

CURRICULUM VITAE

CONTACT INFORMATION

Xiaomin Ma, Ph.D.
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EDUCATION

- Ph.D. (10/1999), Signal and Information Processing, Beijing University of Posts and Telecommunications, Beijing, China.
- M.Sc. (01/1989), Communication and Electronic System, Beijing University of Aerospace and Aeronautics, Beijing, China.
- B.Sc. (07/1984), Electrical Engineering, Anhui University, Hefei, China.

POSTDOCTORAL TRAINING

Postdoctoral Research Associate/Motorola Consultant

Center for Advanced Computing and Communications,
Dept. of Electrical and Computer Engineering,
Duke University, Durham, NC 27708, USA

Aug. 2000-Jan. 2003

APPOINTMENTS

Professor, Tenured

Engineering Department
Oral Roberts University, Tulsa, OK 74171, USA

Aug. 2011- Present

Associate Professor, Tenured

Engineering, Computer Science, Physics and Mathematics Department
Oral Roberts University, Tulsa, OK 74171, USA

Aug. 2009-May 2011

Associate Professor, Tenure-track

Engineering & Physics Department,
Oral Roberts University, Tulsa, OK 74171, USA

Aug. 2007-May 2009

Assistant Professor, Tenure-track

Engineering & Physics Department,
Oral Roberts University, Tulsa, OK 74171, USA

Jan. 2003-May 2007

Senior Researcher

Wireless branch,
Huawei Communication Technology Corporation, China

Oct. 1999-Aug. 2000

Assistant Professor/Associate Professor

Electrical Engineering Group
Dept. of Automation
Petroleum University 257061, China

Sept. 1991-July 1996

COURSES TAUGHT

- Computer Networks and Communications
- Signal and Systems
- High Frequency Electrical circuits
- Digital Signal Processing
- Microprocessor System Design
- Computer Architecture
- Digital Logic Design
- Design with standard components
- Computer Data Acquisition Systems
- Artificial Intelligence
- Introduction to Engineering

RESEARCH INTERESTS AND EXPERTISE

- MAC layer and physical layer of Ad-Hoc wireless mobile networks or wireless sensor networks
- Performance, reliability and performability modeling and evaluation of computer and communication networks
- Computational Intelligence and its applications
- Digital logic circuit, Programmable logic device, and FPGA
- Microprocessors, Computer architecture, and computer data acquisition system
- Information theoretic cryptography and Security
- Signal processing & Pattern recognition

MAJOR GRANTS

- Principal Investigator (PI): NSF CNS-NeTS: Collaborative Research (with Professor Kishor Trivedi at Duke University as Co-PI): Analytic Modeling and Enhancement of Vehicular Ad Hoc Networks for Safety Critical Applications, \$341,646 (ORU side: \$194,146), Aug. 2010~July 2014.
- Principal Investigator (PI): Vehicular Ad Hoc Wireless Communication System, Oklahoma NSF EPSCoR, \$10,000, June 2007, Sub-contract.
- Principal Investigator (PI): Analysis of MAC Layer Protocols for Inter-vehicle Communications, Intramural grant, Oral Roberts University, \$3400, 2005~2006.
- Co-Principal Investigator (Co-PI): Application of Computational Intelligence to Modern Code, Chinese National Science Foundation (NSF), 99,000 Chinese Yuan, 1997~1999.

INVOLVED RESEARCH PROJECTS

A. Oral Roberts University

- National Science Foundation (NSF): Analytic Modeling and Enhancement of Vehicular Ad Hoc Networks for Safety Critical Applications, Aug. 2010~July 2014, PI.

- Vehicular ad hoc wireless communication system, Oklahoma NSF EPSCoR, June, 2007, Sub-contract PI.
- Analysis of MAC layer protocols for Inter-vehicle communications, Intramural grant, Oral Roberts University, 2005~2006, PI.
- Cross layer design of inter-vehicle communications, NSF-REU (Research Experiences for Undergraduates), University of Oklahoma.

B. Duke University

- The availability, capacity and performance (ACP) of packet voice over packet-oriented wireless network, grant from Motorola, Duke University.
- MURI: Fault-Tolerant real-time network protocols, grant from AFOSR, Duke University: fault-tolerance design and optimization in wireless voice-data systems.
- MURI: Reliability modeling of service failures in complex dynamic systems, grant from ARO, Duke University.

