

Publication List of Professor Babak HosseinKhalaj

A) Articles in Journals

Published Papers:

- 1) B. H. Khalaj, H. K. Aghajan, T. Kailath (1994): '*Patterned Wafer Inspection by High Resolution Spectral Estimation Techniques*', Journal of Machine Vision and Applications, 7(3): 178-185.
- 2) H. K. Aghajan, B. H. Khalaj, T. Kailath (1994): '*Estimation of Skew Angle in Text Image Analysis by SLIDE: Subspace-based Line Detection*', Journal of Machine Vision and Applications, 7(4): 267-276.
- 3) H. Aghajan, B. Khalaj, T. Kailath (1999): '*Estimation of Multiple 2D Uniform Motions by SLIDE: Subspace-based Line Detection*', IEEE Transactions on Image Processing, Volume: 8 Issue: 4, Apr 1999, pp. 517 -526.
- 4) M. Sharif, M. Gharavi-Alkhansari, Babak H. Khalaj (2003): '*On the Peak to Average Power of OFDM Signals Based on Oversampling*', IEEE Transactions on Communications, Volume: 51, Issue: 1, Jan 2003 pp. 72 -78.
- 5) Seyed Saeed Changiz Rezaei, Babak H. Khalaj, '*Grey Prediction Based Handoff Algorithm*', in International Journal of Information Technology, 2004, Vol. 1, Number 3, pp. 165-168.
- 6) K. Ghaboosi, Babak H. Khalaj (2005): '*CICADA - A Novel Scheme for Improving TCP Performance Over Wireless Links*', in International Journal on Wireless Communications and Mobile Computing, John Wiley, Volume 5, Issue 4, June 2005, pp. 439-458.
- 7) M. H. Taghavi, Babak H. Khalaj (2006): '*Interference Suppression for Space-Time Coded CDMA via Decision Feedback Equalization*', in IEEE Transactions on Vehicular Technology, Volume: 55, Issue: 1, Jan 2006, pp. 200-206.
- 8) P. Razzaghi, Babak H. Khalaj, Mehrdad Shamsi, '*Linear Decoupled and Quasi-Decoupled Space-Time Codes*', in IEEE Transactions on Communications, Volume: 55, Issue: 1, January 2007, pp. 54-59.
- 9) Behrooz Khoshnevis, Babak H. Khalaj, '*Optimum Power Selection Algorithms in Aloha Networks, Random and Deterministic Approaches*', in IEEE Transactions on Wireless Communications, Volume: 6, Issue: 8, August 2007, pp. 3124 – 3136.
- 10) Behrooz Khoshnevis, Babak H. Khalaj, '*Optimum QoS Classes in Interworking of Next Generation Networks*', in IEEE/KICS Journal of Communications and Networks, Volume 9, Number: 4, December 2007, pp. 438-445.
- 11) S. Jalali, Babak H. Khalaj, '*Power Control for Multirate DS-CDMA Systems with Imperfect Successive Interference Cancellation*', in IEEE Transactions on Vehicular Technology, Volume: 57, Issue: 1, January 2008, pp. 600-603.
- 12) Kaveh Ghaboosi, Babak Hossein Khalaj, Yang Xiao, Matti Latva-aho, '*Modeling IEEE 802.11 DCF using Parallel Space-Time Markov Chain*', in IEEE Transactions on Vehicular Technology, Volume 57, Issue: 4, July 2008, pp. 2404 – 2413.
- 13) Mohammad H. Amerimehr, Babak H. Khalaj, and Pedro M. Crespo, '*A Distributed Cross-layer Optimization Method for Multicast in Interference-Limited Multi-hop Wireless Networks*', c
- 14) Behrooz Khoshnevis, Babak H. Khalaj, '*Analysis of a Deterministic Power Level Selection Algorithm with Small and Large Power Steps for Aloha Networks under Saturation*', Wireless Networks Journal, Springer Science Publishing, Volume 15:3, April 2009, pp. 408-

- 15) Kaveh Ghaboosi, Matti Latva-aho, Yang Xiao, Babak Hossein Khalaj, '*Modeling Non-Saturated Contention-based IEEE 802.11 Multi-hop Ad Hoc Networks*', in IEEE Transactions on Vehicular Technology, Volume 58, Issue: 7, September 2009, pp. 3518-3532.
- 16) Javier Del Ser, Babak H. Khalaj, '*Performance Analysis of a Novel Dual-Frequency Multiple Access Relay Transmission Scheme*', in International Journal of Communications, Network and System Sciences, 2009, Vol. 7, pp. 592-599.
- 17) Amir Hessam Salavati, Babak Hossein Khalaj, Pedro M. Crespo, Mohammad Reza Aref, '*QoSNC: A Novel Approach to QoS-based Network Coding for fixed networks*', in IEEE/KICS Journal of Communications and Networks, Volume 12, Number: 1, February 2010, pp. 86-94.
- 18) Javier M. Paredes, Babak H. Khalaj, Alex B. Gershman, '*Cooperative Transmission for Wireless Relay Networks Using Low-Rate Feedback*', in IEEE Transactions on Signal Processing, Volume 58, Issue: 7, July 2010, pp. 3828 - 3841.
- 19) Amir Khodaian, Babak H. Khalaj, '*Delay-Constrained Utility Maximization in Multihop Random Access Networks*', in IET Communications, Volume 4, Issue: 16, Nov. 2010, pp. 1908-1918.
- 20) Seyed Pooya Shariatpanahi, Babak Hossein Khalaj, Amir Shishegar, Hamid Reza Saligheh Rad, '*Decorrelating Closely-Spaced Antennas by Pattern Design in Uniform Scattering Environments*', in IET Microwaves, Antennas, and Propagation, Volume 4, Issue: 11, Nov. 2010, pp. 1903-1909.
- 21) Hamed Shahmansouri, Mohammad Reza Pakravan, Babak Hossein Khalaj, '*Analytical Modeling and Performance Analysis of Flooding in CSMA-based Wireless Networks*', in IEEE Transactions on Vehicular Technologies, Volume 60, Issue: 2, February 2011, pp. 664-679.
- 22) Hossein Ghasvari, Mohammad Raayatpanah, Babak Khalaj, Hamid Bakhshi, '*Optimal Sub-graph Selection over Coded Networks with Delay and Limited-Size Buffering*', in IET Communications, Volume 5, Issue: 11, July 2011, pp. 1497-1505.
- 23) Mahdi Khodaian, Jesús Pérez, Babak H. Khalaj, Pedro M. Crespo, '*Adaptive Access and Rate Control of CSMA for Energy, Rate, and Delay Optimization*', in EURASIP Journal on Wireless Communications and Networking, January 2012.
- 24) Farokh Marvasti, Arash Amini, Farzan Haddadi, Mehdi Soltanolkotabi, Babak Khalaj, Akram Aldroubi, Saeid Sanei, Jonathon Chambers, '*A unified approach to sparse signal processing*', in EURASIP Journal on Advances in Signal Processing, February 2012.
- 25) Seyed Pooya Shariatpanahi, Babak Hossein Khalaj, Kasra Alishahi, Hamed Shah-Mansouri, '*One-Hop Throughput of Wireless Networks with Random Connections*', in IEEE Wireless Communications Letter, Volume 1, Issue: 3, June 2012, pp. 205-208.
- 26) Seyed Pooya Shariatpanahi, Babak Hossein Khalaj, Hamed Shah-Mansouri, Javier Del Ser, '*Analysis of Quantization Effects on the Performance of Cooperative MIMO Techniques in Wireless Networks*', in EURASIP Journal on Wireless Communications and Networking 2012:290 (18 September 2012)
- 27) Ehsan Pasandshanjani, Babak H. Khalaj, '*Primary-Secondary Interaction Modeling in Cellular Cognitive Radio Networks: A Game-Theoretic Approach*', in IET Communications, Volume 6, Issue: 10, July 2012, pp. 1212-1219.

