

Jiho Ryu

CONTACT INFORMATION	138-414, Seoul National University 599 Gwanangno, Gwanak-gu Seoul, 151-742, Korea	<i>Mobile:</i> +82-10-7531-3240 <i>Fax:</i> +82-2-872-2045 <i>E-mail:</i> jihoryu@snu.ac.kr <i>Web:</i> http://mmlab.snu.ac.kr/~jhryu
OBJECTIVE	A postdoctoral research position, utilizing my research experience in wireless networks.	
RESEARCH INTERESTS	Scheduling in Wireless Networks; IEEE 802.11 Wireless LANs: QoS & Enhancing MAC performance; Real-time systems; RFID systems	
EDUCATION	Ph.D. candidate, 2005-present, School of Computer Science & Engineering, Seoul National University Advisors: <i>Prof. Ted “Taekyoung” Kwon</i> and <i>Prof. Yanghee Choi</i> B.S., 2005, Computer Science Division at Department of EECS, Korea Advanced Institute of Science and Technology (KAIST) <i>Cum Laude</i> , With Honors in Engineering	
WORK EXPERIENCES	• Visiting Scholar; July 2009 - December 2009 at Information Processing Systems Lab (IPS), Ohio State University (Advisor: <i>Prof. Ness B. Shroff</i>) • Visiting Researcher; June 2008 - August 2008 at the University of Connecticut (Advisor: <i>Prof. Yoo-Ah Kim</i>) • Intern; July 2004 - August 2004 at Electronics and Telecommunications Research Institute (ETRI) • Intern; January 2004 - February 2004 at LG Electronics Institute of Technology (LG Elite)	
INTERNATIONAL JOURNAL PUBLICATIONS	1. Rajiv Gandhi, Yoo-Ah Kim, Seungjoon Lee, Jiho Ryu, and Peng-Jun Wan, “Approximation Algorithms for Data Broadcast in Wireless Networks,” accepted to <i>IEEE Transactions on Mobile Computing (TMC)</i>. 2. Jeongkeun Lee, Jiho Ryu, Sung-Ju Lee, and Ted “Taekyoung” Kwon, “Improved modeling of IEEE 802.11a PHY through fine-grained measurements,” <i>Elsevier Computer Networks (ComNet)</i>, Vol. 54, No. 4, pp. 641-657, March 2010.. 3. Jiho Ryu, Chang-Gun Lee, Ted “Taekyoung” Kwon, and Junghee Han, “Combined Scheduling and Routing for Deterministic Guarantee of End-to-End Deadlines in Cell Structured Sensor Networks,” <i>IEEE Sensors Journal</i>, Vol. 9, No. 10, pp. 1291-1301, October 2009. 4. Nakjung Choi, Jiho Ryu, Eunkyong Paik, Ted “Taekyoung” Kwon, and Yanghee Choi, “A Transparent Failover Mechanism for a Mobile Network with Multiple Mobile Routers,” <i>IEEE Communications Letters, (CL)</i>, Vol. 11, No. 7, pp. 604-606, July 2007. 5. Jiho Ryu, Yongho Seok, Nakjung Choi, Ted “Taekyoung” Kwon, and Yanghee Choi, “S-EDCA: EDCA based on SuperSlot and Pseudo Collision,” <i>ACM SIG-MOBILE Mobile Computing and Communications Review (MC2R)</i>, Vol. 10, No. 4, pp. 15-16, October 2006 (invited).	

1. **Jiho Ryu**, Changhee Joo, Ted “Taekyoung” Kwon, Ness B. Shroff, and Yanghee Choi, “DSS: Distributed SINR based Scheduling Algorithm for Multi-hop Wireless Networks,” submitted to *IEEE Transactions on Mobile Computing (TMC)*.