C. Beijing University of Posts and Telecommunications

- Application of computational intelligence to modern code, supported by Chinese National Science Foundation (NSF), BUPT, Co-PI.
- Implementation of base station of software radio, supported by foundation of Ministry of Posts and Telecommunications, BUPT.
- Key techniques of signal processing and coding in software radio system, supported by foundation of Ministry of Posts and Telecommunications, BUPT.

AWARDS AND HONORS

- Best paper award, “On the Coverage Area in Broadcast Ad Hoc Networks” IEEE International Conference on Network Infrastructure and Digital Content, Beijing, China, Sept. 21-23, 2012.
- Scholar of the Year for 2010-2011, Oral Roberts University, 2011.
- Alumni Faculty Recognition Award for Outstanding Research, Oral Roberts University, Nov. 2008.
- Senior Member of the **IEEE** (Communication, Signal Processing, and Information Theory Societies), Aug. 2008.
- Research Opportunity Award (ROA) for regional university faculty, Oklahoma Experimental Program to Stimulate Competitive Research (EPSCoR), 2007.
- Oklahoma Society of Professional Engineers (OSPE) Outstanding Achievement Award, Advisor of Senior Project “Collision Prevention”, March, 2007.
- Outstanding Faculty, Engineering & Physics Department, Oral Roberts University, 2006-2007.
- Selected in Who’s Who in America 61st Edition, 2007, 62nd Edition, 2008.
- Scholar of the Year for 2004-2005, Oral Roberts University, 2005.
- Award for distinguished Ph. D. dissertation, Beijing University of Posts and Telecommunications, China, 1999.
- Award for outstanding paper published in Journal of Petroleum University, China, 1998.
- Excellent Teaching Award in course: Signal & System, Petroleum University, China, 1995.

SYNERGISTIC ACTIVITIES

- Session Chair, *IEEE International Conference on Computing, Networking and Communications (ICNC15)*, Anaheim, California, USA, February 19, 2015.
- Guest Editor for Special Issue on "Advanced Safety and Security Techniques in Vehicular Networks" in *International Journal of Internet Technology*, Sept. 2014.
- Guest Editor for Special Issue on "Reliable and secure VANETs" in *IEEE Transactions on Dependable and Secure Computing*, Jan. 2014.
- Session Chair, *IEEE The 9th International Wireless Communications & Mobile Computing Conference (IWCMC 2013)-Vehicular Communication Symposium*, CAGLIARI, SARDINIA – ITALY, July 3, 2013.
- Editorial Board of *International Journal of Vehicular Technology*, Hindawi Publish House, Sept. 2012~present.
- Ph. D. Dissertation Committee Member for Xiaoyan Yin in Electrical and Computer Engineering at Duke University, Sept. 2012~Sept. 2013.
- Session Chair, *IEEE International Conference on Network Infrastructure and Digital Content*, Beijing, China, Sept. 23, 2012.
- Chair of Student Circuit Design Contest for IEEE Region 5 conference on The 2012 Green Technology Challenge, April 21, 2012.
- Adjunct Faculty, Ph. D. Dissertation Committee Member in Electrical and Computer Engineering at University of Oklahoma, Sept. 2010~ Sept. 2012.
- Thesis Committee Member for Masters Degree in Electrical Engineering at University of Tulsa, April 2010.
- Chair of Tenure Faculty Committee in School of Science & Engineering at Oral Roberts University, 2009-2010
- Technical Program Committee (TPC) member for the Wireless Communications Symposium (WCS) at **IEEE GLOBECOM 2009**
- Technical Program Committee (TPC) member for The 3rd Workshop on Next Generation Wireless Networks 2008
- Technical Program Committee (TPC) member for **IEEE International Symposium on Wireless Quality-of-Service**, part of WirelessCom2005 Conference
- Member of **IEEE ComSoc Radio Communications Committee (RCC)**
- Reviewer: Reviewed papers for the following journals and conferences: IEEE/ACM Trans. on Networking; ACM Wireless Networks; IEEE Trans. on Dependable and Secure Computing; IEEE Trans. on Vehicular Technology; IEEE Trans. on Wireless Communications; IEEE Communications Letters; Computer Networks; Wireless Communications and Mobile Computing; Performance Evaluation; IEEE Trans. on Neural Networks; IEEE Symposium on Reliable Distributed Systems (IEEE SRDS 2002); Internet Performance and Dependability Symposium (IPDS 2002); The 11th IEEE/ACM International Symposium on Modeling, Analysis and Simulation of computer and Telecommunication Systems (2003); The 28th International Computer Software and Applications Conference (2004); IEEE Intelligent Transportation System Conference (ITSC05) (2005); IEEE International Symposium on WirelessCom2005 (2005); IEEE International Symposium on Software Reliability Engineering (ISSRE 2005).