- 28) Hamed Shah-Mansouri, Babak Hossein Khalaj, Seyed Pooya Shariatpanahi, Javier Del Ser and Susana Perez-Sanchez, '*Asymptotic Analysis of Flooding in CSMA-based Large Scale Ad-Hoc Wireless Networks*', in EURASIP Journal on Wireless Communications and Networking 2012:312 (12 October 2012).
- 29) M. A. Raayatpanah, H. Salehi Fathabadi, B. H. Khalaj, S. Khodayifar, '*Minimum Cost Multiple Multicast Network Coding with Quantized Rates*', in Elsevier Computer Networks, December 2012, <http://dx.doi.org/10.1016/j.comnet.2012.11.017>.
- 30) Seyed Pooya Shariatpanahi, Babak Hossein Khalaj, Hamed Shah-Mansouri '*Power Allocation Scheme in Time Division Multiple Access Distributed Multi-input Multi-output Interference Channels*', IET Communications, Volume 7, Issue: 5, 2013, pp. 391-396.
- 31) Arvin Ayoughi, Masoumeh Nasiri-Kenari, Babak Hossein Khalaj, '*Degrees of Freedom Region of Cognitive MIMO Two Interfering Two-User Multiple Access Channels*', in IEEE Trans. On Vehicular Technology, Volume 62, Issue: 5, June 2013, pp. 2052-2068.
- 32) M. A. Raayatpanah, M.A., H. Salehi Fathabadi, B.H. Khalaj, S. Khodayifar, P.M. Pardalos, '*Bounds on end-to-end statistical delay and jitter in multiple multicast coded packet networks*', Elsevier Journal of Network and Computer Applications, 41 (2014) pp. 217-227.
- 33) Seyed Pooya Shariatpanahi, Hamed Shah-Mansouri, Babak Hossein Khalaj, "*Caching Gain in Interference-Limited Wireless Networks*", in IET Communications, Volume 9, Issue: 10, 2015, pp. 1269-1277.
- 34) Hossein Piliaram, Mehrdad Kiamari, and Babak Hossein Khalaj, "*Distributed Synchronization and Beamforming in Uplink Relay Asynchronous OFDMA CoMP Networks*", in IEEE Transactions on Wireless Communications, Volume: 14, Issue: 6, 2015, pp. 3471 – 3480.
- 35) Seyed Pooya Shariatpanahi, Babak Hossein Khalaj, K. Alishahi, Hamed Shah-Mansouri, "*Throughput of Large One-hop Ad-hoc Wireless Networks with General Fading*", in IEEE Transactions On Vehicular Technology, Volume: 64, Issue: 7, 2015, pp. 3304-3310.
- 36) Fatemeh Rezaei and Babak H. Khalaj, "*Stability, Rate, and Delay Analysis of Single Bottleneck Caching Networks*", in IEEE Transactions on Communications, Volume: 64, Issue: 1, 2016, pp. 300-313.
- 37) Shima Haddadi, Ashkan Olliaiee, Hamid Behroozi, Babak Hossein Khalaj, "*On the Power Allocation Strategies in Coordinated Multi-cell Networks using Stackelberg Game*", EURASIP Journal on Wireless Communications and Networking, **2016**:91, April 2016.
- 38) Seyed Pooya Shariatpanahi, Seyed Abolfazl Motahari, Babak Hossein Khalaj, "*Multi-server Coded Caching*", in IEEE Transactions on Information Theory, Volume: 62, Issue: 12, 2016, pp. 7253-7271.
- 39) Damoon Nashtaali, Seyed Abolfazl Motahari, Babak Hossein Khalaj, "*Breaking Lander-Waterman's Coverage Bound*", PLoS ONE 11(11): November 2, 2016, e0164888. doi:10.1371/journal.pone.0164888
- 40) Roozbeh Mohammadian, Arash Amini, Babak Khalaj, "*Deterministic Pilot Design For Sparse Channel Estimation in MISO/Multi-user OFDM Systems*", in IEEE Transactions on Wireless Communications, Volume: 16, Issue: 1, 2017, pp. 129-140.

- 41) Roozbeh Mohammadian, Arash Amini, Babak Khalaj, “*Compressive Sensing Based Pilot Design For Sparse Channel Estimation in OFDM Systems*”, in IEEE Communications Letters, Volume: 21, Issue: 1, 2017, pp. 4-7.
- 42) Seyed Abolfazl Motahari, Damoon Nashtaali, Ali Aliyari, Mohammad Amin Edrisi, Ahmad Ahmadian Moghadam, Babak H. Khalaj, ”*Meta-aligner: Long-read Alignment Based on Genome Statistics*”, BMC Bioinformatics (2017) 18:126 DOI 10.1186/s12859-017-1518-y.
- 43) Mehdi Setayesh; Hamid Behroozi; Babak Khalaj, “*A Distortion Outer Bound for Communicating Correlated Gaussian Sources over a Gaussian MAC*”, in IEEE Communications Letters, Volume: 21, Issue: 7, 2017, pp. 1457-1460.
- 44) Mohammad Hadi Abbaszadeh, Babak H. Khalaj, Afroz Haghbin, “*Error performance analysis for generalized orthogonal frequency division multiplexing*”, in Elsevier Computers and Electrical Engineering, July 2017.
- 45) Mohammad Hadi Abbaszadeh, Babak H. Khalaj and Afroz Haghbin, "*Optimum low complexity filter bank for generalized orthogonal frequency division multiplexing*", in EURASIP Journal on Wireless Communications and Networking, 2018:12.
- 46) Mohammad Javad Salehi, Seyed Abolfazl Motahari, Babak Hossein Khalaj, "*On the Optimality of 0–1 Data Placement in Cache Networks*", in IEEE Transactions on Communications, March 2018, Volume: 66, Issue: 3, 2018, pp. 1053-1063.
- 47) Vahideh Sanjaroon, Alireza Farhadi, Abolfazl Seyed Motahari, Babak H. Khalaj, "*Estimation of Nonlinear Dynamic Systems over Communication Channels*", in IEEE Transactions on Automatic Control, September 2018, Volume: 63, Issue: 9, 2018, pp. 3024 – 3031.
- 48) Shahram Shahsavari, Nail Akar, Babak H. Khalaj, "*Joint Cell Muting and User Scheduling in Multi-Cell Networks with Temporal Fairness*", in Wireless Communications and Mobile Computing, John Wiley, March 2018, Article ID 4846291.
- 49) Mohammad Ali Tahmasbi Nejad, Saeedeh Parsaeefard, Mohammad Ali Maddah-Ali, Toktam Mahmoodi, and Babak Hossein Khalaj, "*vSPACE: VNF Simultaneous Placement, Admission Control and Embedding*", in IEEE Journal on Selected Areas in Communications (JSAC), March 2018, Volume: 36, Issue: 3, 2018, pp. 542-557.
- 50) Behrooz Tahmasebi, Mohammad Ali Maddah-Ali, Saeedeh Parsaeefard, Babak Hossein Khalaj, "*Optimum Transmission Delay for Function Computation in NFV-based Networks: the role of Network Coding and Redundant Computing*", to appear in IEEE Journal on Selected Areas in Communications (JSAC), DOI: 10.1109/JSAC.2018.2869952.

B) Published Book Chapters

- 1) K. Ghaboosi, Y. Xiao, M. Latva-aho, B. H. Khalaj, ‘*Overview of IEEE 802.15.2: Coexistence of wireless personal area networks with other unlicensed frequency bands operating wireless devices*. Chapter 6 in the book: Emerging Wireless LANs, Wireless PANs, and Wireless MANs: IEEE 802.11, IEEE 802.15, 802.16 Wireless Standard Family,

by Yang Xiao, Yi Pan, Wiley, 2009, pp. 135-150.

