stanford, CA, USA, Nov. 2015
- COSN'15 **Sharing Topics in Pinterest: Understanding Content Creation and Diffusion Behaviors**
J. Han, D. Choi, A. Choi, **T. Chung**, T. Kwon, J. Rha, and C. Chuah
COSN, Stanford, CA, USA, Nov. 2015
- ANCS'14 **CoRC: Coordinated Routing and Caching for Named Data Networking**
H. Choi, J. Yoo, **T. Chung**, N. Choi, T. Kwon, and Y. Choi
ANCS, Marina del Rey, CA, USA, Oct. 2014
- WWW'14 **Unveiling Group Characteristics in Online Social Games: A Socio-Economic Analysis**
T. Chung, J. Han, D. Choi, T. Kwon, H. K. Kim and Y. Choi
WWW, Seoul, Korea, Apr. 2014
- IFIP Networking'13 **Spatial and Temporal Locality of Content in BitTorrent: A Measurement Study**
T. Chung, J. Han, H. Lee, J. Kangasharju, T. Kwon, and Y. Choi
IFIP Networking, Brooklyn, NY, USA, May 2013
- SIGMETRICS'12 **Bundling Practice in Bittorrent: What, How, and Why**
J. Han, S. Kim, **T. Chung**, T. Kwon, H. Kim, and Y. Choi
SIGMETRICS, London, UK, Jun. 2012

- IFIP Networking'12 **Content Publishing and Downloading Practice in BitTorrent**
S. Kim, J. Han, **T. Chung**, T. Kwon, H. Kim, and Y. Choi
IFIP Networking, Prague, Czech, May 2012
- GLOBECOM'12 **Bandwidth Allocation for BitTorrent under Multi-Torrent Environments**
J. Choi, J. Han, **T. Chung**, E. Cho, T. Kwon, and Y. Choi
GLOBECOM, Houston, Texas, United States, Dec. 2011

Journal Publications

Predicting Content Consumption from Content-to-Content Relationships

Jinyoung Han, Daejin Choi, **T. Chung**, Chen-Nee Chuah, Hyun-chul Kim, and Ted "Taekyoung" Kwon

Elsevier Journal of Network and Computer Applications (JNCA), Vol. 132, pp. 1, April 2019

A First Look at Certification Authority Authorization (CAA)

Quirin Scheitle, **T. Chung**, Jens Hiller, Oliver Gasser, Johannes Naab, Roland van Rijswijk-Deij, Oliver Hohlfeld, Ralph Holz, Dave Choffnes, Alan Mislove, and Georg Carle

ACM SIGCOMM Computer Communications Review (CCR), Vol. 48, pp. 2, Apr. 2018

An End-to-End View of DNSSEC Ecosystem Management

T. Chung, R. van Rijswijk-Deij, B. Chandrasekaran, D. Choffnes, D. Levin, B. M. Maggs, A. Mislove, and C. Wilson

USENIX Magazine ;login:, Vol. 42, No. 4, Dec. 2017

A Target-centric Surveillance System based on Localization and Social Networking

J. Han, N. Choi, **T. Chung**, T. Kwon, and Y. Choi

Multimedia Tools and Applications (MTAP), Vol. 73, Issue 1, pp. 241-265, Nov. 2014

Strategic Bundling for Content Availability and Fast Distribution in BitTorrent

J. Han, **T. Chung**, S. Kim, H. Kim, J. Kangasharju, T. Kwon, and Y. Choi

Computer Communication (COMCOM), Vol. 43, pp. 64-73, May 2014

Bundling Practice in Bittorrent: What, How, and Why

J. Han, S. Kim, **T. Chung**, T. Kwon, H. Kim, and Y. Choi

ACM SIGMETRICS Performance Evaluation Review, Vol. 40, No. 1, pp. 77-88, Jun. 2012.

How Prevalent is Content Bundling in BitTorrent?

J. Han, **T. Chung**, S. Kim, T. Kwon, H. Kim, and Y. Choi

ACM SIGMETRICS Performance Evaluation Review, Vol. 39, No. 1, pp. 319-320, Jun. 2011.

Posters

- SIGCOMM'17 **The Root Canary: Monitoring and Measuring the DNSSEC Root Key Rollover**
R. van Rijswijk-Deij, **T. Chung**, D. Choffnes, A. Mislove, and W. Toorop
SIGCOMM, Los Angeles, CA, USA, Aug. 2017
- ACNS'14 **Toward Terabyte-scale Caching with SSD in a Named Data Networking Router**
W. So, **T. Chung**, H. Yuan, D. Oran, and M. Stapp
ANCS, Marina del Rey, CA, USA, Oct. 2014
- PAM'13 **Spatial and Temporal Locality of Swarm Dynamics in BitTorrent**
T. Chung, J. Han, H. Lee, J. Kangasharju, T. Kwon, and Y. Choi
PAM, Hong Kong, March. 2013.

