



Jin Li

Redmond, WA 98052, USA
Tel. +1 (425) 703-8451
Email: lijn71@hotmail.com

Career Highlights

Research Manager & Principal Researcher, Microsoft Research, Redmond, WA.

IEEE Fellow

Microsoft Gold Star Service Award x4

(1999: for contribution in founding Microsoft Research Asia.

2001: for contribution to scalable audio compression.

2006: for contribution to P2P VoD and P2P folder sharing

2010: for contribution to Deduplication in Windows Server.)

Broad and in-depth contribution to a wide array of strategic Microsoft

Products: WMA9 Lossless (Reversible Transform), Live Messenger (NAT traversal, sharing folder), Live Mesh (NAT traversal), Windows 7 (Teredo), Lync (Bandwidth Estimation & Management, FEC, Media Gateway, DiffServ, QoS monitoring), Windows 8 (RemoteFX for WAN, BranchCache), Windows 8 server (Primary Data Deduplication), Azure (Local Reconstruction Coding), Bing (Global Traffic Management, SSD object store), Xbox Live (Low Delay Message Protocol).

Extensive contribution to multimedia compression standard: JPEG 2000

(sub-bitplane scanning and rate-distortion optimization, visual weighting and progressive visual coding, JPEG Interactive Protocol), MPEG 4 (arbitrary shape wavelet transform), H.264 SVC (motion compensated temporal filtering).

59 issued US patents.

IEEE ComSoc Distinguished Lecturer, 2011-2012.

Extensive Community Service and Organization Committee Involvement

e.g., ICCCN 2008 Panel Chair.

GLOBECOM 2010 Plenary Panel Chair.

ICME 2010 Lead TPC Chair.

ICCCN 2011 Associate General Chair.

ACM MM 2011 Workshop Chair.

CCNC 2013 TPC Chair

Associate Editors/Guest Editors: IEEE Trans. On Multimedia, Journal of Selected Area of Communication, Journal of Visual Communication and Image Representation, P2P networking and applications, Journal of Communications

Ph.D. with honor in Electrical Engineering, Tsinghua University, 1994.

Affiliated Professor, Tsinghua University, from 2000

Completed in 3 year the 5-year undergraduate program in Tsinghua University (1987-1990)

Demoed to Xiaoping Deng in 1984, lead to the quote “Computer literacy should start with children” (计算机普及要从娃娃抓起) widely cited in Chinese press.

Contact & Personal Information

Tel. +1 (425) 270-8263
Email: lijn71@hotmail.com
Citizenship: USA

Professional experience

2001.1 – Current Microsoft Research Redmond, WA
Principal Researcher and Research Manager, Compression, Communication and Storage Group

Build a multi-disciplinary research team, with broad and extensive contribution to Microsoft product lines

- Bing (Global Traffic Management): developed a set of tools to evaluate global data center performance, select new potential data center for deployment, and direct client traffic to the data center with best performance.
- Bing (Pegasus SSD): developed high performance SSD based object store solution with tight memory footprint and intelligent cache management strategy.
- Azure (Erasure Coding based Storage): developed advanced erasure coding algorithm, failure recovery and storage performance tuning tool that provides cost effective, reliable and high performance storage cluster. The work reduces the data replication rate in Windows Azure Storage from 3x to 1.33x, results in hundreds of millions dollars saving per year, and a capital and operating cost advantage for Microsoft Azure. Please refer to <http://research.microsoft.com/en-us/news/features/erasurecoding-090512.aspx> for details.
- Windows 8 server (Primary Data Deduplication): architected the primary data deduplication feature in windows 8 server. Please refer to: <http://research.microsoft.com/en-us/news/features/deduplication-101311.aspx> for details.
- Windows 8 (RemoteFX for WAN): developed RemoteFX for WAN, which uses a new UDP/FEC transport. This results in a very large positive shift in customer and analyst reception of RDP and its appropriateness for Wan use (which was previously a key product gap).
- Windows 8 (BranchCache): developed the content aware chunking algorithm for Windows 8 BranchCache, a serverless P2P sharing protocol.
- Live Messenger/Live Mesh/Windows 7 (NAT traversal): developed an algorithm that can intelligently guess the port number used by a computer in a P2P communication behind a symmetric NAT. It raises NAT traversal success rate from 60% to 85% across Microsoft product line.
- Xbox Live (Low Delay Message Protocol): developed an adaptive erasure correction protocol that improves the responsiveness of Xbox Live games.
- Lync (Bandwidth Estimation & Management): responsible for Lync's bandwidth management protocol that will intelligently manage the bandwidth of an audio/video conferencing session under complex network conditions.
- Lync (FEC): developed forward error correction (FEC) for Lync to

protect against network packet loss in a video conferencing session.