C) Published contributions to Standard Committees

- 1) B. Khalaj, B. Rezvani, '*Channel Modeling and Spectral Compatibility Issues*', T1E1.4 Spectral Compatibility Project, T1E1.4/97-246, Chicago, June 1997
- 2) B. Rezvani, B. Khalaj, '*Proposed Working Draft of Spectrum Compatibility Technical Report*', T1E1.4 Spectrum Compatibility Standard for Twisted-pair Loop Transmission Systems, T1E1.4/98-002, Huntsville, June 1998
- 3) B. Rezvani, B. Khalaj, '*Preliminary Simulation Results for the Loop Reach in xDSL Environments*', T1E1.4/98-227, Huntsville, June 1998

D) Patents

- 1) **US Patent # 5,513,275**: B. Khalaj, H. Aghajan, and T. Kailath, "*Automated Direct Patterned Wafer Inspection*", issued April 30, 1996
- 2) **US Patent # 6,668,041 B2**: J. Kamali, B. H. Khalaj, "*Single Ended Line Probing in DSL System*", issued December 23, 2003

E) Published contributions to academic conferences

- 1) H. Hashemi, B. H. Khalaj, '*A fixed Channel Assignment Algorithm for 3 Dimensional Frequency Reuse Environments*', Proceedings of IEEE International Conference on Communications, Vol. I, pages 16-22, Denver, CO, June 1991
- 2) B. H. Khalaj, H. K. Aghajan, T. Kailath, '*Automated Direct Patterned Wafer Inspection*', Proceedings of the IEEE Workshop on Applications of Computer Vision, pages 266-273, Palm Springs, CA, Nov. 1992
- 3) H. K. Aghajan, B. H. Khalaj, T. Kailath, '*Estimation of Skew Angle in Text Image Analysis by Sensor Array Processing Techniques*', Proceedings of IS&T/SPIE International Symposium on Electrical Imaging: Science & Technology, Vol. 1906, pages 49-60, San Jose, CA, Feb. 1993
- 4) B. H. Khalaj, H. K. Aghajan, T. Kailath, '*Automated Direct Patterned Wafer Inspection*', Proceedings of IS&T/SPIE Symposium on Electronic Imaging: Science & Technology, Vol. 1907, pages 140-147, San Jose, CA, Feb, 1993
- 5) B. H. Khalaj, H. K. Aghajan, T. Kailath, '*Digital Image Processing Techniques for Patterned Wafer Inspection*', Proceedings of SPIE Symposium on Microlithography, Vol. 1926, pages 508-516, San Jose, CA, March 1993
- 6) B. H. Khalaj, A. H. Sayed, T. Kailath, '*A Unified Derivation of Square-root Multichannel Least-square Filtering Algorithms*', Proceedings of IEEE International Conference on Signal Processing, Vol. 5, pages 523-526, Minneapolis, MN, April 1993
- 7) H. K. Aghajan, B. H. Khalaj, T. Kailath, '*Estimation of Skew Angle in Text Image Analysis by SLIDE: Subspace-based Line Detection*', Proceedings of International Conference on Signal Processing Applications & Techniques, pages 885-894, Santa Clara, CA, Sept. 1993
- 8) B. H. Khalaj, A. Paulraj, T. Kailath, '*Antenna Arrays for CDMA Systems with Multipath*', Proceedings of IEEE Military Communications Conference, pages 624-628, Boston, MA, Oct. 1993
- 9) B. H. Khalaj, B. Hassibi, A. Paulraj, T. Kailath, '*Blind Identification of FIR Channels via Antenna Arrays*', Proceedings of 27th Asilomar Conf. on Circuits, Systems, and Computers, pages 721-725, Pacific Grove, CA, Nov. 1993
- 10) B. H. Khalaj, H. K. Aghajan, A. Paulraj and T. Kailath, '*Defect Inspection of Periodic Patterns with Low-order Distortion*', Proceedings of IS&T/SPIE Symposium on Electronic

- Imaging Science & Technology, Vol. 2183, pages 13-19, San Jose, CA, Feb. 1994
- 11) B. H. Khalaj, H. K. Aghajan, A. Paulraj and T. Kailath, '*Signal Processing Techniques for Defect Inspection of Distorted Patterned Wafers*', Proceedings of SPIE Symposium on Microlithography, IC Metrology, Inspection, and Process Control VIII, Vol. 2196, pages 234-240, San Jose, CA, Feb. 1994
 - 12) H. K. Aghajan, B. H. Khalaj and T. Kailath, '*Estimation of Multiple 2D Uniform Motions by Sensor Array Processing Techniques*', Proceedings of IS&T/SPIE Symposium on Electronic Imaging Science & Technology, Vol. 2182, pages 78-89, San Jose, CA, Feb. 1994
 - 13) A. Naguib, B. H. Khalaj, A. Paulraj, T. Kailath, '*Adaptive Channel Equalization for TDMA Digital Cellular Communications Using Antenna Arrays*', Proceedings of IEEE International Conference on Signal Processing, Vol. IV, pages 101-104, Adelaide, Australia, April 1994
 - 14) D. Pal, B. H. Khalaj, '*A RAKE Type Receiver Structure for Narrow Band Wireless Systems Can be Designed Using Multiple Antennas at the Receiver*', Proceedings of IEEE International Conference on Communications, pages 1701-1705, New Orleans, May 1994
 - 15) B. Hassibi, H. K. Aghajan, B. H. Khalaj, A. Paulraj, T. Kailath, '*Spatio-temporal Blind Identification of FIR Channels For Multiple Users*', Proceedings of 28th Annual Conference on Information Sciences and Systems, Princeton, NJ, 1994
 - 16) B. H. Khalaj, A. Paulraj, T. Kailath, '*2D RAKE Receivers for CDMA Cellular Systems*', Proceedings of IEEE Global Communications Conference, Vol. I, pages 400-404, San Francisco, CA, December 1994
 - 17) H. K. Aghajan, B. Hassibi, B. H. Khalaj, A. Paulraj, T. Kailath, '*Blind Identification of FIR Channels with Multiple Users via Spatio-Temporal Processing*', Proceedings of IEEE Global Communications Conference, pages 1899-1903, San Francisco, CA, December 1994
 - 18) B. H. Khalaj, Y. C. Pati, T. Kailath, '*Distortion Compensation for Accurate Overlay in Lithography of Quasi-Periodic Patterns*', Proceedings of SPIE Symposium on Integrated Circuit Metrology, Inspection, and Process Control IX, pages 20-22, Santa Clara, CA, February 1995
 - 19) B. H. Khalaj, Y. C. Pati, T. Kailath, '*A New Method for Accurate Overlay in Lithography of Flat Panel Displays*', Proceedings of Society for Information Display International Symposium, Orlando, Florida, May 1995
 - 20) B. H. Khalaj, A. Paulraj, T. Kailath, '*Spatio-temporal Channel Estimation Techniques for Multiple Access Spread Spectrum Systems with Antenna Arrays*', Proceedings of IEEE International Conference on Communications, pages 1520-1524, Seattle, Washington, June 1995
 - 21) M. Sharif, B. Khalaj, '*Peak to Mean Envelope Power Ratio of Oversampled OFDM Signals, An Analytic Approach*', Proceedings of IEEE International Conference on Communications, Vol. 5, pp. 1476-1480, Helsinki, Finland, June 2001
 - 22) M. Sharif, Babak H. Khalaj, '*Computation of the Peak of the Instantaneous and Envelope Power of Coded OFDM Signals: New Relative Error Bounds*', Proceedings of 1st International Symposium on Telecommunications, pp. 646-649, Tehran, Iran, Sept. 2001
 - 23) M. Sharif, M. Gharavi-Alkhansari, B. Khalaj, '*New Results on the Peak Power of OFDM Signals Based on Oversampling*', Proceedings of IEEE International Conference on Communications, pp. 866-871, New York, May 2002
 - 24) A. Majlesi, Babak H. Khalaj, '*An Adaptive Fuzzy Logic Based Handoff Algorithm for Hybrid Networks*'. Proceedings of International Conference on Signal Processing, pp. 1223-1228, Beijing, China, August 2002

