

Bo Han

CONTACT INFORMATION	Room 4160, A. V. Williams Building Department of Computer Science University of Maryland College Park, MD 20742 USA	<i>Mobile:</i> +1-240-476-3269 <i>Fax:</i> +1-301-405-6707 <i>E-mail:</i> bohan@cs.umd.edu <i>WWW:</i> www.cs.umd.edu/users/bohan
RESEARCH INTERESTS	Wireless networking and mobile computing, distributed systems and algorithms, Internet routing.	
EDUCATION	University of Maryland , College Park, Maryland USA Ph.D. Candidate, Computer Science, since August 2006 (expected graduation: August 2012) <ul style="list-style-type: none">• Dissertation Topic: <i>Exploiting Opportunistic Communications for Mobile Systems and Applications (tentative)</i>• Advisors: Professor Aravind Srinivasan and Professor Bobby Bhattacharjee City University of Hong Kong , Hong Kong, China M.Phil., Computer Science, August 2006 <ul style="list-style-type: none">• Thesis Topic: <i>Backbone Formation in Wireless Ad Hoc Networks Using Connected Dominating Set</i> Tsinghua University , Beijing, China B.E., Computer Science and Technology, July 2000 <ul style="list-style-type: none">• Thesis Topic: <i>The Design and Implementation of BGP-4 Protocol Conformance Test Suite</i>	
PROFESSIONAL EXPERIENCE	HP Labs , Palo Alto, California USA <i>Summer Intern</i> May 2011 to August 2011 <ul style="list-style-type: none">• Worked in the Networking and Communications Lab. Worked with Sung-Ju Lee and Jeongkeun Lee on buffer sizing for 802.11n frame aggregation. Deutsche Telekom Laboratories , Berlin, Germany <i>Summer Intern</i> June 2010 to August 2010 <ul style="list-style-type: none">• Worked in the Intelligent Networks Department. Worked with Pan Hui on mobile data offloading. AT&T Labs Research , Florham Park, New Jersey USA <i>Consultant and Summer Intern</i> 2007 to 2009 <ul style="list-style-type: none">• Worked in the Communications Technology Research Department. Worked with Lusheng Ji, Robert Miller, and Seungjoon Lee on a practical partial packet recovery mechanism for 802.11, a channel access throttling scheme for 802.11 wireless LANs, and the measurement study of sub-frame bit error patterns of 802.11. City University of Hong Kong , Hong Kong, China <i>Research Assistant</i> October 2003 to July 2004 <ul style="list-style-type: none">• Worked with Weijia Jia on the implementation of 3G-324M protocol.	

Beijing Tongcai Technology Co. Ltd., Beijing, China

Software Engineer (Senior)

July 2000 to September 2003

- Worked on an accounting software designed for the Ministry of Finance, People's Republic of China.

REFEREED
JOURNAL
PUBLICATIONS

1. **Bo Han**, Lusheng Ji, Seungjoon Lee, Bobby Bhattacharjee, and Robert R. Miller. Are All Bits Equal? – Experimental Study of IEEE 802.11 Communication Bit Errors. Accepted for publication, *IEEE/ACM Transactions on Networking*.
2. **Bo Han**, Pan Hui, V. S. Anil Kumar, Madhav V. Marathe, Jianhua Shao, and Aravind Srinivasan. Mobile Data Offloading through Opportunistic Communications and Social Participation. *IEEE Transactions on Mobile Computing*, vol. 11, no. 5, pp. 821–834, May 2012.
3. Seungjoon Lee, Bobby Bhattacharjee, Suman Banerjee, and **Bo Han**. A General Framework for Efficient Geographic Routing in Wireless Networks. *Computer Networks*, vol. 54, no. 5, pages 844–861, April 2010.
4. **Bo Han**. Zone-Based Virtual Backbone Formation in Wireless Ad Hoc Networks. *Ad Hoc Networks*, vol. 7, no. 1, pages 183–200, January 2009.
5. **Bo Han** and Weijia Jia. Clustering Wireless Ad Hoc Networks with Weakly-Connected Dominating Set. *Journal of Parallel and Distributed Computing*, vol. 67, no. 6, pages 727–737, June 2007.
6. **Bo Han**, Weijia Jia, and Lidong Lin. Performance Evaluation of Scheduling in IEEE 802.16 Based Wireless Mesh Networks. *Computer Communications*, vol. 30, no. 4, pages 782–792, February 2007.
7. Weijia Jia, **Bo Han**, Chuanlin Zhang, and Wanlei Zhou. Delay Control and Parallel Admission Algorithms for Real-Time Anycast Flow. *The Journal of Supercomputing*, vol. 29, no. 2, pages 197–209, August 2004.
8. Weijia Jia, **Bo Han**, Pui-on Au, Yong He, and Wanlei Zhou. Optimal Multicast Tree Routing for Cluster Computing in Hypercube Interconnection Networks. *IEICE Transactions on Information and Systems*, vol. E87-D, no. 7, pages 1625–1632, July 2004.
9. Yixin Zhao, **Bo Han**, Xia Yin, and Jianping Wu. Test Routing Protocols with Windowed Black Box Model and Multiple Channels Test Method. *IEICE Transactions on Communications*, vol. E84-B, no. 11, APPENDIX, pages 133–136, November 2001.