ADVISING AND MENTORING

Doctoral Students

- Xiaoyan Yin, “Performance and Reliability Evaluation for DSRC Vehicular Safety Communication,” Electrical and Computer Engineering Dept., Duke, 2010-present.
- Xianbo Chen, “Achieving Low Latency and High Packet Reception Ration in Media Access Control Layer in VANET,” Electrical and Computer Engineering Dept., OU, 2006-2009.
- Su Yang, “Analysis of R-ALOHA System in Mobile Wireless Environment” Electrical and Computer Engineering Dept., OU, 2004-2007.

Masters Students

- Tong Wu, “Performance Analysis and Modeling of IEEE 802.11 Based Broadcast Schemes for Emergency Message Propagation in VANET” Electrical Engineering Dept., University of Tulsa, 2008-2009
- Yun Liu, “Soft handoff schemes for improving utilization efficiency of traffic channels in CDMA” Electrical and Computer Engineering Dept., Duke, 2000-2002

Undergraduate Students for Research

- Anh Tran, Electrical and Computer Engineering, ORU, 2014-present
- Jessica Fuentes, Electrical Engineering, ORU, 2014-present
- Brandon Braun, Electrical Engineering, ORU, 2013-present
- Mila Mathew, Computer Engineering, ORU, 2013-present
- Meryl D'Souza, Computer Engineering, ORU, 2012-2013
- Caleb Penney, Computer Engineering, ORU, 2012-2014
- Gregory Butron, Electrical and Computer Engineering, ORU, 2011-present
- Matthew Wilson, Computer Science, ORU, 2010-2012
- Daryl Cherron, Computer Engineering, ORU, 2011-2012
- Obiye Kolokolo, Computer Engineering, ORU, 2011-2012
- Jeyan Oorjitham, Computer Science, ORU, 2011
- Dennis Nickelson, Computer Engineering, ORU, 2009-2011
- David Vandenhouten, Electrical Engineering, ORU, 2010-2011
- Timothy Asaph Bright, Electrical Engineering, ORU, 2008-2009
- Oluwapelumi A Idowu, Computer Engineering, ORU, 2008-2009
- Benjamin Zigrang, Computer Engineering, ORU, 2007-2008
- Edwin Oriewo, Electrical Engineering, ORU, 2007-2008
- Nick LaSorte, Computer Engineering, ORU, 2007-2008
- Gabriel A. Cap, Electrical Engineering, ORU, 2007-2008
- Eric F. Dunn, Electrical Engineering, ORU, 2006-2007
- Daniel P. Henry, Computer Engineering, ORU, 2006-2007
- Vijay L. Masillamoni Karlsson, Electrical Engineering, ORU, 2006-2007
- Paul Hrubik, Computer Engineering, ORU, 2005-2006

- Anthony Cooper, Computer Engineering, ORU, 2003-2004
- Chukwuemeka Okafor, Electrical Engineering, ORU, 2003-2004