- 25) A. Majlesi, Babak H. Khalaj, 'An adaptive Fuzzy Logic Based Handoff Algorithm for Interworking Between WLANs and Networks', Proceedings of IEEE International Symposium on Personal, Indoor, and Mobile Radio Communications, pp. 2446-2451, Lisbon, Portugal, September 2002.
- 26) M. Ebrahimian, Babak H. Khalaj, 'A Simulation Study of Multiuser OFDM', in Proceedings of 2nd International Symposium on Telecommunications, pp. 693-697, Isfahan, Iran, 16-18 August 2003
- 27) A. Pezeshk, Babak H. Khalaj, 'Extended Hexagonal Constellations as a Means to Reduce OFDM and DMT PARR', in Lecture Notes in Computer Science, EurAsia-ICT 2002: Information and Communication Technology, pp. 926-936, H. Shafazand and A.M. Toja (Eds.), Springer Verlag, 2002
- 28) P. Razzaghi, Babak H. Khalaj, 'Linear Decoupled Space-Time Codes', in Proceedings of IEEE International Symposium on Personal, Indoor, and Mobile Radio Communications (IEEE PIMRC), pp. 2862- 2867, Beijing, China, 7-10 September 2003.
- 29) E. Bakhtiari, Babak H. Khalaj, 'A New Joint Power and Subscriber Allocation Scheme for Multiuser OFDM Systems', in Proceedings of IEEE International Symposium on Personal, Indoor, and Mobile Radio Communications (IEEE PIMRC), pp. 1959 –1963, Beijing, China, 7-10 September 2003.
- 30) S. Jalali, Babak H. Khalaj, 'Power Control for Multirate CDMA Systems with Imperfect Successive Interference Cancellation', in Proceedings of IEEE Wireless Communications and Networking Conference (IEEE WCNC), Vol. 3, pp. 1388—1393, Atlanta, Georgia, USA, 21-25 March 2004.
- 31) P. Razzaghi, Babak H. Khalaj, 'A Novel Time-Frequency Receiver for Unknown Fast Fading Channels', in Proceedings of IEEE Wireless Communications and Networking Conference (IEEE WCNC), Vol. 3, pp. 1572-1577, Atlanta, Georgia, USA, 21-25 March 2004.
- 32) M. H. Taghavi, Babak H. Khalaj, 'Two Dimensional MMSE-DFE for Space-Time Coded Wideband CDMA', in Proceedings of IEEE Wireless Communications and Networking Conference (IEEE WCNC), Vol. 2, pp. 1216-1221, Atlanta, Georgia, USA, 21-25 March 2004.
- 33) Vahidreza Arbab, Sadaf Zahedi, Babak H. Khalaj, 'Analysis on the Capacity of Wireless Ad-Hoc Networks', in Proceedings of 1st International Conference on Information and Communication Technologies, pp. 203-204, Damascus, Syria, 19-23 April 2004.
- 34) K. Ghaboosi, Babak H. Khalaj, 'AMACA, A Novel MAC Protocol for Wireless LANs', in Proceedings of International Workshop on Wireless Ad-hoc Networks, pp. 238-242, Oulu, Finland, May 31st- June 3rd, 2004.
- 35) S. Jalali, Babak H. Khalaj, 'Power Management for Multirate DS-CDMA Systems with Imperfect Successive Interference Cancellation', in Proceedings of IEEE International Conference on Communications (IEEE ICC), pp. 3256-3260, Paris, France, 20-24 June 2004.
- 36) M. H. Taghavi, Babak H. Khalaj, 'Decision Feedback Equalization and Transmit Diversity for Wideband CDMA', in Proceedings of IEEE International Conference on Communications (IEEE ICC), pp. 2347-2351, Paris, France, 20-24 June 2004.
- 37) K. Ghaboosi, Babak H. Khalaj, 'AMACA, A New Multiple Access Collision Avoidance Scheme for Wireless LANs', in Proceedings of IEEE International Symposium on Personal, Indoor, and Mobile Radio Communications (IEEE PIMRC), Vol.3 , pp. 1932-1936, Barcelona, Spain, 5-8 September 2004.
- 38) E. Bakhtiari, Babak H. Khalaj, 'A Novel Rate-Adaptation Algorithm for Multiple Access

- OFDM Systems*', in Proceedings of IEEE International Symposium on Personal, Indoor, and Mobile Radio Communications (IEEE PIMRC), Vol.4, pp. 2509-2513, Barcelona, Spain, 5-8 September 2004.
- 39) H. Bagheri, M.R. Pakravan, B. Khalaj, '*Iterative Multi-user Power Allocation: Performance Evaluation and Modification*', in Proceedings of IEEE TENCON 2004, Vol. 3, pp. 216-219, Chiang Mai, Thailand, November 2004.
 - 40) Seyed Saeed Changiz Rezaei, Babak H. Khalaj, '*Grey Prediction Based Handoff Algorithm*', in Proceedings of International Conference on Signal Processing, pp. 80-83, 15-17 December 2004, Istanbul, Turkey.
 - 41) Seyed Ali Tajer, Babak H. Khalaj, '*Performance Enhancement of Cellular OFDM Based Wireless LANs by Exploiting Spatial Diversity Techniques*', in Proceedings of International Conference on Signal Processing, pp. 72-75, 15-17 December 2004, Istanbul, Turkey.
 - 42) Ali Malekitabar, Hossein Aghababa, M.H. Radfar, and Babak Hossein Khalaj, '*Minimizing the Error of TDOA Method in Mobile Networks*', in Proceedings of International Conference on Wireless and Optical Communications Networks, WOCN 2005, pp. 328-332, 6-8 March 2005, Dubai, UAE.
 - 43) Mahdi Golparvar Roozbahani, Babak H. Khalaj, '*Rate-Maximizing Adaptation in MIMO-OFDM with Space-Time-Frequency Coding*', in Proceedings of Iranian Conference on Electrical Engineering, Vol. 2, May 10-12, 2005, Zanjan.
 - 44) Kaveh Ghaboosi, Babak H. Khalaj, '*A Novel Transport Agent for Wireless Routers to Improve TCP and UDP Performance over Wireless Links*', in Proceedings of IEEE International Symposium on Personal, Indoor, and Mobile Radio Communications (IEEE PIMRC), September 11-14 2005, Vol. 4, pp. 2201-2205, Berlin, Germany.
 - 45) Yashar Ghiassi, Mohammad Mehdi Mansouri, Babak H. Khalaj, '*An Efficient MAC Protocol for Sensor Network Considering Energy Consumption and Information Retrieval Pattern*', in Proceedings of 8th Euromicro Conference on Digital System Design, Architectures, Methods and Tools, pp. 261-266, Porto, Portugal, Aug 30th to September 3rd 2005.
 - 46) Amir Mahdi Khodaiian, Babak H. Khalaj, '*Performance Analysis of Adaptive OFDM-CDMA Systems*', in Proceedings of International Symposium on Telecommunications, pp. 579-584, September 2005, Shiraz, Iran.
 - 47) V. S. Mansouri, Y. G. Farrokhfal, M. MohammadNia-Avval, B. H. Khalaj, '*Using a Diversity Scheme for Power Aware Routing in Large Scale Sensor Networks*', in Proceedings of the Second IEEE/CreateNet International Workshop on Broadband Advanced Sensor Networks (IEEE BaseNet), pp. 17-20, Boston, MA, October 3-7, 2005.
 - 48) M. Mohammadnia-Avval, M. R. Pakravan, Babak H. Khalaj, '*Adapting Power for BER Improvement in Wireless Channels*', in Proceedings of Eighth ACM/IEEE International Symposium on Modeling, Analysis and Simulation of Wireless and Mobile Systems (MSWIM'05), October 10-13, 2005, Montreal, Quebec, Canada.
 - 49) V. S. Mansouri, M. MohammadNia-Avval, Y. G. Farrokhfal, B. H. Khalaj, '*Dynamic Scheduling MAC Protocol for Large Scale Sensor Networks*', in Proceedings of IEEE International Conference on Mobile Adhoc and Sensor Systems, (IEEE MASS 2005), pp. 62-66, Washington DC, November 7-10, 2005.
 - 50) Behtash Babadi, Pooya Shariatpanahi, Babak H. Khalaj, '*An Adaptive Feedback Bit Allocation Method For Wireless Systems With Transmit Diversity*' in Proceedings of the 1st Conference on Computers, Communications, and Signal Processing, pp. 181-184, Kuala Lumpur, Malaysia, 14-16 November, 2005
 - 51) Pooya Shariatpanahi, Behtash Babadi, Babak H. Khalaj, '*Feedback Bit Reduction For*