SUBMITTED
JOURNAL
PUBLICATIONS

1. **Bo Han**, V. S. Anil Kumar, Madhav V. Marathe, Srinivasan Parthasarathy, Guanhong Pei, and Aravind Srinivasan. Distributed Strategies for Channel Allocation and Scheduling in Software-Defined Radio Networks. Under review.
2. **Bo Han**, Lusheng Ji, Seungjoon Lee, Robert R. Miller, and Bobby Bhattacharjee. Channel Access Throttling for 802.11 Wireless Networks. Under review.

1. **Bo Han**, and Aravind Srinivasan. Your Friends Have More Friends Than You Do: Identifying Influential Mobile Users Through Random Walks. Accepted for publication, *Proceedings of the 13th ACM International Symposium on Mobile Ad Hoc Networking and Computing (MOBIHOC 2012)*.
2. Savio Dimatteo, Pan Hui, **Bo Han**, and Victor O. K. Li. Cellular Traffic Offloading through WiFi Networks. In *Proceedings of the 8th IEEE International Conference on Mobile Ad-hoc and Sensor Systems (MASS 2011)*, pages 192–201, October 2011.
3. **Bo Han**, Pan Hui, V. S. Anil Kumar, Madhav V. Marathe, Guan hong Pei, and Aravind Srinivasan. Cellular Traffic Offloading through Opportunistic Communications: A Case Study. In *Proceedings of the ACM MobiCom Workshop on Challenged Networks (CHANTS 2010)*, co-located with ACM MobiCom and ACM MobiHoc 2010, pages 31–38, September 2010.
4. **Bo Han**, Aaron Schulman, Francesco Gringoli, Neil Spring, Bobby Bhattacharjee, Lorenzo Nava, Lusheng Ji, Seungjoon Lee, and Robert R. Miller. Maranello: Practical Partial Packet Recovery for 802.11. In *Proceedings of the 7th USENIX Symposium on Networked Systems Design and Implementation (NSDI 2010)*, pages 1–14, April 2010.
5. Cristian Lumezanu, Dave Levin, **Bo Han**, Neil Spring, and Bobby Bhattacharjee. Don't Love Thy Nearest Neighbor. In *Proceedings of the 9th International Workshop on Peer-to-Peer Systems (IPTPS 2010)*, pages 1–5, April 2010.
6. **Bo Han**, Lusheng Ji, Seungjoon Lee, Robert R. Miller, and Bobby Bhattacharjee. Channel Access Throttling for Improving WLAN QoS. In *Proceedings of the 6th Annual IEEE Communications Society Conference on Sensor, Mesh and Ad Hoc Communications and Networks (SECON 2009)*, pages 1–9, June 2009.
7. **Bo Han**, Lusheng Ji, Seungjoon Lee, Robert R. Miller, and Bobby Bhattacharjee. Channel Access Throttling for Overlapping BSS Management. In *Proceedings of 2009 IEEE International Conference on Communications (ICC 2009)*, pages 1–6, June 2009.
8. **Bo Han**, V. S. Anil Kumar, Madhav V. Marathe, Srinivasan Parthasarathy, and Aravind Srinivasan. Distributed Strategies for Channel Allocation and Scheduling in Software-Defined Radio Networks. In *Proceedings of the 28th IEEE Conference on Computer Communications (INFOCOM 2009)*, pages 1521–1529, April 2009.
9. **Bo Han**, Lusheng Ji, Seungjoon Lee, Bobby Bhattacharjee, and Robert R. Miller. All Bits Are Not Equal – A Study of IEEE 802.11 Communication Bit Errors. In *Proceedings of the 28th IEEE Conference on Computer Communications (INFOCOM 2009)*, pages 1602–1610, April 2009.
10. **Bo Han** and Pete Keleher. Implementation and Performance Evaluation of Fuzzy File Block Matching. In *Proceedings of the USENIX 2007 Annual Technical Conference (USENIX 2007)*, pages 199–204, June 2007.
11. **Bo Han** and Seungjoon Lee. Efficient Packet Error Rate Estimation in Wireless Networks. In *Proceedings of the 3rd International Conference on Testbeds and Research Infrastructures for the Development of Networks and Communities (TridentCom 2007)*, pages 1–9, May 2007.
12. Lidong Lin, Weijia Jia, **Bo Han**, and Lizhuo Zhang. Performance Improvement using Dynamic Contention Window Adjustment for Initial Ranging in IEEE 802.16 P2MP Networks. In *Proceedings of 2007 IEEE Wireless Communications and Networking Conference (WCNC 2007)*, pages 1877–1882, March 2007.