SELECTED INVITED TALKS

- “On QoS of Vehicular Ad Hoc Networks for Safety Related Services”, Invited talk in Seminar at Tongji University, Shanghai, China, May 8, 2014.
- “Research on Vehicle-to-vehicle Communication for Safety Applications: Current Status and Future Perspectives”, Invited talk in Seminar at China University of Petroleum, Qingdao, China, May 19, 2014.
- “Analysis and Enhancement of IEEE 802.11p for Safety Related Applications”, Invited talk in Seminar at Beijing University of Posts and Telecommunications, Sept. 25, 2012.
- “Modeling and Simulation of Vehicular Ad Hoc Networks for Safety Related Services”, Seminar in Department of Modeling and Simulation, Old Dominion University, Feb. 23, 2012.
- “On the Reliability of Safety Applications in VANET”, Telecommunication Seminar at University of Oklahoma, March 29th, 2011.
- “Improve Road Safety Using Wireless Communications”, the *ACM Waves of Future Forum* at Oral Roberts University, March 31st, 2011.
- “Analytic Modeling and Enhancement of Vehicular Ad Hoc Networks for Safety Critical Applications,” Duke kick-off meeting of the NSF project, Aug. 23, 2010.
- "Design and Analysis of A VANET Broadcast Scheme For Vehicular Safety Related Services", Engineering & Research Seminar, Baylor University, April 28 2010.
- “Design and Analysis of Inter-Vehicle Communications (IVC) System for Safety Applications,” Seminar at ORU College Weekend, April 02, 2008.
- “Research on Artificial Neural Network and Its Applications,” Seminar in Engineering Department at ORU, Sept. 25, 2005.
- “Modeling and performance analysis for soft handoff schemes in CDMA cellular systems”, Seminar in Qualcomm, March 05, 2002.

US PATENT

Methods and Systems for Improving Utilization of Traffic Channel in a Mobile Communications Network, US 7,099,672, **Xiaomin Ma**, Yun Liu, and K. S. Trivedi, filed by Patent Office of Duke University in February 6, 2002; granted on August 29, 2006.

SELECTED ACADEMIC PUBLICATIONS

A. Journal Papers

1. **Xiaomin Ma**, X. Yin, Jun Wu, and K. S. Trivedi, Performance of VANET Safety Message Broadcast at Intersections and Analysis of IEEE 802.11p in Worst-case, Submitted, Aug. 2014.

2. Jong-Hyoun Lee, Thierry Ernst, and **Xiaomin Ma**, Performance Analysis of Secure Beaconing Messages for GeoNetworking, *Security and Communication Networks*, Wiley, DOI: 10.1002/sec.396, 7(12): 2555-2563, Dec. 2014.
3. S. Hong, H. Yang, G. Li, N. Huang, **Xiaomin Ma**, and K. S. Trivedi, Analysis of propagation dynamics in complex dynamical network based on disturbance propagation model, *Int. Journal of Modern Physics B*, DOI: 10.1142/S0217979214501495, June 2014.
4. X. Yin, **Xiaomin Ma**, and K. S. Trivedi, Performance and Reliability Evaluation of BSM Broadcasting in DSRC with Multi-channel, *IEEE Transactions on Computers*, DOI: 10.1109/TC.2013.17563(12): 3101-3113, Dec. 2014.
5. J. Zhang, **Xiaomin Ma**, and T. Wu, Performance Modeling and Analysis of Emergency Message Propagation in Vehicular Ad Hoc Networks, *Wireless Communications and Mobile Computing*, Wiley, doi:10.1002/wcm.2188, 14(3): 366-379, Feb 25 2014.
6. X. Yin, **Xiaomin Ma**, and K. S. Trivedi, MAC and Application Level Performance Evaluation of Beacon Message Dissemination in DSRC Safety Communication, *Performance Evaluation*, Elsevier Science, Vol. 71, pp. 1-24, 2014. DOI: 10.1016/j.peva.2013.10.001.
7. **Xiaomin Ma**, X. Yin, G. Butron, C. Penney, and K. S. Trivedi, Packet Delivery Ratio in k-dimensional Broadcast Ad Hoc Networks, *IEEE Communications Letters*, 10.1109/LCOMM.2013.110413.131227, 17(12):2252-2255, Dec. 2013.
8. X. Yin, **Xiaomin Ma**, and K. S. Trivedi, An Interacting Stochastic Models Approach for the Performance Evaluation of DSRC Vehicular Safety Communication, *IEEE Transactions on Computers*, 62(5): 873-885, DOI:10.1109/TC.2012.37, 2013.
9. **Xiaomin Ma**, J. Zhang, X. Yin, and K. S. Trivedi, Design and Analysis of a Robust Broadcast Scheme for VANET Safety-Related Services, 61(1): 46~61, *IEEE Transactions on Vehicular Technology*, Jan. 2012.
10. **Xiaomin Ma**, Xiaoyan Yin, and Kishor Trivedi, "On the Reliability of Safety Applications in VANETs", Invited paper, *International Journal of Performability Engineering Special Issue on Dependability of Wireless Systems and Networks*, 8(2), March 2012.
11. **Xiaomin Ma**, J. Zhang, T. Wu, Reliability Analysis of One-hop Safety-Critical Broadcast Services in VANETs, *IEEE Transactions on Vehicular Technology*, 60(8): 3933-3946, Oct. 2011.
12. **Xiaomin Ma**, "On the Reliability and Performance of Real-Time One-Hop Broadcast MANETs", *ACM/Springer Wireless Networks*, 17(5): 1323-1337, May 2011. DOI: 10.1007/s11276-011-0351-x.
13. X. Chen, H. Refai, and **Xiaomin Ma**, On the enhancements to IEEE 802.11 MAC and their suitability for safety-critical applications in VANET, *Wireless Communications and Mobile Computing*, Wiley, 10(9): 1253-1269, Spt. 2010. DOI: 10.1002/wcm.674.
14. **Xiaomin Ma**, and H. Refai, Analysis of sliding frame R-ALOHA protocol for Inter-Vehicle communications. *ACM/Springer Wireless Networks*, 15(8): 1102-1112, Oct. 2009. doi: 10.1007/s11276-008-0105-6.
15. **Xiaomin Ma**, X. Chen, and H. Refai, Performance and reliability of DSRC vehicular broadcast ad hoc networks for highway safety applications, *EURASIP Journal on Wireless Communications and Networking*, Special Issue on Wireless Access in Vehicular Environments, V. 2009 (2009), doi:10.1155/2009/969164.
16. **Xiaomin Ma** and X. Chen, Performance analysis of IEEE 802.11 broadcast scheme in ad hoc wireless LANs, *IEEE Transactions on Vehicular Technology*, 57(6): 3757-3768, Nov. 2008.
17. **Xiaomin Ma** and X. Chen, Saturation performance of IEEE 802.11 broadcast networks, *IEEE Communications Letters*, 11(8), 686-688, August, 2007.