- Antenna Selection Methods In Wireless Systems*' in Proceedings of the 1st IEEE International Conference on Networks, pp. 229-233, Kuala Lumpur, Malaysia, 16-18 November, 2005
- 52) Yashar Ghiassi, Vahid Reza Arbab, Mohammad R. Pakravan, Babak H. Khalaj, '*Estimation Error Minimization in Sensor Networks with Mobile Agents*', in Proceedings of Consumer Communications and Networking Conference, Las Vegas, Nevada, 8-10 January 2006.
 - 53) M. Mohammadnia-Avval, M. R. Pakravan, Babak H. Khalaj, '*A New Strategy to Solve Energy-Efficient Adaptive Modulation Problems in Single Carrier Wireless Systems*', in Proceedings of International Symposium on Wireless Pervasive Computing, 16-18 January, 2006, Phuket, Thailand.
 - 54) Mohammadnia-Avval, M.; Pakravan, M.R.; Khalaj, B.H, '*Transmit Power Reduction by Adapting Rate or Power for Single Carrier Wireless Systems*', in Proceedings of International Performance, Computing, and Communications Conference (IEEE IPCCC), April 10-12, 2006, Phoenix, Arizona.
 - 55) Mahdi Golparvar Roozbahani, Babak H. Khalaj, '*Rate-Maximizing Adaptation in Multiantenna OFDM Systems With Space-Time-Frequency Coding*', in Proceedings of IEEE International Conference on Communications (IEEE ICC) , Istanbul, Turkey, 11-15 June 2006.
 - 56) Behrooz Khoshnevis, Babak H. Khalaj, '*On a Decentralized Deterministic Transmission Power Level Selection Algorithm in Large Aloha Networks under Saturation*', in Proceedings of IEEE International Conference on Communications (IEEE ICC), Istanbul, Turkey, 11-15 June 2006.
 - 57) Farshad Ahdi, Babak H. Khalaj, '*Vertical Handoff Initiation Using Road Topology and Mobility Prediction*', in Proceedings of IEEE Wireless Communications and Networking Conference (IEEE WCNC), Vol. 1, pp. 593-598, Las Vegas, NV, 3-6 April 2006.
 - 58) P. Shariatpanahi and B. H. Khalaj, '*Delay-Aware Scheduling in Heterogeneous Multiuser Systems*', in Proceedings of IEEE 7th Workshop on Signal Processing Advances in Wireless Communications (SPAWC 06), pp. 1-5, Cannes, France, 1-5 July 2006.
 - 59) Ali Eslami, Babak H. Khalaj, '*Wireless Multicasting Using Network Coding*', in Proceedings of 1st Workshop on Operator-Assisted (Wireless Mesh) Community Networks (OpComm), Berlin, Germany, Sept. 2006.
 - 60) Mohammad Sadegh Talebi, Mahdi Kefayati, Babak Khalaj, Hamid Rabiee, '*Adaptive Consensus Averaging for Information Fusion over Sensor Networks*', in Proceedings of IEEE International Conference on Mobile Ad-hoc and Sensor Systems, (IEEE MASS), pp. 562-565, Vancouver, Canada, 9-12 October 2006.
 - 61) Amirmahdi Khodaian, Babak H. Khalaj, Mohammad S. Talebi, '*Utility Constrained Energy Minimization In Aloha Networks*', in Proceedings of IEEE Consumer Communications and Networking Conference (CCNC) 2007, pp. 665-669, Las Vegas, Nevada, 11-13 January 2007.
 - 62) Mohammad Sadegh Talebi, Babak Khalaj, '*Distributed Power Allocation For OFDM Wireless Ad-Hoc Networks Based On Average Consensus*', in Proceedings of 10th IEEE International Conference on Communication Systems (ICCS06), Singapore, 30 Oct.-1 Nov. 2006.
 - 63) Ali Eslami, Babak H. Khalaj, '*Capacity of Network Coding for Wireless Multicasting*', in Proceedings of IEEE Wireless and Microwave Technology Conference (IEEE WAMICON), Clearwater, Florida, 4-5 December, 2006.
 - 64) S. Samadi, A. Golmoahammdi, A. Jannesari, M. R. Movahedi, B. Khalaj, S. Ghaemmaghani, '*A Novel Implementation of IEEE 802.11 Medium Access Control*', in

- Proceedings of International Symposium on Intelligent Signal Processing and Communication Systems (ISPACS06), pp. 489-492, Tottori, Japan, 2-15 December 2006.
- 65) Mahdi Kefayati, Mohammad S. Talebi, Hamid R. Rabiee, Babak H. Khalaj, '*Secure Consensus Averaging for Secure Information Fusion in Sensor Networks*', in Proceedings of The 10th International Symposium on Signal Processing and its Applications (ISSPA 2007), 12-15 February 2007, Sharjah, United Arab Emirates.
 - 66) Mahdi Kefayati, Mohammad S. Talebi, Hamid R. Rabiee, Babak H. Khalaj, '*On Secure Consensus Information Fusion over Sensor Networks*', in Proceedings of IEEE/ACS International Conference on Computer Systems and Applications (AICCSA '07), pp. 108-115, 13-16 May 2007, Amman, Jordan.
 - 67) Mahdi Kefayati, Mohammad S. Talebi, Babak H. Khalaj, Hamid R. Rabiee, '*On Secure Consensus Averaging in Sensor Networks Using Random Offsets*', in Proceedings of IEEE International Conference on Telecommunications (ICT-MICC07), pp. 556-560, 14-17 May 2007, Penang, Malaysia.
 - 68) Amirmahdi Khodaian, Babak H. Khalaj, '*Energy and Utility Optimization in Wireless Networks with Random Access*', in Proceedings of IEEE International Conference on Communications (IEEE ICC), pp. 3799-3804, Glasgow, Scotland, 24-29 June 2007.
 - 69) Babak H. Khalaj, Javier Del Ser, Pedro M. Crespo, and Jesus Gutierrez-Gutierrez, '*A Novel Dual-Frequency Multiple Access Relay Transmission Scheme*', in Proceedings of IEEE International Symposium on Personal, Indoor, and Mobile Radio Communications (IEEE PIMRC), Athens, Greece, September 3-8, 2007.
 - 70) Jose Angel Esteban, Javier Del Ser, Babak H. Khalaj y Pedro M. Crespo, '*Comparacion de Tecnicas de Codificacion de Red y Encaminamiento para Redes de Multidifusion*', in Proceedings of Simposium Nacional de la Unión Científica Internacional de Radio (URSI 2007), Tenerife, Spain, 19-21 September, 2007.
 - 71) Mohammad H. Ameri Mehr, Babak H. Khalaj, '*A Distributed Probability Collectives Optimization Method for Multicast in CDMA Wireless Data Networks*', in Proceedings of IEEE International Symposium on Wireless Communication Systems (ISWCS 2007), pp. 617-621, Trondheim, Norway, 17-19 October 2007.
 - 72) Sara Bahramian, Babak Hossein Khalaj, '*A Novel Low-Complexity Dynamic Frequency Selection Algorithm for Cognitive Radios*', in Proceedings of IEEE International Symposium on Wireless Communication Systems (ISWCS 2007), pp. 558-562, Trondheim, Norway, 17-19 October 2007.
 - 73) Babak H. Khalaj, Javier Del Ser, Pedro M. Crespo, Jesus Gutierrez-Gutierrez, '*Diversity Gain Analysis of a Novel Dual-Frequency Multiple Access Relay Transmission Scheme*', in Proceedings of IEEE International Symposium on Wireless Communication Systems (ISWCS 2007), pp. 460-464, Trondheim, Norway, 17-19 October 2007.
 - 74) Javier Del Ser, Pedro M. Crespo, Babak H. Khalaj, and Jesus Gutierrez-Gutierrez, '*On Combining Distributed Joint Source-Channel-Network Coding and Turbo Equalization in Multiple Access Relay Networks*', in Proceedings of 3rd IEEE International Conference on Wireless and Mobile Computing, Networking and Communications (WiMob 2007), New York, USA, October 8-10, 2007.
 - 75) J. Esteban; J. Del Ser; P. Crespo, B. H. Khalaj, '*Improved Dual Frequency Multiple Access Relay Scheme for Spatially Correlated Sources*', in Proceedings of International ITG Workshop on Smart Antennas (WSA 2008), Darmstadt, Germany, 26-27 February, 2008.
 - 76) Pooya Shariatpanahi, Babak Hossein Khalaj, Amir Ahmad Shishegar, Hamidreza Saligheh Rad, '*Decorrelating Closely-Placed Antennas by Pattern Design in Uniform Scattering*