13. **Bo Han** and Weijia Jia. Efficient Construction of Weakly Connected Dominating Set for Clustering Wireless Ad Hoc Networks. In *Proceedings of 2006 IEEE Global Telecommunications Conference (GLOBECOM 2006)*, pages 1–5, November 2006.
14. **Bo Han**, Weijia Jia, and Lidong Lin. Performance Evaluation of Scheduling in IEEE 802.16 Based Wireless Mesh Networks. In *Proceedings of the 1st International Workshop on Wireless Mesh Networks and Applications (WiMa 2006), co-located the 3rd IEEE International Conference on Mobile Ad-hoc and Sensor Systems (MASS 2006)*, pages 789–794, October 2006.
15. Lidong Lin, **Bo Han**, and Weijia Jia. Modeling and Performance Analysis of Initial Connection in IEEE 802.16 P2MP Networks. In *Proceedings of 2006 International Conference on Multimedia & Expo (ICME 2006)*, pages 609–612, July 2006.
16. Weijia Jia, **Bo Han**, Ji Shen, and Haohuan Fu. Next Generation Networks Architecture and Layered End-to-End QoS Control. In *Proceedings of the 3rd International Symposium on Parallel and Distributed Processing and Applications (ISPA 2005)*, pages 1055–1064, November 2005.
17. **Bo Han** and Weijia Jia. Design and Analysis of Connected Dominating Set Formation for Topology Control in Wireless Ad Hoc Networks. In *Proceedings of the 14th International Conference on Computer Communications and Networks (ICCCN 2005)*, pages 7–12, October 2005.
18. Man-Ching Yuen, Ji Shen, Weijia Jia, and **Bo Han**. Simplified Message Transformation for Optimization of Message Processing in 3G-324M Control Protocol. In *Proceedings of 2005 International Conference on Computer Networks and Mobile Computing (ICCNMC 2005)*, pages 64–73, August 2005.
19. Weijia Jia, **Bo Han**, Haohuan Fu, Ji Shen, and Man-Ching Yuen. Efficient Implementation of 3G-324M Protocol Stack for Multimedia Communication. In *Proceedings of the 11th International Conference on Parallel and Distributed Systems (ICPADS 2005)*, pages 599–605, July 2005.
20. **Bo Han**, Weijia Jia, Ji Shen, and Man-Ching Yuen. Context-Awareness in Mobile Web Services. In *Proceedings of the 2nd International Symposium on Parallel and Distributed Processing and Applications (ISPA 2004), Lecture Notes in Computer Science (LNCS 3358)*, Springer, pages 519–528, December 2004.
21. Weijia Jia, Haohuan Fu, **Bo Han**, and Pui-on Au. Efficient Data Transmission Multiplexing in 3G Mobile Systems. In *Proceedings of Global Mobile Congress*, October 2004.
22. **Bo Han**, Haohuan Fu, Ji Shen, Pui-on Au, and Weijia Jia. Design and Implementation of 3G-324M – An Event-Driven Approach. In *Proceedings of IEEE Vehicular Technology Conference 2004-Fall (VTC 2004-Fall)*, pages 2108–2112, September 2004.
23. Ji Shen, **Bo Han**, Man-Ching Yuen, and Weijia Jia. End-to-End Wireless Multimedia Transmission System. In *Proceedings of IEEE Vehicular Technology Conference 2004-Fall (VTC 2004-Fall)*, pages 2616–2620, September 2004.
24. Yixin Zhao, Xia Yin, **Bo Han**, and Jianping Wu. On-Line Test System Applied in Routing Protocol Test. In *Proceedings of the 9th International Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems (MASCOTS 2001)*, pages 331–338, August 2001.