- Lync (QoS monitoring): architect the Quality of Service monitoring and diagnosis platform for Lync.
- WMA9 Lossless (Reversible Transform): developed reversible integer-to-integer transform that enables WMA 9 Lossless codec

1999.4 – 2000.12

Microsoft

Beijing, China

Researcher/Project Leader, Microsoft Research Asia

- Invented motion compensated temporal filtering, in which wavelet decomposition in the temporal direction is applied in hierarchical B-frame fashion. This technology integrates motion compensation into the temporal wavelet filtering direction, and is fundamental to maintaining high quality while scaling video over a large range of bit rates. It is incorporated to H.264/SVC.
- Developed Vmedia, a protocol that breaks scalable coded JPEG 2000 image into small pieces, and streams the pieces over the Internet according to the resolution and region that the user is viewing. It initiated the JPIP standards activity, which became part 9 of the JPEG 2000 suite of standards.
- Pioneered multi-view video coding and depth plus color video coding, leading up to the H.264/MVC standard

1996.11 – 1999.4 Sharp Laboratories of America Camas, WA

Member of Technical Staff, Digital Video Department

- Represent Sharp in MPEG4 and JPEG 2000 standard activity
- Invented a visual weighting tool and progressive visual coding tool for JPEG 2000. Both tools are crucial to boost the subjective quality of image.
- Developed the arbitrary shape wavelet transform for wavelet coding of non-rectangular objects in MPEG4

1994.8 – 1996.11

University of Southern California

Los Angeles, CA

Research Associate, Integrated Media Systems Center

- Inventing sub-bitplane scanning, a key ingredient in modern image codecs, and was incorporated into JPEG 2000. Previously, scalable coding scanned by bitplane. Dr. Li showed that additional coding gain can be realized by sequencing the transmission in sub-bitplanes, according to context, using a rate-distortion criterion.

Professional memberships & activities

IEEE Fellow

Associate Editor/Guest Editor: IEEE Trans. On Multimedia, Journal of Selected Area of Communication, Journal of Visual Communication and Image Representation, P2P networking and applications, Journal of Communications

Organization Committee Members and TPCs of Major International Conferences, such as:

. ICCCN 2008 Panel Chair.
 GLOBECOM 2010 Plenary Panel Chair.
 ICME 2010 Lead Program Chair.
 ICCCN 2011 Associate General Chair.
 ACM MM 2011 Workshop Chair.
 CCNC 2013 TPC Chair

Honors and Awards

Gold Star service award x4 (1999, 2001, 2006, 2010), Microsoft
 (1999: for contribution in founding Microsoft Research Asia.
 2001: for contribution to scalable audio compression.
 2006: for contribution to P2P VoD and P2P folder sharing
 2010: for contribution to Deduplication in Windows Server.)
 Microsoft Member Bench Program, 2007
 Best paper award, ICME 2009.
 The Young Investigator Award from SPIE/IS&T, 1998
 The Best Ph.D. Thesis Award, Tsinghua University, 1994
 Various prestigious scholarships of Tsinghua Univ. during year 1987-1994, such
 as “Tsinghua Ten Stars”, the Supreme Guanghua Scholarship(1993), the
 Supreme Scholarship of Tsinghua (1991), the Best M.S. Thesis Award (1991),
 etc..
 Championship (ranked 1st) of National Youth Computer Programming
 Competition, China, 1987.