- Environments*', in Proceedings of 10th International Conference on Advanced Communication Technology (ICACT 2008), pp. 2092-95, Phoenix Park, Korea, 17-20 February, 2008.
- 77) Sara Bahramian, Babak H. Khalaj, '*Joint Dynamic Frequency Selection and Power Control for Cognitive Radio Networks*', in Proceedings of 15th International Conference on Telecommunications (ICT08), St. Petersburg, Russia, 16-19 June, 2008.
- 78) Javier M. Paredes, Babak H. Khalaj, Alex Gershman, '*Using Orthogonal Designs with Feedback in Wireless Relay Networks*', in Proceedings of 9th IEEE International Workshop on Signal Processing Advances in Wireless Communications (SPAWC08), pp. 61-65, Recife, Brazil, 6-9 July, 2008.
- 79) Pooya Shariatpanahi, Amir Ahmad Shishegar, Babak Hossein Khalaj, A. H. Salavati, Hamidreza Saligheh Rad, '*Low SNR Capacity Analysis of MIMO Systems Using Directional Antennas*', in Proceedings of International Symposium on Telecommunications, (IST 2008), pp. 393-398, Tehran, Iran, 27-28 August, 2008.
- 80) Amir Hessam Salavati, Babak Hossein Khalaj, Mohammad Reza Aref, '*A Novel Approach for Providing QoS with Network Coding*', in Proceedings of International Symposium on Telecommunications, (IST 2008), pp. 446-451, Tehran, Iran, 27-28 August, 2008.
- 81) Kaveh Ghaboosi, Matti Latva-aho, Yang Xiao, Babak Hossein Khalaj, '*IEEE 802.11 Distributed Coordination Function Service Time and Queuing Delay Analysis using Parallel Space – Time Markov Chain*', in Proceedings of IEEE International Symposium on Personal, Indoor, and Mobile Radio Communications (IEEE PIMRC), Cannes, France, September 15-18, 2008.
- 82) Amir Hessam Salavati, Babak Hossein Khalaj, Pedro Crespo, Mohammad Reza Aref, '*QoS Network Coding*', in Proceedings of International Symposium on Information Theory and its Applications (ISITA 2008), Auckland, New Zealand, 7-10 December 2008.
- 83) Javier Paredes, Babak H. Khalaj, Alex Gershman, '*A Differential Cooperative Transmission Scheme with Low Rate Feedback*', in Proceedings of IEEE ICASSP 2009, pp. 2621-2624, Taipei, Taiwan, 19-24 April 2009.
- 84) Amirmahdi Khodaian, Babak H. Khalaj, Hamed Shahmansouri, '*Optimal Utility-Energy Tradeoff in Delay Constrained Random Access Networks*', in Proceedings of IEEE International Conference on Communications (IEEE ICC), Dresden, Germany, June 14-18, 2009.
- 85) S. Ebrahim Safavi, Babak H. Khalaj, Farhad Saheban, '*Asymptotic Analysis of Error Probability and Outage Behavior of Equal-Gain Combining*', in Proceedings of IEEE International Symposium on Personal, Indoor, and Mobile Radio Communications (IEEE PIMRC), Tokyo, Japan, September 13-16, 2009.
- 86) H. Shah-Mansouri, B. H. Khalaj, M. R. Pakravan, and A. M. Khodaian, '*Counter-based Broadcasting: Modeling and Performance Analysis in CSMA-based Wireless Networks*', in Proceedings of IEEE International Symposium on Personal, Indoor, and Mobile Radio Communications (IEEE PIMRC), Tokyo, Japan, September 13-16, 2009.
- 87) Kaveh Ghaboosi, Matti Latva-aho, Yang Xiao, Babak Hossein Khalaj, '*Modeling IEEE 802.11 DCF using Parallel Space-Time Markov Chain: Multi-hop Ad-hoc Networks*', in Proceedings of IEEE Globecom Conference, Hawaii, USA, 30 Nov. 4-Dec. 2009.
- 88) Kaveh Ghaboosi, Matti Latva-aho, Yang Xiao, Babak Hossein Khalaj, '*Performance Analysis of Random Access Multi-Hop Ad Hoc Networks: An Analytical Approach*', in Proceeding of IFIP Wireless Days 2009, Paris, France, December 14-16, 2009.
- 89) Keyvan Ramezanzpour, Babak H. Khalaj, Ali Fotowat-Ahmady, '*Reduction of Multipath*

- Errors in Spread-Spectrum Code Tracking*', in Proceedings of IEEE International Conference on Communications (IEEE ICC), Cape Town, South Africa, May 23-27, 2010.
- 90) Ebrahim Safavi, Babak Hossein Khalaj, '*Cooperative Diversity of Distributed Network Beamforming Under Long-Term Power Constraints*', in Proceedings of IEEE International Symposium on Computers and Communications (IEEE ISCC), pp. 268-271, Riccione, Italy, June 22-25, 2010.
- 91) Mohsen Karimzadeh, Babak H. Khalaj, Shahin Vakilineia, '*Delay QoS Provisioning in Cognitive Radio Systems Using Adaptive Modulation*', in Proceedings of ACM International Symposium on QoS and Security for Wireless and Mobile Networks (Q2SWINET), pp. 49-54, Bodrum, Turkey, October 17-21, 2010.
- 92) Pooya ShariatPanahi, Babak H. Khalaj, '*A Novel Approach to Power Allocation in Wireless Adhoc Networks*', in Proceedings of ACM International Conference on Modeling, Analysis and Simulation of Wireless and Mobile Systems (MSWIM'10), pp. 78-82, Bodrum, Turkey, October 17-21, 2010.
- 93) Hamidreza Aghasi, Morteza Hashemi, Babak Hossein Khalaj, '*A Source Localization Based on Signal Attenuation and Time Delay Estimation in Sensor Networks*', in Proceedings of IEEE International Conference on Signal Acquisition and Processing (ICSAP 2010), Singapore, February 26-28, 2010.
- 94) A. A. Tarkhan, F. Farzaneh, B. H. Khalaj, '*Efficient Suboptimal Transmit Antenna selection for MIMO Relay Channels*', in Proceedings of International Symposium on Computer Networks and Distributed Systems, Tehran, Iran, February 23-24, 2011.
- 95) A. A. Tarkhan, F. Farzaneh, B. H. Khalaj, '*Mutual Coupling and Correlation Based Suboptimal Antenna Subset Selection in MIMO Systems*', in Proceedings of International Symposium on Computer Networks and Distributed Systems, Tehran, Iran, February 23-24, 2011.
- 96) H. Ghasvari, B. H. Khalaj, M. A. Raayatpanah, '*Robust Minimum-Cost Multicast with Network Coding*', in Proceedings of 18th International Conference on Telecommunications, Ayia Napa, Cyprus, May 8-11, 2011.
- 97) Shahin Vakilineia, Babak H. Khalaj, Mohammad Hassan Lotfi Froushani, '*QoS-Aware Water-Filling for Real-Time Transmission in OFDMA Systems*', in Proceedings of 18th International Conference on Telecommunications, Ayia Napa, Cyprus, May 8-11, 2011.
- 98) M. H. Lotfi Froushani, B. H. Khalaj, S. Vakilineia, '*A Novel Approach to Incentive-Based Cooperation in Wireless Ad Hoc Networks*', in Proceedings of 18th International Conference on Telecommunications, Ayia Napa, Cyprus, May 8-11, 2011.
- 99) Hamidreza Aghasi, Morteza Hashemi, Babak Hossein Khalaj, '*Source localization Through Adaptive Signal Attenuation Model and Time Delay Estimation*', in Proceedings of 18th International Conference on Telecommunications, Ayia Napa, Cyprus, May 8-11, 2011.
- 100) Alireza Louni and Babak Hossein Khalaj, '*Distributed Beam-Forming and Power Control in Multi-Relay Underlay Cognitive Radio Networks: A Game-Theoretical Approach*', to appear in Proceedings of 6th International ICST Conference on Cognitive Radio Oriented Wireless Networks, CrownCom 2011, Osaka, Japan, June 1-3, 2011.
- 101) N. Omidvar, B. H. Khalaj. '*A Game Theoretic Approach for Power Allocation in the Downlink of Cognitive Radio Networks*', to appear in Proceedings of IEEE International Workshop on Computer-Aided Modeling Analysis and Design of Communication Links and Networks (IEEE CAMAD), Kyoto, Japan, June 10-11, 2011.
- 102) Ehsan Pasandshanjani, Babak H. Khalaj, and Mahyar Shirvani Moghaddam, '*A New Cost Function for Game Theoretic SIR-Based Power Control Algorithms*' in Proceedings of

