



师资队伍

- 学术带头人
- 博士生导师
- 硕士生导师
- 学院老教师
- 全体教师

您当前位置: 首页 > 师资队伍 > 全体教师 > 教师风采

白琳 教师个人简介

个人基本信息

姓名: 白琳
性别: 男
职务:
职称: 副教授
通信地址: 北京市海淀区学院路37号北京航空航天大学新主楼F627
联系电话: 82317846转6271
邮箱: L.Bai@buaa.edu.cn



个人简介

白琳, 于2004年毕业于华中科技大学电子信息工程系, 获学士学位; 于2007年, 2010年毕业于英国威尔士大学-斯旺西, 无线通信专业, 分别获硕士(with Distinction)及博士学位; 现任北京航空航天大学电子信息工程学院副教授, 硕士生导师, 并入选北京航空航天大学第二批“卓越百人”人才计划。主要研究方向包括空间信息网络传输技术、MIMO 通信系统、智能天线波束形成设计、航空宽带通信研究等。著有英文专著两部: 《Low Complexity MIMO Detection》、《Low Complexity MIMO Receivers》由美国Springer出版社分别于2012、2014年出版; 中文专著一部《空间信号组合理论与关键技术》由人民邮电出版社于2013年出版。目前已经在IEEE Transactions on Wireless Communications、IEEE Transactions on Communications、IEEE Transactions on Signal Processing、IEEE Transactions on Vehicular Technology、IEEE Communications Letters等国际刊物及IEEE Globecom、ICC、VTC等国际会议上录用发表论文50余篇。获得IEEE Communications Letters Exemplary Reviewer 2012奖项; ICNS 2013最佳论文奖。担任SCI期刊International Journal of Distributed Sensor Networks (IJDSN)客座编委, Journal of Telecommunications System and Management (JTSM)编委。

主要研究领域

主要研究方向包括下一代空间通信的信号处理核心技术、MIMO通信系统、阵列信号处理、智能天线波束形成设计、Lattice方法在通信领域的研究等。主要研究方向包括: Lattice reduction based MIMO detection; Iterative receiver for MIMO systems; QoS guaranteed orthogonal beamforming; Collaborative relay multiuser beamforming; Multicell MIMO; Interference alignment; ...

正在研究项目

- 主持国家自然科学基金委空间信息网络重大研究计划面上项目一项 (课题编号: 91338106)
- 主持国家自然科学基金委主任基金一项 (课题编号: 61250001)
- 参与国家自然科学基金重点项目一项 (课题编号: 61231013)

最近发表论著

- 所著专著
- [1] Lin Bai, Jinho Choi, and Quan Yu, Low Complexity MIMO Receivers, Springer, 2014, ISBN-13: 978-3-319-04983-0/ e-ISBN 978-3-319-04984-7

<http://www.springer.com/engineering/signals/book/978-3-319-04983-0>
[2] Lin Bai and Jinho Choi, Low Complexity MIMO Detection, Springer, New York, 2012, ISBN-13: 978-1-4419-8582-8/ e-ISBN 978-1-4419-8583-5
<http://www.springer.com/engineering/signals/book/978-1-4419-8582-8>
[3] 白琳, 李颖, 黄勤飞, 董旭, 于全, 《空间信号组合理论与关键技术》, 人民邮电出版社, 394页, 60万字, 2013, ISBN 978-7-1153-1335-5

