

Curriculum Vitae

Chia-Wen Lin



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Education

- Ph.D. National Tsing Hua University (NTHU), Electrical Engineering, Taiwan, January 2000. Thesis title: “Video Transcoding Techniques for Multipoint Video Conferencing” Advisors: Profs. Yung-Chang Chen and Ming-Ting Sun (University of Washington).
- M.S. National Tsing Hua University (NTHU), Taiwan, Electrical Engineering, June 1992. Thesis topic: “Efficient VLSI Architectures for Filter Banks in Subband Coding”. Advisors: Profs. Yung-Chang Chen and Chin-Liang Wang
- B.S. National Kaohsiung Institute of Technology (NKIT), Electrical Engineering, Taiwan, June 1987.

Research Interests (See <http://www.ee.nthu.edu.tw/cwlin> for details)

- Video Content Analysis & Retrieval
- Intelligent Video Processing (Video Retargeting, Super-resolution, Inpainting, Rain Removal, Object Tracking)
- Video Adaptation in Heterogeneous Environments
- Video Coding & Streaming

Experiences

A. Academic Employment

2007~present: **Associate Professor**, Dept. Electrical Engineering, National Tsing Hua University, Hsinchu, Taiwan

2011~present: **Deputy Director**, Computer & Communication Center, National Tsing Hua University, Hsinchu, Taiwan

2005~2007: **Associate Professor**, Dept. Computer Science & Information Engineering, National Chung Cheng University, Taiwan

2000~2005: **Assistant Professor**, Dept. Computer Science & Information Engineering, National Chung Cheng University, Taiwan

2002~2002: **Visiting Professor**, Wireless Networking Group, Microsoft Research Asia (MSRA), Beijing, China

2000~2000: **Visiting Scholar**, Information Processing Lab., Dept. EE, University of Washington.

1993~2000: **Research Assistant** at EE, National Tsing Hua University, Hsinchu, Taiwan

1990~1992: **Research Assistant** at EE, National Tsing Hua University, Hsinchu, Taiwan

1989~1990: **Teaching/Research Assistant** at EE, National Kaohsiung Institute of Technology, Kaohsiung, Taiwan

B. Industrial Employment

1997~2000: **Section Manager and Project Manager** with the Customer Premises Equipment & Access Technology Dept., Computer and Communication Research Labs, ITRI, Hsinchu, Taiwan

1996~1997: **Project Manager** at Digital Transmission Dept., Computer and Communication Research Labs, ITRI, , Hsinchu, Taiwan

1994~1996: **Team Leader** at Digital Transmission Dept., Computer and Communication Research Labs, ITRI, Hsinchu, Taiwan

1992~1994: **R&D Engineer** at Digital Transmission Department, Computer and Communication Research Labs, ITRI, , Hsinchu, Taiwan

1987 ~1989: **Full-time Military Service**, Taiwan, , Hsinchu, Taiwan

Served as a navy communication officer (second lieutenant) at Chinese Marine Corp. (CMC) for wired and wireless communication systems operation and maintenance

Honors

- **2006~2009: Young Investigator Awards (the Wu-Da-You Memorial Awards)**, National Science Council (NSC), Taiwan
- **2005~2006: Young Faculty Awards**, National Chung Cheng University (CCU), Taiwan
- **2005: Young Investigator Award (Co-Author)**, SPIE VCIP 2005
Yu-Hsuan Ho, Chia-Wen Lin, Jing-Fung Chen, and Hong-Yuan Mark Liao “Fast coarse-to-fine video retrieval via shot-level statistics,” in *Proc. SPIE Conf. Visual Commun. Image Processing* (VCIP 2005), July 2005, Beijing, China.
- **2004: top 10% paper** and nominated for the **IBM Student Paper Awards** of IEEE ICIP 2004
Yu-Hsuan Ho, Wei-Ren Chen, and Chia-Wen Lin, “A rate-constrained key-frame extraction scheme for channel-aware video streaming,” in *Proc. IEEE Int. Conf. Image Processing*, Oct. 2004, Singapore.
- **2002: Third-Place Prize**, National Wireless Communication Software Contest, the Ministry of Economic Affairs (MOEA), Taiwan
- **2001: Research Awards**, National Science Council, Taiwan, R.O.C.
- **2000: Ph.D. Thesis Awards**, the Ministry of Education, Taiwan
- **2000: Acer Ph.D. Thesis Awards**
- **2000: ITRI Research Achievement Awards - Bronze Medal**