- IEEE 7th International Wireless Communications and Mobile Computing Conference (IEEE IWCMC), Istanbul, Turkey, July 5-8, 2011.
- 103) Mahyar Shirvani Moghaddam and Babak Hossein Khalaj, and Ehsan PasandShanjani, '*Cross-Layer Rateless Coding over Wireless Relay Networks*', in Proceedings of IEEE 7th International Wireless Communications and Mobile Computing Conference (IEEE IWCMC), Istanbul, Turkey, July 5-8, 2011.
- 104) Mohsen Karimzadeh and Babak Hossein Khalaj, '*Novel Power Control Algorithms for Underlay Cognitive Radio Networks*', in Proceedings of 21st International Conference on Systems Engineering (ICSENG 2011), Las Vegas, USA, August 16-18, 2011.
- 105) Seyed Pooya Shariatpanahi, Babak Hossein Khalaj, '*Analysis of Quantization Effects on Performance of Hierarchical Cooperation Schemes in Ad-Hoc Wireless Networks*', in Proceedings of IEEE Local Computer Networks (IEEE LCN 2011), Bonn, Germany, October 4-7, 2011.
- 106) Shahruz Sharifi, Babak Hossein Khalaj, '*SINR Analysis of Time and Frequency Offsets in OFDM Systems*', in Proceedings of 11th IEEE International Workshop on Wireless Local Networks (IEEE WLN 2011), Bonn, Germany, October 4-7, 2011.
- 107) Alireza Louni and Babak Hossein Khalaj, '*Joint Power Control and Pricing for Relay-Based Underlay Cognitive Radio Networks*', in Proceedings of IEEE International Symposium on Wireless Communication Systems (ISWCS 2011), Aachen, Germany, November 6-9, 2011.
-
- 108) Seyed Pouya Ehsani, Hojjat Seyed Mousavi, Babak H. Khalaj, '*Chromosome Image Contrast Enhancement Using Adaptive, Iterative Histogram Matching*', in Proceedings of Machine Vision and Image Processing (MVIP), Tehran, Iran, November 16-17, 2011.
- 109) Mohammad Ali Raayatpanah, Hassan Salehi Fathabadi, Babak Khalaj, Salman Khodayifar, 'Minimum-cost Multicast over Coded Packet Networks with Uncertain Rate Demands', in Proc. of ECCO 2012 – 25th Conference of European Chapter on Combinatorial Optimization, Antalya, Turkey, April 26 – 28, 2012.
- 110) Shahin Vakilinea, H. Karimi Khouzani, Babak H. Khalaj, '*Energy Efficient QoS-aware Resource Allocation in OFDMA Systems*', in Proceedings of IEEE Canadian Conference on Electrical and Computer Engineering, Montreal, Canada, April 29-May 2, 2012.
- 111) Seyed Pouya Ehsani, Hojjat Seyed Mousavi, Babak H. Khalaj, '*Iterative Histogram Matching Algorithm for Chromosome Image Enhancement Based on Statistical Moments*', in Proceedings of IEEE International Symposium on Biomedical Imaging, Barcelona, Spain, May 2-5, 2012.
- 112) Seyed Hamed Rastegar, Shahin Vakilinea, Babak Hossein Khalaj, '*Rate Adaptation and Power Allocation for Time-Correlated MISO Rayleigh Fading Channel with Delay-Limited HARQ*', in Proceedings of IEEE International Conference on Communications (IEEE ICC), Ottawa, Canada, June 10-15, 2012.
- 113) Hamed Shah-Mansouri, Babak Hossein Khalaj, and Seyed Pooya Shariatpanahi, '*On the Route Discovery Rate of Flooding in Large Wireless Networks*', in Proceedings of IEEE PIMRC 2012, Sydney, Australia, September 9-12, 2012.
- 114) Naeimeh Omidvar, Babak H. Khalaj, '*A Game-Theoretic Approach for Joint Channel and Power Allocation in Downlink of Cellular Cognitive Radio Networks*', in Proceedings of IEEE PIMRC 2012, Sydney, Australia, September 9-12, 2012.

- 115) Mohammad Javad Salehi, Babak H. Khalaj, Marcos Katz, Ghazal Fazelnia, Parishad Karimi, '*Mobile Cloud Management: A New Framework*', in IEEE International Workshop on Internet-of-Things Communications and Networking in Proceedings of IEEE PIMRC 2012, Sydney, Australia, September 9-12, 2012.
- 116) Sahand Golnarian, Babak H. Khalaj, '*An Incentive Mechanism in Smart Networks Using Ascending Reverse Auction*', in IEEE International Workshop on Internet-of-Things Communications and Networking in Proceedings of IEEE PIMRC 2012, Sydney, Australia, September 9-12, 2012.
- 117) Mohammad Javad Salehi, Babak H. Khalaj, Marcos Katz, Ghazal Fazelnia, Parishad Karimi, Javier Del Ser, '*Mobile Clouds: How to Find Opportunities*', in Proceedings of IEEE International Workshop on Computer-Aided Modeling Analysis and Design of Communication Links and Networks (IEEE CAMAD) 2012, Barcelona, Spain, September 17-19, 2012.
- 118) Fatemeh Rezaei, Babak H. Khalaj, "*Distributed Human Tracking in Smart Camera Networks by Adaptive Particle Filtering and Data Fusion*", in Proceedings of 6th ACM/IEEE International Conference on Distributed Smart Cameras (ICDSC 2012), Hong Kong, Oct 30 - Nov 2, 2012.
- 119) Adrian Schad, Babak Khalaj, Marius Pesavento, "*Precoding in Relay Networks with Frequency Selective Channels*", in Proceedings of Asilomar Conference on Signals, Systems, and Computers, Pacific Grove, CA, Nov 4-7, 2012.
- 120) S Haddadi, H Behroozi, BH Khalaj, '*Power Allocation in Coordinated Multi-cell Networks using Stackelberg Game*', Sixth International Symposium on Telecommunications (IST), Tehran, Iran, 2012.
- 121) Mehrad Kiamari, Hossein Pilaram, Babak Hossein Khalaj, '*Joint MIMO Filter-and-Forward Relay and Base Station Post-Processing for Uplink CoMP Reception with Frequency-Selective Channels*', in Proceedings of IEEE Vehicular Technology Conference (IEEE VTC), Dresden, Germany, June 2-5, 2013.
- 122) H. S. Mousavi, B. Khalighinejad, B. H. Khalaj, "*Capacity maximization in MIMO vehicular communication using a novel antenna selection algorithm*", in Proceedings of IEEE 9th International Wireless Communications and Mobile Computing Conference (IEEE IWCMC), 1-5 July 2013, Sardinia, Italy.
- 123) Hamidreza Bagheri; Mohammad Javad Salehi; Bidushi Barua; Babak Hossein Khalaj; Marcos D Katz , "*Energy and Delay Efficient Strategies for Content Distribution Using Mobile-to-Mobile Cooperation*", in Proceedings of IFIP Wireless Days 2013, 13-15 Nov 2013, Valencia, Spain.
- 124) Seyed Mohammad Asghari Pari; Mohammad Noormohammadpour; Mohammad Javad Salehi; Babak Hossein Khalaj; Hamidreza Bagheri; Marcos Katz, "*A Self-Organizing Approach to Malicious Detection in Leader-Based Mobile Ad-hoc Networks*", in Proceedings of IFIP Wireless Days 2013, 13-15 Nov 2013, Valencia, Spain.
- 125) Hamidreza Bagheri; Mohammad Javad Salehi; Babak Hossein Khalaj; Marcos D Katz, "*An Energy-Efficient Leader Selection Algorithm for Cooperative Mobile Clouds*", in Proceedings of IFIP Wireless Days 2013, 13-15 Nov 2013, Valencia, Spain.
- 126) Seyed Mohammad Asghari Pari; Mohammad Javad Salehi; Mohammad Noormohammadpour; Babak Hossein Khalaj; Hamidreza Bagheri; Marcos Katz, "*An Incentive-Based Leader Selection Mechanism for Mobile Ad-hoc Networks (MANETs)*", in Proceedings of IFIP Wireless Days 2013, 13-15 Nov 2013, Valencia, Spain.