1. **Jiho Ryu**, Changhee Joo, Ted “Taekyoung” Kwon, Ness B. Shroff, and Yanghee Choi, “Distributed SINR based Scheduling Algorithm for Multi-hop Wireless Networks,” in Proc. of the *13th ACM Intl. Symposium on Modeling, Analysis and Simulation of Wireless and Mobile Systems (MSWIM’2010)*, Bodrum, Turkey, October 2010. (Short paper, Acceptance Ratio: $39.4 = 52/132$, Regular: $32.6 = 43/132$).
2. Rajiv Gandhi, Yoo-Ah Kim, Seungjoon Lee, **Jiho Ryu**, and Peng-Jun Wan, “Approximation Algorithms for Data Broadcast in Wireless Networks,” in Proc. of *IEEE INFOCOM Mini-conference 2009*, Rio de Janeiro, Brazil, April 2009.
3. **Jiho Ryu**, Jeongkeun Lee, Sung-Ju Lee, and Ted “Taekyoung” Kwon, “Revamping the IEEE 802.11a PHY Simulation Models,” in Proc. of the *11th ACM/IEEE Intl. Symposium on Modeling, Analysis and Simulation of Wireless and Mobile Systems (MSWIM’08)*, **one of three best paper candidates**, Vancouver, British Columbia, Canada, October 2008. (Acceptance Ratio: $29.3 = 55/188$, Regular: $21.3 = 40/188$).
4. Jeongkeun Lee, Sung-Ju Lee, **Jiho Ryu**, and Ted “Taekyoung” Kwon, “Simulating the 802.11a PHY Model: Making It Accurate,” *ACM International Conference on Mobile Computing and Networking (MobiCom) 2008* Poster Session, San Francisco, California, USA, September 2008.
5. Jeongkeun Lee, Wonho Kim, Sung-Ju Lee, Daehyung Jo, **Jiho Ryu**, Ted “Taekyoung Kwon”, and Yanghee Choi, “An Experimental Study on the Capture Effect in 802.11 Networks,” in Proc. of the *Second ACM International Workshop on Wireless Network Testbeds, Experimental evaluation and CHaracterization (WinTECH) 2007*, Montreal, QC, Canada, September 2007.
6. Nakjung Choi, **Jiho Ryu**, Yongho Seok, Ted “Taekyoung” Kwon, and Yanghee Choi, “Optimizing Aggregate Throughput of Upstream TCP Flows over IEEE 802.11 Wireless LANs,” in Proc. of *IEEE International symposium on Personal, Indoor and Mobile Radio Communications (PIMRC) 2007*, Athens, Greece, September 2007.
7. **Jiho Ryu**, Hojin Lee, Yongho Seok, Ted “Taekyoung” Kwon, and Yanghee Choi, “A Hybrid Query Tree Protocol for Tag Collision Arbitration in RFID systems,” in Proc. of the *IEEE International Conference on Communications (ICC) 2007*, Glasgow, Scotland, June 2007.
8. Yongsu Nam, **Jiho Ryu**, Nakjung Choi, Ted “Taekyoung” Kwon, and Yanghee Choi, “Block-Poll Coordination Function for Improving Throughput Performance in Wireless LANs,” in Proc. of *IEEE International Conference on Communications Systems (ICCS) 2006*, Singapore, October/November 2006.
9. Nakjung Choi, **Jiho Ryu**, Yongho Seok, Yanghee Choi, and Ted “Taekyoung” Kwon, “Unicast-Friendly Multicast in IEEE 802.11 Wireless LANs,” in Proc. of *IEEE Consumer Communications & Networking Conference (CCNC) 2006*, Las Vegas, USA, January 2006. **the Best Student Paper Award(3rd place)**.

10. Nakjung Choi, **Jiho Ryu**, Yongho Seok, Yanghee Choi, and Ted “Taekyoung” Kwon, “Throughput Enhancement for Uploading TCP Flows in IEEE 802.11 Wireless LANs,” in Proc. of *IEEE International Conference on Consumer Electronics (ICCE) 2006*, Las Vegas, USA, January 2006.
11. **Jiho Ryu**, Yongho Seok, Yanghee Choi, Ted “Taekyoung” Kwon, and Jean-Marie BONNIN, “S-EDCF: EDCF based on SuperSlot and Pseudo Collision,” *ACM International Conference on Mobile Computing and Networking (MobiCom) 2005* Student Poster Session, Cologne, Germany, August/September 2005.