<http://www.ptpress.com.cn/Book.aspx?id=25352>

部分论文

- [1] L. Bai*, J. Choi, Lattice reduction-based MIMO iterative receiver using randomized sampling, IEEE Transactions on Wireless Communications, 12(5), pp. 2160-2170, 2013 (SCI)
- [2] Q. Li, J. Zhang, L. Bai*, J. Choi, Lattice reduction-based approximate MAP detection with bit-wise combining and integer perturbed list generation, IEEE Transactions on Communications, 61(8), pp. 3259-3269, 2013 (SCI)
- [3] L. Bai, J. Choi, Low Complexity MIMO Detection, Springer Science+Business Media, 2012
- [4] L. Bai, C. Chen*, J. Choi, C. Ling, Greedy user selection using a lattice reduction updating method for multiuser MIMO systems, IEEE Transactions on Vehicular Technology, 60(1), pp. 136-147, 2011 (SCI)
- [5] L. Bai*, J. Choi, Partial MAP based list detection for MIMO systems, IEEE Transactions on Vehicular Technology, 58(5), pp. 2544-2548, 2009 (SCI)
- [6] X. Zhang, L. Bai*, W. Guang, Multiple beam selection for combing M2M communication networks and cellular networks with limited feed, International Journal of Distributed Sensor Networks, 2013 (2013), pp 1-11, 2013 (SCI)
- [7] J. Xie, L. Bai*, J. Zhang, T. Zhang, SDMA-based aeronautical machine-to-machine communications under SINR constraints, International Journal of Distributed Sensor Networks, 2013(2013), pp 1-9, 2013 (SCI)
- [8] Q. Li*, Y. Li, L. Bai, J. Choi, Lattice Reduction-Based User Selection in Multiuser MIMO Systems, Recent Trends in Multi-user MIMO Communications, published by INTECH, 2013
- [9] Y. Li, X. Dong, L. Wang, X. Guo, L. Bai*, A dual-cycle architecture in cognitive M2M wireless networks, International Journal of Distributed Sensor Networks, 2013(2013), pp 1-10, 2013 (SCI)
- [10] X. Zhang, D. Wang, L. Bai*, C. Chen, Collaborative relay beamforming based on minimum power for M2M devices in multicell systems, International Journal of Distributed Sensor Networks, 2013(2013), pp 1-9, 2013 (SCI)
- [11] Z. Liu, X. Zhang*, L. Bai, C. Chen, H. Xiang, Secure Beamforming via Amplify-and-Forward Relays in Machine to Machine Communications, International Journal of Distributed Sensor Networks, 2013 (2013), pp 1-11, 2013 (SCI)
- [12] L. Bai*, S. Dou, Q. Li, W. Xing, J. Choi, Low complexity iterative channel estimation with lattice reduction based detection for MIMO systems, IET Communications, 2013(2013), PP. 1-9, 2013 (SCI)
- [13] Q. Li, J. Zhang, L. Bai, J. Choi, Performance Analysis and System Design for Hierarchical Modulated BICM-ID, IEEE Transactions on Wireless Communications, vol. 99, pp. 1-14, 2014 (SCI)
- [14] C. Chen, L. Bai*, B. Wu, J. Choi, Downlink throughput maximization for OFDMA systems with feedback channel capacity constraints, IEEE Transactions on Signal Processing, 59(1), pp. 441-446, 2011 (SCI)
- [15] L. Bai, C. Chen*, J. Choi, Partial MAP-based lattice reduction-aided list MIMO detection, Electronics Letters, 48(10), pp. 598-600, 2012 (SCI)
- [16] L. Bai, C. Chen*, J. Choi, Prevoiting cancellation-based detection for underdetermined MIMO systems, EURASIP Journal on Wireless Communications and Networking, 2010, pp. 38-48, 2010 (SCI)
- [17] L. Bai, C. Chen*, J. Choi, Error-probability-based column reordering criterion for lattice-reduction-based list MIMO detection, Electronics Letters, 46(12), pp. 868-869, 2010 (SCI)
- [18] L. Bai, C. Chen*, B. Wu, J. He, Adaptive resource allocation for multicast orthogonal frequency division multiple access systems with guaranteed BER and rate, International Journal of Communication Systems, 26(7), pp. 912-926, 2013 (SCI)
- [19] J. He*, Y. Zhang, Z. Fan, H. Chen, L. Bai, Wireless machine-to-machine networks, International Journal of Distributed Sensor Networks, 2012(535927), pp. 1-2, 2012 (SCI)
- [20] C. Chen, L. Bai*, Y. Li, Y. Jin, J. Choi, Multiuser beamforming in multicell downlinks for maximising worst signal-to-interference-plus-noise ratio, IET Communications, 7(15), pp. 1596 - 1604, 2013.