18. **Xiaomin Ma**, Transient solutions of sliding frame R-ALOHA for real-time Ad Hoc wireless networks in fading environment, *IEEE Communications Letters*, 11(4), 354-356, April 2007.
19. **Xiaomin Ma**, Yun Liu, and Kishor S. Trivedi, Design and analysis of a new soft handoff scheme for CDMA cellular system. *IEEE Transactions on Vehicular Technology*, 55(5), September 2006.
20. **Xiaomin Ma**, Yonghuan Cao, Yun Liu, and Kishor S. Trivedi, Modeling and performance analysis for soft handoff schemes in CDMA cellular systems. *IEEE Transactions on Vehicular Technology*, 55(2), March 2006.
21. Zhaozhi Zhang, **Xiaomin Ma**, and Yixian Yang, Bounds on the number of hidden neurons in three-layer binary neural networks, *Neural Networks*, Elsevier Science, 16(7), 2003.
22. Kishor S. Trivedi, **Xiaomin Ma**, and S. Dharmaraja, Performability modeling of wireless communication systems, *International Journal of Communication Systems*, Wiley, 16(6), 561-577, Aug. 2003.
23. Kishor S. Trivedi, S. Dharmaraja, and **Xiaomin Ma**, Analytic modeling of handoffs in wireless cellular networks, *Information Sciences*, Elsevier Science, 148(1-4) 155-166, Dec. 2002.
24. Zhaozhi Zhang, **Xiaomin Ma**, and Yixian Yang, A unified method to construct neural network decoders for arbitrary codes and decoding rules, *Discrete Mathematics*, Elsevier Science, 238(2001) 171-181, 2001.
25. **Xiaomin Ma**, Yi Xian Yang, and Zhang Zhaozhi, Boolean neural network design using set covering in hamming geometrical space, *IEICE Transactions on Fundamentals of Electronics, Communications and Computer Science*, Vol. E82A, No.10, October 1999.
26. **Xiaomin Ma**, Yixian Yang, and Zhang Zhaozhi, An information transmission system based on stochastic neural network, *Journal of China Institute of Communications* 23(4), 42-49, 2002.
27. Ziping Hu, Ping Cui, **Xiaomin Ma**, A neural network learning algorithm for Boolean logic design, *Journal of Petroleum University*, 25(3), 2001.
28. **Xiaomin Ma**, Yi Xian Yang, and Zhang Zhaozhi, A new framework and some results for threshold function, *Chinese Journal of Computers*, 23(3), 225-230, 2000.
29. **Xiaomin Ma**, Yi Xian Yang, and Zhang Zhaozhi, Nonlinear shift register synthesis based on binary neural network, *Acta Electronic Sinica*, 28(1), 2000.
30. **Xiaomin Ma**, Yi Xian Yang, and Zhang Zhaozhi, A new learning algorithm of binary neural network used for optimum design of Boolean function, *Acta Electronic Sinica*, 27(12), 1999.
31. **Xiaomin Ma**, Yi Xian Yang, Zhang Zhaozhi, and Wu Weiling, An efficient algorithm for Boolean neural network, *Journal of China Institute of Communications*, 20(12), 1999.
32. **Xiaomin Ma**, Yi Xian Yang, and Zhang Zhaozhi, Research on the learning algorithm of binary neural network, *Chinese Journal of Computers*, 22(9), 931-935, 1999.
33. **Xiaomin Ma**, Yi Xian Yang, and Zhang Zhaozhi, Design of block code decoders based on feedforward multilayer neural network, *Journal of China Institute of Communications*, 20(6), 1999.
34. **Xiaomin Ma**, Yi Xian Yang, and Zhang Zhaozhi, A neural network for decoding of nonlinear codes, *Journal of Electronics*, 20(6), 1998.
35. **Xiaomin Ma**, and Yi Xian Yang, Optimal design of FIR digital filter using genetic algorithm, *Journal of China Universities of Posts and Telecommunications*, 5(1), 12-15, 1998.
36. **Xiaomin Ma**, Niu Xinxi, and Cheng Qingbiao, Data acquisition technology in software radio, *Telecommunications Science*, 14(5), 5-8, 1998.