Education

Mar. 1991 - Jun. 1994	Tsinghua University	Beijing, China
Ph.D. in Electrical Engineering, graduated with honor		
Thesis advisor: Prof. Xinggang Lin and Prof. Youshou Wu		
Sep. 1990 - Mar. 1991	Tsinghua University	Beijing, China
M.S. in Electrical Engineering, graduated with honor		
Thesis advisor: Prof. Rensheng Liu		
Sep. 1987 - Sep. 1990	Tsinghua University	Beijing, China
B.S. in Electrical Engineering, graduated with honor		
(Complete 5 year undergraduate program with only 3 years.)		

Patents Issued

- [1] J. Li and S. Lei, “[Arbitrary shape wavelet transform with phase alignment](#)”, US 6,233,357. [Provisional filed Jul. 14, 1997, US1997000052450, Issued May. 15, 2001, cited by [18](#)]
- [2] J. Li, “[Method of visual progressive coding](#)”, US6,327,392, [Filed Jan. 28, 1999, Issued Dec. 4, 2001, cited by [58](#)]
- [3] S. Lei and J. Li, “[Quad-tree embedded image compression and decompression method and apparatus](#)”, US6,356,665, [Filed Dec. 9, 1998, Issued Mar. 12, 2002, cited by [15](#)]
- [4] J. Li and S. Lei, “[Dynamic management of embedded coded images in a](#)

- [digital storage device](#)”, US6,463,177, [Filed Nov. 4, 1998, Issued Oct. 8, 2002, cited by [11](#)]
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 - [6] W. Zeng, J. Li, and S. Lei, “[Joint coding method for images and videos with multiple arbitrarily shaped segments or objects](#)”, US6,553,148, [Filed May. 21, 2001, Issued Apr. 22, 2003, cited by [24](#)]
 - [7] J. Li, Y. Zhang, Y. Wu and L. Luo, “[Methods and arrangements for compressing image-based rendering \(IBR\) data using alignment and 3D wavelet transform techniques](#)”, US6,567,081, [Filed Jun. 20, 2001, Issued May. 20, 2003, cited by [22](#)]
 - [8] J. Li and S. Lei, “[Embedded image coder with rate-distortion optimization](#)”, US6,625,321, [Filed Jan. 30, 1997, Issued Sept. 23, 2003, cited by [57](#)]
 - [9] C. Zhang and J. Li, “[Methods and arrangements for compressing image based rendering data using multiple reference frame prediction techniques that support just-in-time rendering of an image](#)”, US 6,693,964 [Filed Mar. 24, 2000, Issued Feb. 17, 2004, cited: [22](#)]
 - [10] J. Li and J. Zhou, “[System and method for delivery of dynamically scalable audio/video content over a network](#)”, US 6,789,123 [Filed Dec. 28, 2001, Issued Sept. 7, 2004, cited by [17](#)]
 - [11] J. Li, H. Sun, H. Li, Q. Zhang and X. Lin, “[Methods and systems for providing random access to structured media content](#)”, US 6,807, 550 [Filed Dec. 1, 1999, Issued Oct. 19, 2004, cited by [7](#)]
 - [12] C. Zhang, J. Li and Y. Wu, “[Rebinning methods and arrangements for use in compressing image-based rendering \(IBR\) data](#)”, US 6,959,120 [filed Oct. 27, 2000, Issued Oct. 25, 2005, cited by [4](#)]
 - [13] C. Zhang and J. Li, “[Methods and arrangements for handling concentric mosaic image data](#)”, US 6,993,074 [filed Mar. 19, 2001, Issued Jan. 31, 2006, cited by [1](#)]
 - [14] C. Zhang, J. Li and Y. Wu, “[Rebinning methods and arrangements for use in compressing image-based rendering \(IBR\) data](#)”, US 6,996,294, [filed Oct. 18, 2004, Issued Feb. 7, 2006]
 - [15] C. Zhang, J. Li and Y. Wu, “[Rebinning methods and arrangements for use in compressing image-based rendering \(IBR\) data](#)”, US 7,065,260, [filed Oct. 13, 2004, Issued June. 20, 2006]
 - [16] C. Zhang, J. Li and Y. Wu, “[Rebinning methods and arrangements for use in compressing image-based rendering \(IBR\) data](#)”, US 7,110,617, [filed Oct. 18, 2004, Issued Sept. 19, 2006]
 - [17] J. Li, “[System and method for embedded audio coding with implicit auditory masking](#)”, US 7,110,941, [filed Mar. 28, 2002, Issued Sept. 19, 2006, cited by [5](#)]
 - [18] J. Li, “[System and method for receiver-driven streaming in a peer-to-peer network](#)”, US 7,174,385, [filed Sept. 28, 2004, Issued Feb. 6, 2007, cited by [39](#)]
 - [19] J. Li, H. Sun, H. Li, Q. Zhang, and X. Ling, “[Methods and systems for providing random access to structured media content](#)”, US 7,236,988, [filed Apr. 30, 2004, Issued June. 6, 2007, cited by [7](#)] (related to JPIP protocol in JPEG 2000)
 - [20] J. Li “[System and method for a media codec employing a reversible transform obtained via matrix lifting](#)”, US 7,315,822, [filed Feb. 20, 2004, Issued Jan. 1, 2008, cited by [5](#)] (related to MPEG-4 ALS)