- [21] J. He, W. Guan*, L. Bai, K. Chen, Theoretic analysis of IEEE 802.11 rate adaptation algorithm sample rate, IEEE Communications Letters, 15(5), pp. 524-526, 2011 (SCI)
- [22] Y. Li, L. Bai, C. Chen*, Y. Jin, J. Choi, Successive orthogonal beamforming for cooperative multi-point downlinks, IET Communications, 7(8), pp. 706 - 714, 2013.
- [23] D. Wang, C. Chen, L. Bai*, Y. Jin, J. Choi, Distributed relay beamforming based on worst-SNR constraints for multiple receivers, IET Signal Processing, 7(7), pp. 523 - 532, 2013 (SCI)
- [24] D. Wang, C. Chen, L. Bai*, J. He, Y. Jin, Y. Li, Optimal designs of collaborative relay-assisted multiuser beamforming for cellular systems, Wireless Communications and Mobile Computing, 2012, online published (SCI)
- [25] C. Chen, L. Bai*, B. Wu, J. Choi, Relay selection and beamforming for cooperative bi-directional transmissions with physical layer network coding, IET Communications, 5(14), pp 2059-2067, 2011 (SCI)
- [26] C. Chen, L. Bai*, J. He, H. Xiang, J. Choi, The throughput order of multicast traffics with physical-layer network coding in random wireless Ad Hoc networks, Journal of Communications and Networks, 13(3), pp 214-220, 2011 (SCI)
- [27] C. Chen, L. Bai*, M. Feng, M. Huang, T. Tian, Distributed beamforming for relay assisted multiuser machine-to-machine networks, International Journal of Distributed Sensor Networks, 2012 (213727), pp 1-9, 2012 (SCI)
- [28] Y. Li, C. Chen, L. Bai*, Y. Jin, On the achievable user number of the downlinks in cellular-based machine-to-machine communications, International Journal of Distributed Sensor Networks, 2012 (714971), pp 1-11, 2012 (SCI)
- [29] J. Xie, J. Zhang, L. Bai*, Multilayer orthogonal beamforming for priority guaranteed wireless communications, International Journal of Distributed Sensor Networks, 2012(307467), pp 1-8, 2012 (SCI)
- [30] X. Dong, S. Wei, Y. Li, L. Wang, L. Bai*, Service-oriented radio architecture: A novel M2M network architecture for cognitive radio systems, International Journal of Distributed Sensor Networks, 2012(762953), pp 1-8, 2012 (SCI)
- [31] D. Wang, L. Bai*, X. Zhang, W. Guan, C. Chen, Collaborative relay beamforming strategies for multiple destinations with guaranteed QoS in wireless machine-to-machine networks, International Journal of Distributed Sensor Networks, 2012(525640), pp 1-10, 2012 (SCI)
- [32] L. Lu, W. Jiang*, L. Bai, C. Chen, J. He, Spectrum redistribution for cognitive radios using discriminatory spectrum double auction, Wireless Communications and Mobile Computing, 13(8), pp. 774-789, 2013 (SCI)
- [33] B. Wu, L. Bai, C. Chen*, J. Choi, Resource allocation for maximizing outage throughput in OFDMA systems with finite-rate feedback, EURASIP Journal on Wireless Communications and Networks, 2011 (56), pp. 1-8, 2011 (SCI)
- [34] C. Chen, L. Bai, K. Cai, J. He*, H. Xiang, A network coding based interference cancellation scheme for wireless Ad Hoc networks, Wireless Communications and Mobile Computing, 10(8), pp 1017-1032, 2010 (SCI)
- [35] L. Bai, W. Guan, C. Chen, J. He, R. Wang, Modeling High-Speed Network Traffic with Truncated α -Stable Processes, Future Communication, Computing, Control and Management Lecture Notes in Electrical Engineering, 141, pp. 599-603, 2012
- [36] J. Xie, L. Bai*, and J. Zhang, Dual priority SDMA in aeronautical communications, 2013 Integrated Communications Navigation and Surveillance Conference, 2013.4.23-25, Herndon, VA, 2013会议论文(EI)
- [37] L. Bai, J. Xie*, W. Guan, Q. Yu, A primary rate guaranteed SDMA for aeronautical communications (invited paper), 8th International Conference on Communications and Networking in China, 2013.8.14-16, Guilin, 2013会议论文(EI)
- [38] S. Dou, L. Bai*, Q. Li, J. Choi, Iterative channel estimation and detection with computational