37. **Xiaomin Ma**, and Yi Xian Yang, Neural network learning algorithm based on direction of inner product and its application, *Journal of Beijing University of Posts and Telecommunications*, 21(4), 1998.
38. **Xiaomin Ma**, and Hu Ziping, Design of digital logic using neural network, *Journal of Circuits and Systems*, 3(3), 51-58, 1998.
39. **Xiaomin Ma**, Yi Xian Yang, and Zhang Zhaozhi, Decoding a kind of linear block code using neural network, *Journal of Beijing University of Posts and Telecommunications*, 21(2), 46-50, 1998.
40. Zhang Zhaozhi, **Xiaomin Ma**, and Yi Xian Yang, Recent development and research problems of information theoretic cryptography, *Acta Electronic Sinica*, 26(7), 9-18, 1998.
41. **Xiaomin Ma**, Identification and adaptive control of plant with pure time delay using neural network, *Journal of Petroleum University*, 22(5), 1998.
42. **Xiaomin Ma**, Inverse identification and closed-loop control of dynamic systems using neural networks, *Control Theory and Application*, 14(6), 836-841, 1997.
43. **Xiaomin Ma**, and Yang Yixian, Inverse model identification and on-line control based on recurrent neural network, *Journal of Petroleum University*, 21(4), 78-82, 1997.
44. **Xiaomin Ma**, and Pang Jinming, Auxiliary design of digital filter using genetic algorithm, *Journal of Petroleum University*, 21(1), 79-51, 1997.
45. **Xiaomin Ma**, and Zhou Manglai, Neural network learning algorithm suitable for nonlinear system identification, *Journal of Petroleum University*, 20(1), 89-93, 1996.
46. **Xiaomin Ma**, A learning algorithm based on U-D factorization Kalman filter (in Chinese), *Signal Processing*, 11(4), 276-281, 1995.
47. **Xiaomin Ma**, and Cui Ping, Design of apparatus for experiment of data acquisition system (in Chinese), *Research and Exploration of Laboratory*, 4(2), 1994.
48. **Xiaomin Ma**, Analysis of image acquisition system by micro-computer (in Chinese), *Shandong Electronics*, 10(1), 12-14, 1994.
49. **Xiaomin Ma**, and Bai Song, Measurement of electrical parameters of three-phase motor using MCS-51 single chip computer (in Chinese), *Journal of Petroleum University*, 22(5), 84-87, 1991.
50. **Xiaomin Ma**, Measurement of network frequency, phase difference, and power factor (in Chinese), *Electrical Measurement and Instrumentation*, 27(5), 32-34, 1990.

