

Hui, Ka Hung

1915 Maple Avenue, Room 517, Evanston, IL 60201

khhui@u.northwestern.edu

1-847-332-5999/1-847-915-2413

Education

Doctor of Philosophy (Ph. D.), Northwestern University, 2007 – present

Program: Electrical Engineering and Computer Science

Master of Philosophy (M. Phil.), The Chinese University of Hong Kong, 2005 – 2007

Program: Information Engineering

Bachelor of Engineering (B. Eng.), The Chinese University of Hong Kong, 2002 – 2005

Major: Information Engineering

Minor: Mathematics

Honor: First Class

Overall GPA: 3.80

Weighted Major GPA: 3.92

Working Experience

Research Assistant, Northwestern University (Jun 08 – present)

Investigate the application of nearest-neighbor interactions in collision avoidance in wireless ad hoc networks

Analyze the benefits of network coding in broadcasting on a line network

IT Team, Chung Chi College, The Chinese University of Hong Kong (Dec 03 – Jul 05)

Maintained and developed database applications with PHP and mysql

Migrated the database applications from PHP to Java Struts

Junior Research Assistant, The Chinese University of Hong Kong (Jun 05 – Jul 05)

Studied sensor networks and assisted in supervising final year projects related to applying sensor networks in medical applications

Junior Research Assistant, The Chinese University of Hong Kong (Jun 04 – Aug 04)

Analyzed the characteristics of Distributed Denial-of-Service (DDoS) attacks

Investigated the usage of on-line packet attribute analysis and selective packet filtering to counteract DDoS

Teaching Experience

Grader, Northwestern University

Advanced Communication Networks (Apr 10 – Jun 10)

Teaching Assistant, Northwestern University
Numerical Methods for Engineers (Apr 08 – Jun 08)

Teaching Assistant, The Chinese University of Hong Kong
Image and Video Processing (Sep 05 – Dec 05, Sep 06 – Dec 06)
Information Engineering Laboratory (Jan 06 – May 06, Jan 07 – May 07)
Wireless Communication Systems (Sep 06 – Dec 06)

Awards

Murphy Fellowship, Northwestern University, 2007/2008

Outstanding Thesis Award (M. Phil.), The Chinese University of Hong Kong, 2006/2007

Outstanding Teaching Assistant Award, The Chinese University of Hong Kong, 2006

The IEE Hong Kong Award for Outstanding Student, 2004-2005

Chiap Hua Cheng's Foundation Scholarship, The Chinese University of Hong Kong, 2004/05

Kai Chong Tong Scholarship, The Chinese University of Hong Kong, 2003/04

Yu-Luan Shih Award, Chung Chi College, The Chinese University of Hong Kong, 2004/2005

Academic Creativity Award, Chung Chi College, The Chinese University of Hong Kong, 2004/2005

Bankee Kwan Scholarships for Interdisciplinary Mathematics, Chung Chi College, The Chinese University of Hong Kong, 2005

Chung Chi College Departmental Prize, Chung Chi College, The Chinese University of Hong Kong, 2005

Chung Chi College Scholarship, Chung Chi College, The Chinese University of Hong Kong, 2003, 2004

Publications

Ka-Hung Hui, Wing Cheong Lau and Onching Yue, "Partial Interference and Its Performance Impact on Wireless Multiple Access Networks," in the EURASIP Journal on Wireless Communications and Networking, Nov. 2010.

Ka Hung Hui, Dongning Guo and Randall Berry, "Medium Access Control via Nearest-Neighbor Interactions for Regular Wireless Networks," in *2010 IEEE International Symposium on Information Theory*, Austin, TX, Jun. 2010.

Ka Hung Hui, Yalin Evren Sagduyu, Dongning Guo, and Randall A. Berry, "The Maximum Stable Broadcast Throughput for Wireless Line Networks with Network Coding and Topology Control," in *2010 Conference on Information Sciences and Systems*, Princeton, NJ, Mar. 2010.

Ka Hung Hui, Dongning Guo, Randall Berry and Martin Haenggi, "Performance Analysis of MAC Protocols in Wireless Line Networks Using Statistical Mechanics," in *2009 Allerton Conference on Communication, Control, and Computing*, Monticello, IL, Sept. 2009.

Ka-Hung Hui, On-Ching Yue and Wing-Cheong Lau, "FRASA: Feedback Retransmission Approximation for the Stability Region of Finite-User Slotted ALOHA," in *ICNP 2007*, Beijing, China, Oct. 2007.

Ka-Hung Hui, Wing-Cheong Lau and On-Ching Yue, "Stability of Finite-User Slotted ALOHA under Partial Interference in Wireless Mesh Networks," in *PIMRC 2007*, Athens, Greece, Sep. 2007.

Ka-Hung Hui, Wing-Cheong Lau and On-Ching Yue, "Characterizing and Exploiting Partial Interference in Wireless Mesh Networks," in *ICC 2007*, Glasgow, Scotland, Jun. 2007.

Ching-Wan Yuen, Ka-Hung Hui and Wing-Cheong Lau, "Theoretical Capacity for 3G (CDMA) Networks: A Survey," Feb 2006.

Ka-Hung Hui and On-Ching Yue, "Analysis of a Distributed Denial-of-Service Attack," July 2004.