- [21] J. Li “[Progressive to lossless embedded audio coder \(PLEAC\) with multiple factorization reversible transform](#)”, US 7,395,210, [filed Nov. 21, 2002, Issued Jul. 1, 2008, cited by 3]
- [22] J. Li “[Efficient implementation of reed-solomon erasure resilient codes in high-rate applications](#)”, US 7,418,649, [filed Mar. 15, 2005, Issued Aug. 26, 2008]
- [23] J. Li “[Serverless peer-to-peer multi-party real-time audio communication system and method](#)”, US 7,460,495, [filed Feb. 23, 2005, Issued Dec. 2, 2008, cited by 1]
- [24] J. Li, H. Sun, H. Li, Q. Zhang, and X. Ling, “[Methods and systems for providing random access to structured media content](#)”, US 7,490,104, [filed May. 10, 2004, issued Feb. 10, 2009] (related to JPIP protocol in JPEG 2000)
- [25] J. Li, “[System and method for seamless multiplexing of embedded bitstreams](#)”, US 7,496,234, [filed Jun. 20, 2003, issued Feb. 24, 2009, cited by 2]
- [26] J. Li and Y. Cui, “[Random access read/write media format for an on-demand distributed streaming system](#)”, US 7,536,470, [filed Mar. 12, 2005, issued May. 19, 2009, cited by 4]
- [27] J. Li, “[Coordination of client-driven media streaming from a cluster of non-cooperating peers in a peer-to-peer network](#)”, US 7,539,767, [filed Feb. 5, 2007, issued May. 26, 2009]
- [28] J. Li and C. Zhang, “[Distributed hosting of web content using partial replication](#)”, US 7,546,342, [filed May. 14, 2004, issued Jun. 9, 2009, cited by 8]
- [29] J. Li, “[Metadata structures for mass P2P file sharing](#)”, US 7,558,797, [filed Jun. 30, 2006, issued Jul. 7, 2009, cited by 1]
- [30] J. Li, C. Zhang and P. A. Chou, “[Efficient one-to-many content distribution in a peer-to-peer computer network](#)”, US 7,593,333, [Filed Jul. 7, 2004, issued Sept. 22, 2009, cited by 8]
- [31] J. Li, “[On-demand file transfers for mass P2P file sharing](#)”, US 7,613,770 [filed Jun. 30, 2006, issued Nov. 3, 2009, cited by 3]
- [32] J. Li, S. Sengupta, M. Ponc, M. Chen, P. A. Chou, “[Rate-controllable peer-to-peer data stream routing](#)”, US 7,636,789 [filed Nov. 27, 2007, issued Dec. 22, 2009]
- [33] J. Li, and Y. Cui, “[Digital rights management scheme for an on-demand distributed streaming system](#)”, US 7,639,805 [filed Mar. 12, 2005, issued Dec. 29, 2009, cited by 1]
- [34] D. Teodosiu, P. A. Chou, A. Heron, C. Huang, “[Scheduling connections between peers in a peer-to-peer file sharing environment](#)”, US 7,643,491 [filed Dec. 16, 2005, issued Jan. 5, 2010]
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- [36] P. Y. Simard, P. A. Viola, and J. Li, “[Credit-based peer-to-peer storage](#)”, US 7,707,248, [filed Jun. 25, 2007, issued Apr. 27, 2010]
- [37] S. Liu, S. Sengupta, M. Chiang, J. Li and P. A. Chou, “[Models for routing tree selection in peer-to-peer communications](#)”, US 7,738,406, [filed Oct. 8, 2008, Issued Jun. 15, 2010]
- [38] J. Li and Y. Sun, “[Distributed source coding with context](#)”, US 7,743,309, [filed Mar. 17, 2006, Issued Jun. 22, 2010]
- [39] J. Li “[Receiver driven streaming in a peer-to-peer network](#)”, US 7,752,327, [filed Feb. 5, 2007, Issued Jul. 6, 2010]
- [40] J. Li, J. Johnston, W. Y. Chan, “[Perceptual, scalable audio](#)”