B. Conference Papers

1. **Xiaomin Ma**, and G. S. Butron, On the Reliability in d-Dimensional Broadcast Wireless Networks, *IEEE International Conference on Computing, Networking and Communications, Wireless Ad Hoc and Sensor Networks Symposium (ICNC'15)*, February 16-19, 2015, Anaheim, USA.
2. W. Li, J. Wu, and **Xiaomin Ma**, On Reliability Requirement for BSM Broadcast for Safety Applications in DSRC System, *IEEE Intelligent Vehicles Symposium*, Dearborn, Michigan, USA, June 8 - 11, 2014.
3. X. Chen, L. Tsaur, H. Refai, and **Xiaomin Ma**, Fighting Against Access Collision And Hidden Node Problem in Broadcast Scheme Of Wireless Ad Hoc Networks, *IEEE GLOBECOM Workshop on Novel MAC design for broadband wireless access*, ATLANTA, GEORGIA, Dec. 2013.
4. X. Yin, **Xiaomin Ma**, and K. S. Trivedi, Channel fading impact on multi-hop DSRC safety communication, *16th ACM International Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems (MSWiM'13)*, Barcelona, Spain, Nov. 2013.

5. J. Zhang, and **Xiaomin Ma**, Broadcast performance of IEEE 802.11 networks under fading channel, *IEEE 2013 International Symposium on Performance Evaluation of Computer and Telecommunication Systems (SPECTS)*, Toronto, Canada, July 7-10, 2013.
6. **Xiaomin Ma**, X. Yin, M. Wilson, and K. S. Trivedi, Performance of VANET safety message broadcast at rural intersections, *IEEE The 9th International Wireless Communications & Mobile Computing Conference (IWCMC 2013)*, CAGLIARI, SARDINIA – ITALY, July 1-5, 2013.
7. X. Yin, **Xiaomin Ma**, and K. S. Trivedi, Performance of BSM Dissemination in Multi-channel DSRC, *IEEE Vehicular Technology Conference*, Dresden, Germany, June 2-5, Spring 2013.
8. **Xiaomin Ma**, X. Yin, M. Wilson, and K. S. Trivedi, MAC and Application-Level Broadcast Reliability in VANETs with Channel Fading, *IEEE International Conference on Computing, Networking and Communications, Mobile Computing Symposium (ICNC'13)*, Jan. 28-31 2013, San Diego, USA.
9. **Xiaomin Ma**, and J. Zhang, On the Coverage Area in Broadcast Ad Hoc Networks, *IEEE International Conference on Network Infrastructure and Digital Content (IEEE IC-NIDC2012)*, Best paper award, Sept. 21-23, 2012, Beijing, China.
10. D. Selvamuthu, R. Vinayak, **Xiaomin Ma**, K. S. Trivedi, Reliability and Survivability of Vehicular Ad hoc Networks, *IEEE 2012 International Symposium on Performance Evaluation of Computer and Telecommunication Systems (SPECTS 2012)*, July 8-11, 2012, Genoa, Italy.
11. **Xiaomin Ma**, Packet Reception Ratios in Two-Dimensional Broadcast Ad Hoc Networks, *IEEE International Conference on Computing, Networking and Communications (ICNC 2012), Communication QoS and System Modeling Symposium* Maui, Hawaii, Jan. 30-Feb. 2, 2012.
12. Xiaobo Chen, Jeyan Oorjitham, and **Xiaomin Ma**, On the Two-Dimensional Coverage Area in Broadcast Ad Hoc Networks, *IFIP/IEEE Wireless Days International Conference*, Niagara Falls, Ontario, Canada, Oct. 10-12, 2011.
13. **Xiaomin Ma**, Xiaoyan Yin, and Kishor Trivedi, A Robust Broadcast Scheme for VANET One-hop Emergency Services, *4th IEEE International Symposium on Wireless Vehicular Communications (WIVEC2011)*, San Francisco, September 5-6 2011.
14. **Xiaomin Ma**, H. Refai, Analytical Model for Broadcast Packet Reception Rates in Two-Dimensional MANETs, *IEEE International Conference on Communications (ICC'11)*, Japan, June 2011.
15. Xiaoyan Yin, **Xiaomin Ma**, and Kishor Trivedi, Performance Evaluation for DSRC Vehicular Safety Communication: A Semi-Markov Process Approach, *The Fourth International Conference on Communication Theory, Reliability, and Quality of Service*, Hungary, April 2011.
16. **Xiaomin Ma**, J. Zhang, and T. Wu, Reconsider Broadcast Packet Reception Rates in One-Dimensional MANETs, *IEEE GLOBECOM 10*, Miami, Dec. 6-10, 2010.
17. N. Jiang, Z. Zhang, Jian Wang, **Xiaomin Ma**, The upper bound on the number of hidden neurons in multi-valued multi-threshold neural networks, *2009 International workshop on Intelligent Systems and Applications (ISA-09)*, May 23-24, 2009.
18. N. Jiang, Z. Zhang, **Xiaomin Ma**, The lower bound on the number of hidden neurons in multi-valued multi-threshold neural networks, *IEEE International Symposium on Intelligent Information Technology Application (IITA 2008)*, December 21-22 Shanghai, 2008.
19. **Xiaomin Ma**, Xianbo Chen, and Hazem Refai, On the broadcast packet reception rates in one-dimensional MANETs, *IEEE GLOBECOM*, New Orleans, Nov. 30-Dec. 4, 2008.