Professional Activities:

Journal Editorship

- Associate Editor, *IEEE Transactions on Circuits and Systems for Video Technology* (March 2009 ~ present)
- Associate Editor, *IEEE Transactions on Multimedia* (October 2011 ~ present)
- Associate Editor, *Journal of Visual Communication and Image Representation* (April 2007 ~ present)
- Area Editor, *EURASIP Signal Processing: Image Communication* (July 2011~ present)
- Guest Editor, ICME Special Issue, *IEEE Transactions on Multimedia* (June 2011)
- Managing Guest Editor, *Special Issue on Recent Advances on Analysis and Processing for Distributed Video Systems*, *Journal of Visual Communication and Image Representation* (Summer 2012)
- Managing Guest Editor, *Special issue on resource-aware adaptive video streaming*, *Journal of Visual Communication and Image Representation* (December 2008)
- Lead Guest Editor, *Special Issue on Video Adaptation for Heterogeneous Environments*, *EURASIP Journal on Advances in Signal Processing* (May 2007)

Committee & Conference

- Senior Member, IEEE (since 2004)
- Secretary (2012~2013) and Chair (2014~2015), Multimedia Systems and Applications TC, IEEE CAS Society
- Member & Chair of Workshops & Conferences Sub-Committee, Multimedia Signal Processing TC, IEEE SP Society (January 2009~December 2012)
- Member, Visual Signal Processing & Communications TC, IEEE CAS Society (since 2002)
- Member, Multimedia Systems and Applications TC, IEEE CAS Society (since 2001)
- Publicity Co-Chair, VCIP 2011
- Technical Program Co-Chair, IEEE SPS Summer School on 3D and High Definition/High Contrast Video Processing Systems 2011
- Special Session Co-Chair, IEEE ICME 2009
- General Co-Chair, First International Workshop on Multimedia Analysis and Processing (IMAP 2007), in conjunction with IEEE IWCMC 2007 and ICCCN 2007
- Paper Awards Chair & Invited Talk Chair, IEEE Pacific-Rim Symp. Image & Video Technology (PSIVT 2006)
- Student Paper Awards Committee Member, IEEE Conf. Multimedia & Expo. (ICME 2006), IEEE Consumer Communications and Networking (CCNC 2008), SPIE VCIP 2000
- Program/Review Committee Members, Track Co-Chair, Session Chair: IEEE ISCAS 2003~2011, IEEE ICME 2002, 2004, 2006~2011, IEEE ICASSP 2010~2011, IEEE MMSP 2005~2007, IEEE PCM 2002~2010, Multimedia Modeling Conference (MMM) 2007~2011

Publications (<http://www.ee.nthu.edu.tw/cwlin>)

Refereed Journal Papers:

Published or Accepted

- [J1] Yuming Fang, Weisi Lin, Bu-Sung Lee, Chiew Tong Lau, Zhenzhong Chen, and Chia-Wen Lin, “Bottom-up saliency detection model based on human visual sensitivity and amplitude spectrum,” *IEEE Trans. Multimedia*. (accepted)
- [J2] Chih-Hung Ling, Yu-Ming Liang, Chia-Wen Lin, Hong-Yuan Mark Liao, and Yong-Sheng Chen, “Human object inpainting using manifold learning-based posture sequence estimation,” *IEEE Trans. Image Processing*, vol. 20, no. 11, 12 pages, Nov. 2011.
- [J3] Tzu-Chieh Yen, Chia-Ming Tsai, and Chia-Wen Lin, “Maintaining temporal coherence in video retargeting using mosaic-guided scaling,” *IEEE Trans. Image Processing*, vol. 20, no. 8, pp. 2339–2351, Aug. 2011.
- [J4] Chih-Hung Ling, Chia-Wen Lin, Chih-Wen Su, Hung-Yuan Mark Liao, and Yung-Sheng Chen, “Virtual contour-guided video object inpainting using posture mapping,” *IEEE Trans. Multimedia*, vol. 13, no. 2, pp. 292–302, Apr. 2011.
- [J5] Chih-Ming Chen, Chia-Wen Lin, and Yung-Chang Chen, “Cross-layer packet retry limit adaptation for video transport over wireless LANs,” *IEEE Trans. Circuits and Systems for Video Technology*, vol. 20, no. 11, pp. 1448–1461, Nov. 2010.
- [J6] Chia-Wen Lin, Zhi-Hong Ling, Yuan-Cheng Chang, and Chung J. Kuo, “Compressed-domain fall incident detection for intelligent homecare,” *Journal of Signal Processing Systems* (Special Issue on Audio-Visual Signal Processing for Intelligent Security Systems), vol. 49, no. 3, pp. 393–408, Dec. 2007.
- [J7] Chih-Wen Su, Hong-Yuan Mark Liao, Hsiao-Rong Tyan, Chia-Wen Lin, Duan-Yu Chen, and Kuo-Chin Fan, “Motion flow-based video retrieval,” *IEEE Trans. Multimedia*, vol. 9, no. 6, pp. 1193–1201, Oct. 2007.
- [J8] Yuh-Chou Tsai, Chia-Wen Lin, and Chia-Ming Tsai, “H.264 error resilience coding based on multihypothesis motion-compensated prediction,” *Signal Processing: Image Communication*, vol. 22, no. 9, pp. 734–751, Oct. 2007.
- [J9] Yuh-Ruey Lee and Chia-Wen Lin, “Visual quality enhancement for DCT-domain spatial downscaling transcoding using generalized DCT decimation,” *IEEE Trans. Circuits and Systems for Video Technology*, vol. 17, no. 8, pp. 1079–1084, Aug. 2007.
- [J10] Chih-Ming Chen, Chia-Wen Lin, Hsiao-Cheng Wei, and Yung-Chang Chen, “Robust video streaming over wireless LANs using multiple description transcoding and prioritized retransmission,” *Journal of Visual Communication and Image Representation*, vol. 18, no. 3, pp. 191–206, June 2007.
- [J11] Chih-Ming Chen, Chien-Min Chen, Chia-Wen Lin, and Yung-Chang Chen, “Error resilient video streaming over wireless networks using combined scalable coding and multiple-description coding,” *Signal Processing: Image Communication*, vol. 22, no. 4, pp. 403–420, Apr. 2007.
- [J12] Chih-Ming Chen, Chia-Wen Lin, and Yung-Chang Chen, “Adaptive error resilience transcoding for video multicast over wireless networks,” *Signal Processing: Image Communication* (Special Issue on Mobile Video), vol. 22, no. 3, pp. 277–297, Mar. 2007.
- [J13] Yu-Hsuan Ho, Chia-Wen Lin, Jing-Fung Chen, and Hong-Yuan Mark Liao “Fast coarse-to-fine video retrieval using shot-level statistics,” *IEEE Trans. Circuits and Systems for Video Technology*, vol. 16, no. 5, pp. 642–648, May 2006. (ISI: 5 citations; Google Scholar: 6 citations)
- [J14] Wen-Nung Lie, C.-I. Tom Lin, and Chia-Wen Lin, “Enhancing video error resilience by using data embedding techniques,” *IEEE Trans. Circuits and Systems for Video Technology*, vol. 16,

no. 2, pp. 300–308, Feb. 2006.