- [compression](#)”, US Patent 7,835,904, [filed Mar. 3, 2006, Issued Nov. 16, 2010]
- [41] J. Li, “[Seamless multiplexing of embedded bitstreams](#)”, US 7,840,079, [filed Jan. 5, 2009, Issued Nov. 23, 2010]
 - [42] J. Li and L. He, “[Automated NAT traversal for peer-to-peer networks](#)”, US 7,912,046. [filed Feb. 11, 2005, Issued, Mar. 22, 2011]
 - [43] C. Huang, M. Chen and J. Li, “[Multiple protection group codes having maximally recoverable property](#)”, US Patent 7,904,782 [filed Mar. 9, 2007, issued Mar. 8, 2011]
 - [44] C. Huang, M. Chen, and J. Li, “[Erasure resilient codes having multiple protection groups](#)”, US Patent 7,930,611 [filed Mar. 9, 2007, issued Apr. 19, 2011]
 - [45] J. Li, D. Teodosiu, P. A. Chou, C. Huang, E. Schwartz, J. T. Spivey, Y. Wu, A. K. Heron, “[Content synchronization in a file sharing environment](#)”, US Patent 7,953,785 [filed Jun. 2006, issued May. 31, 2011]
 - [46] J. Li, L. He and J. Liang, “[Distributed data storage using erasure resilient coding](#)”, US Patent 8,051,362 [filed Jun. 15, 2007, Issued Nov. 1, 2011]
 - [47] J. Li, S. Sengupta and V. Vasudevan, “[Proximity guided data discovery](#)”, US Patent 8,073,978 [filed Jun. 24, 2009, Issued Dec. 6, 2011]
 - [48] J. Wang, C. Huang, S. Sengupta, and J. Li, “[ISP-friendly rate allocation for P2P applications](#)”, US Patent 8,082,358 [filed Sep. 30, 2008, Issued Dec. 20, 2011]
 - [49] M. Chen, C. Huang, and J. Li, “[Optimizing XOR-based codes](#)”, US Patent 8,209,577 [filed Dec. 20, 2007, Issued Jun. 26, 2012]
 - [50] Y. -Z. Huang, M. Jain, J. Li, S. Mehrotra, S. Sen, S. Sengupta, “[Optimized transport protocol for delay-sensitive data](#)”, US Patent 8,228,800, [filed Feb. 3, 2009, Issued Jul. 24, 2012]
 - [51] C. Huitema, W. A. S. Buxton, J. E. Paff, Z. Liu, R. Hedge, Z. Zhang, K. Quinn, J. Li, M. Pahud, “[Ambulatory presence features](#)”, US Patent 8,253,774, [filed Mar. 30, 2009, Issued Aug. 28, 2012]
 - [52] M. Chen, M. Ponc, S. Sengupta, J. Li, and P. A. Chou, “[Rate-controllable peer-to-peer data stream routing](#)”, US Patent 8,260,951, [filed Nov. 4, 2009, Issued Sep. 4, 2012]
 - [53] S. Sengupta, M. Chen, J. Li, P. A. Chou, M. Ponc, “[Multi-rate peer-assisted data streaming](#)”, US Patent 8,260,952, [filed Jan. 31, 2008, Issued Sep. 4, 2012]
 - [54] J. Li, J-H. Lin, Aravind Krishnamachari, “[Cuckoo hashing to store beacon reference data](#)”, US Patent 8,305,271 [filed Mar. 17, 2010, Issued Nov. 6, 2012]
 - [55] C. Huang, N. Holt, A. Greenberg, and J. Li, “Using DNS reflection to measure network performance”, US Patent 8,326,980 [filed Apr. 28, 2010, Issued Dec. 4, 2012]
 - [56] Z. Zhang, X.-D. Huang, J. Li, R. Hedge, K. Quinn, M. Pahud, J. Dalal, “[Force-feedback within telepresence](#)”, US Patent 8,332,755, [filed May. 27, 2009, issued Dec. 11, 2012]
 - [57] J. Li, C. Huang, Y. Wang, R. Yang, “[Quality of service \(QoS\) based systems, networks, and advisors](#)”, US Patent 8,335,163, [filed Oct. 27, 2009, issued Dec. 18, 2012]
 - [58] J. Li and Y. Cui, “[Digital right management scheme for an on-demand distributed streaming system](#)”, US Patent 8,375,456 [filed Nov. 12, 2009,