- 127) Elnaz Lashgari, Mehran Jahed, Babak Hossein Khalaj, '*Manifold Learning for ECG Arrhythmia Recognition*', in Proceedings of Iranian Conference on Biomedical Engineering, 18-20 December, 2013, Tehran, Iran.
- 128) Mohammad J. Salehi, Mehrooeh Salehi, Hamidreza Bagheri, Babak H. Khalaj, Marcos Katz and Pavel Loskot, '*Exploiting Relative Consensus Techniques in Future Advanced Communications Networks in the Presence of Failures*', in Proceedings of International Conference on Electrical Engineering and Applications, 4-6 April 2014, Athens, Greece.
- 129) S Minaee, M Fotouhi, BH Khalaj, "A geometric approach to fully automatic chromosome segmentation", in Proceedings of IEEE Signal Processing in Medicine and Biology Symposium (SPMB), 2014.
- 130) Seyed Pooya Shariatpanahi, Babak Hossein Khalaj, Hamed Shah-Mansouri, '*Achievable Throughput of Wireless Networks with Local Traffic*', in Proceedings of IEEE WCNC 2014, April 6-9, 2014, Istanbul, Turkey.
- 131) Seyed Pooya Shariatpanahi, Hamed Shah-Mansouri, Babak Hossein Khalaj, '*Caching Gain in Wireless Networks with Fading: A Multi-User Diversity Perspective*', in Proceedings of IEEE WCNC 2014, April 6-9, 2014, Istanbul, Turkey.
- 132) M. M. Khalili, L. Gao, J. Huang, b. H. Khalaj, '*Incentive Design and Market Evolution of Mobile User-Provided Networks*', in Proceedings of Smart Data Pricing Workshop of IEEE Infocomm 2015, 26 April-1 May, 2015. Hong Kong.
- 133) M. Fozi, B. H. Khalaj, M. Pesavento "*Differentially Encoded Blind Multicell Multiuser Massive MIMO*", in Proceedings of IEEE ICC Workshop on 5G & Beyond, Enabling Technologies and Applications, June 8-12, 2015, London, UK.
- 134) A. Vahabpour, B. H. Khalaj, "*Graph-Based Altruistic Games for Interference Mitigation in Femtocell Networks*", in Proceedings of IEEE PIMRC 2015, 30 Aug – 2 Sept, 2015, Hong Kong.
- 135) P. Shariatpanahi, A. Motahari, B. H. Khalaj, "*Content Delivery via Multi-Server Coded Caching in Linear Networks*", in Proceedings of IEEE ITW 2015, 11-15 Oct 2015, Jeju Island, Korea.
- 136) Roozbeh Mohammadian, Arash Amini, Babak H. Khalaj, and Naeimeh Omidvar, "*MIMO-OFDM Pilot Symbol Design For Sparse Channel Estimation*", in Proceedings of Asia-Pacific Signal and Information Processing Association Annual Summit and Conference, 16-19 December, 2015, Hong Kong.
- 137) F. Rezaei, B. H. Khalaj, M. Xiao, M. Skoglund, "*Delay and Stability Analysis of Caching in Heterogeneous Cellular Networks*", in Proceedings of 23rd International Conference on Telecommunications, Thessaloniki, Greece, May 16-18, 2016.
- 138) Borna Kananian, Mohammad A. Maddah-Ali, Seyed Pooya Shariatpanahi, Babak H. Khalaj, "*Collaboration Alignment in Distributed Interference Management in Uplink Cellular Systems*", in Proceedings of IEEE International Conference on Information Theory, Barcelona, Spain, June 10-15, 2016.
- 139) Mehdi Setayesh, Hamid Behroozi, and Babak H. Khalaj, "*On distributed transmission of remote correlated Gaussian sources over an orthogonal Gaussian multiple-access channel*", in Proceedings of 8th International Symposium on Telecommunications (IST), Tehran, Iran, September 27-28, 2016.
- 140) Leila Enamipour, Zolfa Zeinalpour-Yazdi, and Babak Hossein Khalaj, "*Performance analysis of the clustered caching wireless networks considering stochastic geometry approach*", in Proceedings of 8th International Symposium on Telecommunications (IST), Tehran, Iran, September 27-28, 2016.

- 141) Mohammad Ali Tahmasbi Nejad, Seyed Pooya Shariatpanahi, and Babak Hossein Khalaj, "*On Storage Allocation in Cache-Enabled Interference Channels with Mixed CSIT*", in Proceedings of IEEE International Conference on Communications, Information Theory, Paris, France, May 21-25, 2017.
- 142) Borna Kananian, Mohammad A. Maddah-Ali, Seyed Pooya Shariatpanahi, Babak H. Khalaj, "*Characterization of Degrees of Freedom versus Receivers Backhaul Load in K-User Interference Channel*", in Proceedings of IEEE International Symposium on Information Theory, Aachen, Germany, June 25-30, 2017.
- 143) Seyed Pooya Shariatpanahi, Giuseppe Caire, Babak H. Khalaj, "*Multi-Antenna Coded Caching*", in Proceedings of IEEE International Symposium on Information Theory, Aachen, Germany, June 25-30, 2017.
- 144) Antti Tolli, Seyed Pooya Shariatpanahi, Jarkko Kaleva and Babak Khalaj, "*Multicast Mode Selection for Multi-antenna Coded Caching*", in Proceedings of IEEE International Symposium on Modeling and Optimization in Mobile, Ad Hoc and Wireless Networks (WiOpt 2018), Shanghai, China, May 7-11, 2018.
- 145) Mohammad Javad Salehi, Seyed Abolfazl Motahari, Babak Hossein Khalaj, Seyed Pooya Shariatpanahi, "*Content Delivery Networks: Interactions Between Storage/Delay/Cost*", in Proceedings of IEEE IWCIT 2018, Tehran, Iran.
- 146) Antti Tolli, Seyed Pooya Shariatpanahi, Jarkko Kaleva and Babak Khalaj, "*Multicast Beamformer Design for Coded Caching*", in Proceedings of IEEE International Symposium on Information Theory, Colorado, USA, June 17-22, 2018.