- [J15] Hung-Jyh Chiou, Yuh-Ruey Lee, and Chia-Wen Lin, “Content-aware error resilient transcoding using prioritized intra-refresh for video streaming,” *Journal of Visual Communication and Image Representation* (Special Issue on Visual Communications in the Ubiquitous Era), vol. 16, no. 4-5, pp. 563–588, Aug.–Oct. 2005.
- [J16] Jun Xin, Chia-Wen Lin, and Ming-Ting Sun, “Digital video transcoding,” *Proceedings of the IEEE*, vol. 93, no. 1, pp. 84–97, Jan. 2005.
- [J17] Chia-Wen Lin, Yung-Chang Chen, and Ming-Ting Sun, “Dynamic region of interest transcoding for multipoint video conferencing,” *IEEE Trans. Circuits and Systems for Video Technology*, vol. 13, no. 10, pp. 982–992, Oct. 2003.
- [J18] Chia-Wen Lin, Yao-Jen Chang, and Yung-Chang Chen, “A low-complexity face detection scheme for low-bit-rate videophone coding,” *IEICE Trans. Information and Systems*, vol. E86-D, no.1, pp.101–108, Jan. 2003.
- [J19] Supavadee Aramvith, Chia-Wen Lin, Sumit Roy, and Ming-Ting Sun, “Wireless video transport using conditional retransmission and low-delay interleaving,” *IEEE Trans. Circuits and Systems for Video Technology* (Special Issue on Wireless Video), vol. 12, no. 6, pp. 558–565, Jun. 2002.
- [J20] Chia-Wen Lin, Yao-Jen Chang, Chih-Ming Wang, Yung-Chang Chen, and Ming-Ting Sun, “A standard compliant virtual meeting system with active video object tracking,” *EURASIP Journal on Advances in Signal Processing*, vol. 6, pp. 622–634, June 2002.
- [J21] Chia-Wen Lin, Jian Zhou, Jeongnam Youn, and Ming-Ting Sun, “MPEG video streaming with VCR functionality,” *IEEE Trans. Circuits and Systems for Video Technology* (Special Issue on Internet Video Streaming), vol. 11, no. 3, pp. 415–425, Mar. 2001.
- [J22] Jeongnam Youn, Ming-Ting Sun, and Chia-Wen Lin, “Motion vector refinement for high performance transcoding,” *IEEE Trans. Multimedia*, vol. 1, pp. 30–40, Mar. 1999.
- [J23] Chia-Wen Lin, Eryin Fei, and Yung-Chang Chen, “Hierarchical disparity estimation using spatial correlation,” *IEEE Trans. Consumer Electronics*, vol. 44, pp. 630–637, Aug. 1998.
- [J24] Jeongnam Youn, Ming-Ting Sun, and Chia-Wen Lin, “Motion estimation for high performance transcoding,” *IEEE Trans. Consumer Electronics*, vol. 44, pp. 649–658, Aug. 1998.

Submitted or in Revision

- [J25] Li-Wei Kang, Chia-Wen Lin, and Yu-Hsiang Fu, “Automatic single-frame-based rain streak removal via image decomposition,” *IEEE Trans. Image Processing*. (submitted, March 2011; Revised August 2011)
- [J26] Chih-Chung Hsu, Chia-Wen Lin, and Chiou-Ting Hsu, “Face hallucination using Bayesian global estimation and local basis selection,” *IEEE Trans. Image Processing*. (submitted, Sept. 2011)
- [J27] Chi-Wen Lo, Chia-Wen Lin, Yung-Chang Chen, and Jen-Yu Yu, “Contribution-guided peer selection for reliable peer-to-peer video streaming over mesh-based networks,” *IEEE Trans. Circuits and Systems for Video Technology*. (submitted, Sept. 2011)
- [J28] Yuming Fang, Weisi Lin, Zhenzhong Chen, and Chia-Wen Lin, “Saliency detection in the compressed domain for adaptive image retargeting,” *IEEE Trans. Image Processing*. (submitted, Sept. 2011)

Refereed Conference Papers:

- [C1] Chun-Yu Lin, Chih-Chun Hsu, Chia-Wen Lin, and Li-Wei Kang, “Fast deconvolution-based image super-resolution using gradient prior,” *Int. Conf. Visual Communication and Image Processing (VCIP)*, Nov. 2010, Tainan, Taiwan. (invited paper)