Issued, Feb. 12, 2013]

- [59] J. Li, H. Khan, G-W. Shieh, M. Jain, "[Estimating communication conditions](#)", US Patent 8,441,930 [filed Dec. 21, 2009, Issued May. 14, 2013]

Journal Papers

- [1] H. Shen, Z. Li, Y. Lin and J. Li, "[SocialTube: P2P-assisted Video Sharing in Online Social Networks](#)", IEEE Trans. On Parallel and Distributed Systems, May. 29, 2013.
- [2] C. Huang, M. Chen and J. Li, "[Pyramid Codes: Flexible Schemes to Trade Space for Access Efficiency in Reliable Data Storage Systems](#)," ACM Transactions on Storage, 9(1), March, 2013.
- [3] H. Shen, Z. Li and J. Li, "[A DHT-aided chunk-driven overlay for scalable and efficient peer-to-peer live streaming](#)", IEEE Trans. On Transactions on Parallel and Distributed Systems, Issue: 99, Oct. 22, 2012.
- [4] X. Chen, M. Chen, B. Li, Y. Zhao, Y. Wu and J. Li, "[Celebrity: a low-delay multi-party conferencing solution](#)", IEEE Journal on Selected Areas in Communications - 2012 Special Issue on Emerging Technologies in Communications.
- [5] M. Chen, M. Ponec, S. Sengupta, J. Li, and P. A. Chou, "[Utility Maximization in Peer-to-Peer Systems with Applications to Video Conferencing](#)", IEEE/ACM Transactions on Networking, vol. 20, no. 6, Dec. 2012.
- [6] M. Ponec, S. Sengupta, M. Chen, J. Li, and P. A. Chou, "[Optimizing Multi-rate Peer-to-Peer Video Conferencing Applications](#)", IEEE Transactions on Multimedia, vol. 13, no. 5, Oct. 2011.
- [7] S. Sengupta, S. Liu, M. Chen, M. Chiang, J. Li, and P. A. Chou, "[P2P Streaming Capacity](#)", IEEE Trans. On Information Theory, Vol. 57, No. 8, Aug. 2011.
- [8] S. Mehrotra, Jin Li, and Ying-zong Huang, "[Optimizing FEC Transmission Strategy for Minimizing Delay in Lossless Sequential Streaming](#)", IEEE Transactions on Multimedia, vol. 13, no. 5, Oct. 2011.
- [9] J. Li, "[On peer-to-peer \(P2P\) content delivery](#)", Peer-to-Peer Networking and Applications, Vol. 1, Issue 1, pp. 45-63, Mar. 2008.
- [10] J. Li, Y. Cui and B. Chang, "PeerStreaming: Design and Implementation of an on-demand distributed streaming system", ACM Multimedia Systems Journal, 2007.
- [11] J. Li, "Low noise reversible MDCT (RMDCT) and its application in progressive to lossless embedded audio coding", *IEEE Trans. On Signal Processing*, vol. 53, no. 5, May. 2005, pp. 1870-1880.
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- [13] J. Duan and J. Li, "Compression of the layered depth image", *IEEE Trans. On Image Processing*, vol. 12, no. 3, Mar. 2003, pp.365-372.
- [14] J. Li and H. Sun, "On interactive browsing of large images", *IEEE Trans. On Multimedia*, vol. 5, no. 4, pp. 581-590, Dec. 2003.
- [15] Y. Wu, C. Zhang and J. Li, "Smart rebinning for the compression of concentric mosaic", *IEEE Trans. on Multimedia*, vol. 4, no. 3, pp. 332-342, Sept. 2002.
- [16] Y. Wu and J. Li, "Concentric mosaic compression with rebinning of slits (ROSS) ", *IEEE Signal Processing Letters*, vol. 9, no. 9, pp. 269-271, Sept. 2002.