DOMESTIC
JOURNAL
PUBLICATIONS

1. Dukhyun Chang, Yoonbo Shim, Gilsoo Kim, Nakjung Choi, **Jiho Ryu**, Ted “Taekyoung” Kwon, and Yanghee Choi, “MIR: Mobility Information based Routing for Delay and Disruption Tolerant Network,” *Journal of KIISE: Information Networking*, Vol. 36 No. 2, pp. 130-136, April 2009.
2. Jinyoung Han, Heedong Jung, Youngbin Im, Jeongkeun Lee, **Jiho Ryu**, Ted “Taekyoung” Kwon, and Yanghee Choi, “Performance Evaluation in Combination of Wired and Wireless Mesh Networks,” *Journal of KIISE: Computing Practices and Letters*, Vol. 14, No. 8, pp. 778-782, November 2008.
3. **Jiho Ryu**, Hojin Lee, Yongho Seok, Ted “Taekyoung” Kwon, and Yanghee Choi, “A Hybrid Approach to Arbitrate Tag collisions in RFID systems,” *Journal of KIISE: Information Networking*, Vol. 34, No. 6, pp. 483-492, December 2007.
4. Nakjung Choi, Hakyoun Jung, **Jiho Ryu**, Yongho Seok, Yanghee Choi, and Ted “Taekyoung” Kwon, “TAS: TCP-Aware Sub-layer over IEEE 802.11-based Wireless LANs,” *Journal of KISS: Information Networking*, Vol. 33, No. 5, pp. 355-368, October 2006.

PROJECT
EXPERIENCES

- Next-generation Network architecture project sponsored by IITA (2011.7 - present)
- Future Internet Network Model Development sponsored by Korea Research Council of Fundamental Science & Technology (KRCF) (2009.1 - present)
- Fundamental technologies for the Future Internet sponsored by Ministry of Information and Communication (MIC) (2007.09 - 2009.06)
- Trusted Overlay Networks sponsored by Institute of Information Technology Advancement (IITA) (2008.3 - 2009.2)
- Mesh-based Access Network in the Future Internet sponsored by National Information Society Agency (NIA) (2007.04 - 2007.12)
- Research on L3SHIM support API for IPv6 site multihoming sponsored by Electronics and Telecommunications Research Institute (ETRI) (2007.03 - 2007.09)
- Testbed implementation and evaluation of mobility support platform for IPv6 mobile nodes and networks sponsored by Korea Telecom Corporation (KT) (2006.02 - 2006.12)
- Research on IPv6 network mobility and multi-homing for portable internet sponsored by Korea Telecom Corporation (KT) (2005.03 - 2005.12)

PROFESSIONAL
SERVICES

- Reviewer of Ad Hoc Networks, SECON 2011/2010, ICOIN 2011/2009, JCCI 2010/2008, IEEE WCNC 2010, MSWiM 2009, ISWCS 2009, ICCCN 2008, ICC 2008, IEEE Globecom 2007, COMSWARE 2007

AWARDS	The prize for excellence • In the 2nd KARUS RFID/USN Research Paper Contest, awarded by the President of KARUS, November 2006 • Title of paper: A Hybrid Query Tree Protocol for Tag Collision Arbitration in RFID systems • (Jiho Ryu, Yongho Seok, Hojin Lee, Taekyoung Kwon, and Yanghee Choi) The best student paper award (3rd place) • IEEE Consumer Communications & Networking Conference (CCNC) 2006, January 2006 • Title of paper: Unicast-Friendly Multicast in IEEE 802.11 Wireless LANs • (Nakjung Choi, Jiho Ryu, Yongho Seok, Yanghee Choi, and Taekyoung Kwon)
TECHNICAL SKILLS	• Programming Languages: C++, Visual C++, Perl, Visual Basic, Java, nML • OS: MS Windows, Linux/FreeBSD, MAC OS • Tools: QualNet, NS2, OPNET
PROFESSIONAL SOCIETIES	IEEE, ACM, KICS, KIISE, FIF
REFERENCES	Prof. Ted “Taekyoung” Kwon (e-mail:tkkwon[at]snu.ac.kr; phone: +82-2-880-9105) • Professor, School of Computer Science & Engineering, Seoul National University, Korea Prof. Yanghee Choi (e-mail:yhchoi[at]snu.ac.kr; phone: +82-2-880-7303) • Professor, School of Computer Science & Engineering, Seoul National University, Korea Prof. Changhee Joo (e-mail:cjoo[at]unist.ac.kr; phone: +82-52-217-2133) • Assistant Professor, School of Electrical and Computer Engineering, Ulsan National Institute of Science and Technology (UNIST), Korea Prof. Ness B. Shroff (e-mail:shroff[at]ece.osu.edu; phone: +1-614-247-6554) • Professor, Department of ECE and CSE, The Ohio State University, USA