Non-Refereed Conference Publications

- TPRC'17 **Investigating End-To-End Integrity Violations in Internet Traffic**
A. Mislove, D. Choffnes, and **T. Chung**
TPRC, Arlington, VA, USA, Sept. 2017

Fellowships

- 2012–2016 **Samsung Ph.D. Industrial Scholarship.**
- 2010–2012 **Hyundai (Hajung) Scholarship.**
- Summer 2007 **POSTECH Student Exchange Program to UCLA.**
- 2005–2008 **National Science & Technology Scholarship, KOSAF(Korea Student Aid Foundation).**

Project Experience

- 06/2015–06/2016 **Personal Recommendation System and Privacy Protection through Big Data Analysis on Online Social Networks**
National Research Foundation of Korea (NRF)
- 09/2012–06/2013 **Networking Content Delivery Optimization**
SAMSUNG Electronics
- 03/2011–02/2014 **Fundamental Research on In-network Caching and Routing for Named-data Networking**
Korea Communications Agency (KCA)
- 07/2010–12/2012 **Future Internet Service Demonstration: Internet Video Diary**
Korea Internet & Security Agency (KISA), Korea

Service

Program Committee Member.

- '19 Program Committee of The Passive and Active Measurement (PAM)
- '19 Program Committee of International AAAI Conference on Web and Social Media (ICWSM)
- '18 Program Committee of International AAAI Conference on Web and Social Media (ICWSM)
- '17 Program Committee of International AAAI Conference on Web and Social Media (ICWSM)
- '17 Program Committee of IEEE International Conference on Ubiquitous Computing and Communications (IUCC)
- '14 Poster Selection Committee of ACM/IEEE Symposium on Architectures for Networking and Communications Systems (ANCS)

Shadow Program Committee Member.

- '18 ACM Internet Measurement Conference (IMC)
- '17 ACM Internet Measurement Conference (IMC)

Registration Chair.

- '18 ACM Internet Measurement Conference (IMC)

Reviewer.

- '19 IEEE/ACM Transactions on Networking
- '19 ACM Transactions on Privacy and Security

Talks

- 01/07/2019 Korea Advanced Institute of Science and Technology (KAIST)
- 12/27/2018 Sungkyunkwan University (SKKU)
- 11/16/2018 GCCIS PhD Colloquium Series at Rochester Institute of Technology (RIT)

11/05/2018 ACM Conference on Computer-Supported Cooperative Work and Social Computing (CSCW)
11/01/2018 ACM Internet Measurement Conference (IMC)
09/14/2018 Great Lakes Security Day (GLSD)
06/29/2018 Sonos at Boston
05/30/2018 Graduate School of Information Security at Korea University
03/21/2018 Department of Computer Science and Engineering at Washington University in St. Louis (WUSTL)
02/28/2018 Department of Computer Science at Rochester Institute of Technology (RIT)
11/02/2017 ACM Internet Measurement Conference (IMC)
09/29/2017 New England Security Day (NESD)
09/08/2017 Research Conference on Communications, Information and Internet Policy (TPRC)
08/18/2017 USENIX Security
11/16/2016 ACM Internet Measurement Conference (IMC)
11/15/2016 ACM Internet Measurement Conference (IMC)
10/07/2016 New England Networking and Systems Day (NENS)
12/29/2014 Korea Advanced Institute of Science and Technology (KAIST)
04/10/2014 World Wide Web Conference (WWW)
05/22/2013 IFIP Networking
12/07/2011 IEEE GLOBECOM

References

Alan Mislove (amislove@ccs.neu.edu)

Associate Professor of Computer Science, Northeastern University, USA

Bruce M. Maggs (bmm@cs.cmu.edu)

Professor of Computer Science, Duke University and Vice President of Research, Akamai Technologies, USA

Dave Levin (dml@cs.umd.edu)

Assistant Professor of Computer Science, University of Maryland, USA

David Choffnes (choffnes@ccs.neu.edu)

Assistant Professor of Computer Science, Northeastern University, USA

Dave Oran (daveoran@orandom.net)

Former fellow at Cisco Systems, USA

Ted "Taekyoung" Kwon (tkkwon@snu.ac.kr)

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