- [17] L. Luo, Y. Wu, J. Li and Y. Zhang, "3D wavelet compression and progressive inverse wavelet synthesis rendering", *IEEE Trans. On Image Processing*, Vol. 11, No. 7, pp. 802-816, Jul. 2002.
- [18] G. Xing, J. Li, S. Li and Y. Zhang, "Arbitrarily shaped video object coding by wavelet", *IEEE Trans. On Circuits and Systems for Video Technology*, Vol. 11, No. 10, pp. 1135-1139, Oct. 2001.
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- [20] J. Li and S. Lei, "An embedded still image coder with rate-distortion optimization", *IEEE Trans. On Image Processing*, Vol. 8, No. 7, pp. 913-924, Jul. 1999.
- [21] J. Li and J. Kuo, "Image compression with a hybrid wavelet-fractal coder", *IEEE Trans. On Image Processing*, Vol. 8, No. 6, pp. 868-873, Jun. 1999.
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Book Chapter

- [1] J. Li, "Image Compression – The Mechanics of JPEG 2000", in MSRI modern signal processing series.
- [2] J. Li, "Scalable audio coding", in *Multimedia over IP: Wired and Wireless Networks*, M. Schaar and P. A. Chou eds.

Conference Papers

- [1] Q. Xu, Z. Mao, S. Mehrotra, and J. Li, "[Proteus: network performance forecast for real-time interactive mobile applications](#)", Mobisys 2013, Jun. 23-28, 2013, Taipei, Taiwan.
- [2] S. Mehrotra, H. Chen, S. Jain, J. Li, B. Li, and M. Chen, "[Bandwidth management for Mobile Media Delivery](#)", GLOBECOM 2012, Dec. 2012, Anaheim, CA.
- [3] Z. Li, H. Shen, G. Liu, and J. Li, "[SOS: A Distributed Mobile Q&A System Based on Social Networks](#)", ICDCS 2012, Jun. 2012, Macau, China.
- [4] A. El-Shimi, R. Kalach, A. Kumar, J. Li, A. Oltean, and S. Sengupta, "Primary Data Deduplication -- Large Scale Study and System Design", USENIX Annual Technical Conference, Boston, USA, June 2012.
- [5] Cheng Huang, Huseyin Simitci, Yikang Xu, Aaron Ogus, Brad Calder, Parikshit Gopalan, Jin Li, and Sergey Yekhanin, "Erasure Coding in Windows Azure Storage", USENIX Annual Technical Conference, Boston, USA, June 2012.

2012.

- [6] V. R. Cadambe, C. Huang, J. Li, “Permutation Code: Optimal Exact-Repair of a Single Failed Node in MDS Code Based Distributed Storage Systems,” IEEE ISIT, August 2011.
- [7] C. Zhang, C. Huang, K. W. Ross, D. A. Maltz, and J. Li, “Inflight Modification of Content: Who are the Culprits”, 4th USENIX workshop on Large-Scale Exploits of Emerging Threads (LEET’2011), Boston, MA, Mar. 2011 (acceptance rate: 30%).
- [8] B. Debnath, S. Sengupta, and J. Li, “SkimpyStash: RAM space skimpy key-value store on Flash-based storage”, ACM SIGMOD 2011, Athens, Greece, Jun. 2011. (acceptance rate: 23%)
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