25. Yixin Zhao, Xia Yin, **Bo Han**, and Jianping Wu. Enhanced Reference Implementation Applied in Routing Protocol Test. In *Proceedings of the 3rd International Conference on Advanced Communication Technology (ICACT 2001)*, pages 80–85, February 2001.
26. Yixin Zhao, Jianping Wu, Xia Yin, and **Bo Han**. Test of BGP-4 Based on the Protocol Integrated Test System. In *Proceedings of the 6th Asia Pacific Conference on Communications (APCC 2000)*, pages 347–355, October–November 2000.

SUBMITTED
CONFERENCE
PUBLICATIONS

1. **Bo Han**, and Aravind Srinivasan. eDiscovery: Energy Efficient Device Discovery for Opportunistic Communications. Under review.
2. **Bo Han**, Yu Xiao, Pan Hui, and Aravind Srinivasan. Energy-Aware Collaborative Mobile Data Offloading for Smartphones. Under review.

CONFERENCE/
WORKSHOP
POSTERS

1. **Bo Han**, Pan Hui, and Aravind Srinivasan. Mobile Data Offloading in Metropolitan Area Networks. In *Poster Session of ACM MobiCom and ACM MobiHoc 2010*, September 2010.
2. **Bo Han**, V. S. Anil Kumar, Madhav V. Marathe, and Aravind Srinivasan. Information Dissemination in Mobile Social Networks: From Theory to Practice. In *Doctoral Consortium of HotMobile 2010*, February 2010.
3. **Bo Han**, Haohuan Fu, Lidong Lin, and Weijia Jia. Efficient Construction of Connected Dominating Set in Wireless Ad Hoc Networks. In *Proceedings of the 1st IEEE International Conference on Mobile Ad-hoc and Sensor Systems (MASS 2004)*, pages 570–572, October 2004.

INVITED
PUBLICATIONS

1. **Bo Han**, Ahmad Rahmati, and Bhojan Anand. Report of HotMobile 2010. *IEEE Pervasive Computing*, vol. 9, no. 3, pages 93-96, July-September 2010.
2. **Bo Han**, Francesco Gringoli, and Luca Cominardi. Bologna: Block-Based 802.11 Transmission Recovery. In *Proceedings of the 2nd Wireless of the Students, by the Students, and for the Students workshop (S3 2010), co-located with ACM MobiCom and ACM MobiHoc 2010*, pages 45–47, September 2010.

PUBLICATIONS
IN CHINESE

1. **Bo Han**, Leisheng Ji, and Xia Yin. Conformance Testing on Frame Relay Signaling Protocol Based on Formal Technology. *Mini-Micro Systems*, vol. 23, no. 12, 2002.
2. **Bo Han** Leisheng Ji, and Xia Yin. Conformance Testing on Frame Relay Congestion Control Protocol Based on Formal Technology. *Journal of China Institute of Communications*, vol. 23, no. 11, 2002.
3. Yixin Zhao, Xia Yin, **Bo Han**, and Jianping Wu. Basic Relations and Test of Policy Based Routing. *Journal of Tsinghua University (Science and Technology)*, vol. 42, no. 10, 2002.
4. Yixin Zhao, **Bo Han**, Xia Yin, and Jianping Wu. Study of Routing Protocols Test. *Computer Engineering*, vol.26 Supplementary Issue, pages 769–774, 2000.

PATENTS

1. Method and Apparatus for Scheduling Communication Traffic Flows. Lusheng Ji, **Bo Han**, and Robert R. Miller. United States Patent 2010/0157961, June 24, 2010.
2. QoS in Multi-hop Wireless Networks through Path Channel Access Throttling. Lusheng Ji, **Bo Han**, and Robert R. Miller. United States Patent 2011/0063996, March 17, 2011.
3. Method for Encoding Frame Data. Lusheng Ji, Bobby Bhattacharjee, **Bo Han**, Seungjoon Lee, and Robert R. Miller. United States Patent 7940850, May 10, 2011.