20. Nan Jiang, Yixian Yang, **Xiaomin Ma**, Zhaozhi Zhang, Analysis of nonseparable property of multi-valued multi-threshold neuron, *IEEE World Congress on Computational Intelligence*, Hong Kong, June 1-6, 2008.
21. Xianbo Chen, Hazem Refai, and **Xiaomin Ma**, SDMA: On the suitability for VANET, *IEEE 3rd International Conference on Information and Communication Technologies*, Damascus, Syria, April 7-11, 2008.
22. Xianbo Chen, Hazem Refai, and **Xiaomin Ma**, A Quantitative approach to evaluate DSRC Highway Inter-vehicle Safety Communication, *IEEE GLOBECOM*, Washington D.C, Nov. 26-30, 2007.
23. **Xiaomin Ma**, Xianbo Chen, and Hazem Refai, Unsaturated performance of IEEE 802.11 Broadcast Service in vehicle-to-vehicle networks, *IEEE Vehicular Technology Conference*, Fall, Baltimore, Sept. 30~Oct. 3, 2007.
24. Xianbo Chen, Hazem Refai, and **Xiaomin Ma**, Saturation performance of IEEE 802.11 broadcast scheme in ad hoc wireless LANs, *IEEE Vehicular Technology Conference*, Fall, Baltimore, Sept. 30~Oct. 3, 2007.
25. Jian Wang, Yixian Yang, Nan Jiang, Zhaozhi Zhang, and **Xiaomin Ma**, Using three layer neural networks to compute discrete real functions, *The 3rd International Conference on Natural Computation (ICNC'07)*, Haikou, China, August 24~30, 2007.
26. **Xiaomin Ma** and Xianbo Chen, Delay and Broadcast Reception Rates of Highway Safety Applications in Vehicular Ad Hoc Networks, *IEEE INFOCOM2007 workshop on Mobile Networks for Vehicular Environments*, Anchorage, Alaska, May 6~12, 2007.
27. Xianbo Chen, Hazem Refai, and **Xiaomin Ma**, Broadcasting Performance Comparison Among IVC MAC Protocol Candidates, invited paper, *IEEE Multi-conference on Systems and Control*, Singapore, Oct., 2007.
28. Xianbo Chen, Hazem Refai, and **Xiaomin Ma**, Impact of EIFS on IEEE 802.11 DCF performance, *4th International Symposium on Mechatronics and its Applications*, Sharjah, UAE, June 2007.
29. Nan Jiang, Yixian Yang, **Xiaomin Ma**, Zhaozhi Zhang, Using Three Layer Neural Network to Compute Multi-valued Functions, *International Symposium on Neural Networks*, Nanjing, China, June 2007.
30. **Xiaomin Ma**, Hazem Refai, and Xianbo Chen, Transient Analysis of Sliding Frame R-ALOHA for Real-time Ad Hoc Wireless Networks With Capture Effect. *IEEE Vehicular Technology Conference*, Montreal, Canada, Sept. 2006.
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