efficient lattice basis reduction for MIMO systems, 2013 International Conference on Wireless Communications & Signal Processing, 2013.10.24-26, HangZhou, 2013会议论文(EI)

[39]W. Bai, Q. Li, L. Bai*, J. Choi, MIMO iterative receiver using lattice reduction-aided detection and successive interference cancellation, 2013 International Conference on Wireless Communications & Signal Processing, 2013.10.24-26, HangZhou, 2013会议论文(EI)

[40]L. Bai, Q. Li*, J. Choi, Q. Yu, On the optimization of lattice reduction-based approximate MAP detection using randomized sampling in MIMO systems, 2013 International Conference on ICT Convergence, 2013.10.14-16, Jeju, 2013会议论文(EI)

[41] H.Yang, X. Wang, C. Grecos, L. Bai, Distributed real-time optimization of average consensus, International Wireless Communications and Mobile Computing Conference, 2013.07.1-5, Sardinia, 2013会议论文(EI)

[42] L. Bai , C. Chen* , J. Choi , C. Ling , Updated basis lattice reduction based sequential user selection for multiuser MIMO systems, 2010 IEEE Global Telecommunications Conference, 2010.12.06-10, pp 1-5, Miami, FL, 2010, 会议论文 (EI)

[43] L. Bai, C. Chen*, J. Choi, Lattice reduction aided detection for underdetermined MIMO systems: A pre-voting cancellation approach, IEEE 71st Vehicular Technology Conference, 2010.05.16-19, pp 1-5, Taipei, 2010, 会议论文 (EI)

[44] D. Wang, L. Bai*, C. Chen, Y. Jin, J. Choi, Coordinated relay beamforming based on the worst-case SINR in multicell wireless systems, 2012 IEEE Global Telecommunications Conference, 2012.12.03-07, pp 3965-3969, Anaheim, 2012, 会议论文 (EI)

[45] Y. Li, L. Bai, C. Chen*, Y. Jin, J. Choi, Orthogonal beamforming for rural broadband wireless access with limited feedback, 2012 IEEE Global Telecommunications Conference, 2012.12.03-07, pp 3936-3941, Anaheim, 2012, 会议论文 (EI)

[46] D. Wang, L. Bai, C. Chen*, W. Guan, Y. Jin, J. Choi, An optimal multiuser beamforming scheme based on the worst SNR in cellular systems, 2012 IEEE 75th Vehicular Technology Conference, 2012.05.06-09, pp 1-5, Yokohama, 2012, 会议论文 (EI)

[47] C. Chen, L. Bai, D. Wang*, Y. Jin, Jinho Choi, Collaborative relay-based multiuser beamforming in cellular systems, IEEE Vehicular Technology Conference, 2012.09.03-06, pp 1-5, Quebec City, 2012, 会议论文 (EI)

[48] D. Wang, L. Bai , C. Chen* , Y. Jin , J. Choi , Collaborative relay beamforming based on the worst-case SINR for multiuser in cellular systems, 2012 18th Asia-Pacific Conference on Communications, 2012.10.15-17, pp 17-22, Jeju Island, 2012, 会议论文 (EI)

[49] W. Guan, J. He*, L. Bai, Z. Tang, Adaptive rate control of dedicated short range communications based vehicle networks for road safety applications, 2011 IEEE 73rd Vehicular Technology Conference, 2011.05.15-18, pp 1-5, Budapest, 2011, 会议论文 (EI)

[50] W. Guan, J. He , L. Bai * , Z. Tang , Adaptive congestion control of DSRC vehicle networks for collaborative road safety applications, 2011 IEEE 36th Conference on Local Computer Networks, 2011.10.04-07, pp 913-917, Bonn, 2011, 会议论文 (EI)

[51] W. Guan , J. He , L. Bai * , Z. Tang , Two-phases control of DSRC Vehicle networks for road intersection coexisting safety applications, 2011 IEEE 13th International Conference on Communication Technology, 2011.09.25-28, pp 577-581, Jinan, 2011, 会议论文 (EI)

[52] C. Chen, L. Bai*, B. Wu, D. To, J. Choi, Outage throughput maximization for OFDMA systems with feedback channel capacity constraints, 2010 IEEE Global Telecommunications Conference, 2010.12.06-10, pp 1-5, Miami, FL, 2010, 会议论文 (EI)

[53] C. Chen, L. Bai*, J. He, H. Xiang, J. Choi, On the capacity improvement of multicast throughput in wireless Ad Hoc networks with physical-layer network coding, International Wireless Communications and Mobile Computing Conference, 2010.06.28-07.02, pp 110-113, Caen, 2010, 会议论文 (EI)

[54] B. Wu, C. Chen*, L. Bai, W. Guan, J. Choi, Resource allocation for OFDMA systems with guaranteed outage probabilities, International Wireless Communications and Mobile Computing Conference, 2010.06.28-07.02, pp 731-735, Caen, 2010, 会议论文 (EI)

[55] W. Guan, J. He, L. Bai*, Z. Tang, Y. Zhou, QoS guarantee with adaptive transmit power and message rate control for DSRC vehicle network based road safety applications, U- and E-Service, Science and Technology International Conference, 2011.12.08-10, pp 130-135, Jeju Island, 2011, 会议论文 (EI)

——> 获得主要荣誉

2013年, ICNS最佳论文

2012年, IEEE Communications Letters Exemplary Reviewer 2012

2011年, 北京航空航天大学第二批“卓越百人”人才计划