AWARDS

- Student Travel Grant for MobiCom/MobiHoc 2010, NSF, September 2010
- Student Travel Grant for NSDI 2010, USENIX, April 2010
- Travel Award for Illinois Wireless Summer School at UIUC, NSF, August 2009
- Computer Science Department Travel Grant for MobiCom/MobiHoc 2007, University of Maryland, September 2007
- Travel Award for Tutorial on Algorithms for Next Generation Networks, DIMACS, August 2007
- Student Travel Grant for USENIX 2007 Annual Technical Conference, USENIX, June 2007
- Computer Science Department Travel Grant for TridentCom 2007, University of Maryland, May 2007
- Goldhaber Award, University of Maryland, May 2007
- Block Fellowship, University of Maryland, 2006 and 2007
- Research Activities Funds, City University of Hong Kong, 12/2005 – 06/2006
- Research Tuition Scholarship, City University of Hong Kong, 04/2005 – 03/2006
- Gold Award in Aerobic Swimming Challenge, City University of Hong Kong, 14-04-2005 (non-academic)
- First Prize of Tug-of-War, the Residence Masters Cup, Inter-Hall Competition, City University of Hong Kong, 2004 (non-academic)
- Tsinghua Excellent Student Scholarship, Tsinghua University, 1997 and 1998

PROFESSIONAL SERVICES

Program committee member for international conferences and workshops:

- Technical Program Committee member of the 9th IEEE International Conference on Mobile Ad hoc and Sensor Systems (MASS 2012).
- Technical Program Committee member of Ad-Hoc and Sensor Networking Symposium, IEEE GLOBECOM 2012.
- Technical Program Committee member of the 4th Annual Extreme Conference on Communication - The Alpine Expedition (ExtremeCom 2012).
- Student Program Committee member of the 3rd International Workshop on Wireless of the Students, by the Students, and for the Students (S3 2011).

Reviewer for international journals and conferences:

- *IEEE/ACM Transactions on Networking (ToN)*
- *IEEE Transactions on Mobile Computing (TMC)*
- *IEEE Transactions on Parallel and Distributed Systems (TPDS)*
- *IEEE Transactions on Wireless Communications (TWC)*
- *IEEE Transactions on Vehicular Technology (TVT)*
- *IEEE Communications Letters*
- *ACM Transactions on Storage (TOS)*
- *Springer Wireless Networks (WINET)*
- *Springer Mobile Networks and Applications (MONET)*

- *Elsevier Computer Networks (COMNET)*
- *Elsevier Ad Hoc Networks (ADHOC)*
- *Elsevier Journal of Parallel and Distributed Computing (JPDC)*
- *Elsevier Computer Communications (COMCOM)*
- *Elsevier Information Sciences*
- *Wiley Wireless Communications and Mobile Computing (WCMC)*
- *EURASIP Journal on Wireless Communications and Networking (WCN)*
- *IEICE Transactions on Communications*
- *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences*
- *ACM International Conference on Measurement and Modeling of Computer Systems (SIGMETRICS)*
- *IEEE International Conference on Network Protocols (ICNP)*
- *ACM International Conference on Ubiquitous Computing (UbiComp)*
- *IEEE Communications Society Conference on Sensor, Mesh and Ad Hoc Communications and Networks (SECON)*
- *IEEE International Conference on Distributed Computing in Sensor Systems (DCOSS)*
- *IEEE International Conference on Communications (ICC)*
- *IEEE Global Telecommunications Conference (GLOBECOM)*
- *IEEE Wireless Communications and Networking Conference (WCNC)*
- *IEEE Workshop on Local and Metropolitan Area Networks (LANMAN)*
- *IASTED International Conference on Parallel and Distributed Computing and Systems (PDCS)*

TEACHING
EXPERIENCE

University of Maryland, College Park, Maryland USA

- CMSC 414, Computer and Network Security, Teaching Assistant, Fall 2008 and Spring 2010.
- CMSC 412, Operating Systems, Teaching Assistant, Fall 2009.
- CMSC 417, Computer Networks, Teaching Assistant, Fall 2006 and Spring 2008.

City University of Hong Kong, Hong Kong, China

- CS4284, Mobile Computing, Teaching Assistant, Fall 2005.
- IT3302/IT5302, Digital Signal Processing, Teaching Assistant, Spring 2005.
- IT4405/IT5405, Human-Computer Interaction, Teaching Assistant, Fall 2004.

CITIZENSHIP

People's Republic of China

REFERENCES

Available upon request.