- [C2] Chih-Chung Hsu and Chia-Wen Lin, "Image superresolution via feature-based affine transform," *IEEE Workshop Multimedia Signal Processing (MMSP)*, Oct. 2011, Hang-Zhou, China. (accepted)
- [C3] Yuming Fang, Weisi Lin, Zhenzhong Chen, and Chia-Wen Lin, "Saliency-based image retargeting in compressed domain," *ACM Multimedia (Short Paper Track)* Nov. 2011, Scottsdale, Arizona, USA. (accepted)
- [C4] Chi-Wen Lo, Chia-Wen Lin, Yung-Chang Chen, and Jen-Yu Yu, "Contribution-based peer selection for packet protection for P2P video streaming over mesh-based networks," in *Proc. IEEE Int. Conf. Image Processing*, May 2011, Brussels, Belgium.
- [C5] Chi-Wen Lo, Chia-Wen Lin, Yung-Chang Chen, and Jen-Yu Yu, "A packet loss estimation model and its application to reliable peer-to-peer video streaming," in *Proc. IEEE Workshop on Streaming and Media Communications (in conjunction with IEEE ICME)*, July 2011, Barcelona, Spain.
- [C6] Yu-Hsiang Fu, Li-Wei Kang, Chia-Wen Lin, and Chiou-Ting Hsu, "Single-frame-based rain removal via image decomposition," in *Proc. IEEE Int. Conf. Acoustics, Speech & Signal Processing*, May 2011, Prague, Czech Republic.
- [C7] Chih-Chung Hsu, Chia-Wen Lin, Chiou-Ting Hsu, and Hong-Yuan Mark Liao, "Face hallucination using Bayesian global estimation and local basis selection," in *Proc. IEEE Workshop Multimedia Signal Processing (MMSP)*, Oct. 2010, Saint-Malo, France.
- [C8] Chih-Hung Ling, Yu-Ming Liang, Chia-Wen Lin, Hong-Yuan Mark Liao, and Yong-Sheng Chen, "Video object inpainting using manifold-based posture estimation," in *Proc. IEEE Int. Conf. Image Processing*, Sept. 2010, Hong Kong, China.
- [C9] Chao-An Chen, Chih-Wen Lo, Chia-Wen Lin, and Yung-Chang Chen "A game-theoretical pricing mechanism for rate allocation for multi-user video transport over WiMAX," *SPIE Conf. Visual Communication and Image Processing*, July 2010, An Hui, China.. (invited paper)
- [C10] Nai-Chia Cheng and Chia-Wen Lin, "Video inpainting using dynamic texture synthesis," in *Proc. IEEE Int. Symp. Circuits and Systems*, May 2010, Paris, France.
- [C11] Chi-Wen Lo, Chia-Wen Lin, Yung-Chang Chen, and Jen-Yu Yu, "On peer selection and packet protection for reliable per-to-peer video streaming," *IEEE Pacific-Rim conference on Multimedia (PCM)*, Dec. 2009, Bangkok, Thailand. (invited paper)
- [C12] Chih-Hung Ling, Chia-Wen Lin, Chih-Wen Su, Hong-Yuan Mark Liao, and Yong-Sheng Chen, "Video object inpainting using posture mapping," in *Proc. IEEE Int. Conf. Image Processing*, Nov. 2009, Cairo, Egypt.
- [C13] Chia-Ming Tsai, Chia-Wen Lin, Weisi Lin, and Wen-Hsiao Peng, "A comparative study on attention-based rate adaptation in scalable video coding," in *Proc. IEEE Int. Conf. Image Processing*, Nov. 2009, Cairo, Egypt.
- [C14] Chung-Chun Wang, Yi-Chueh Su, Chiou-Ting Hsu, Chia-Wen Lin, and Hong-Yuan Mark Liao, "Bayesian aging estimation on face images," in *Proc. IEEE Int. Conf. Multimedia and Expo*, June 2009, New York.
- [C15] Chih-Chung Hsu, Chia-Wen Lin, Chiou-Ting Hsu, and Hong-Yuan Mark Liao, "Cooperative face hallucination using multiple priors," in *Proc. IEEE Int. Conf. Multimedia and Expo*, June 2009, New York.
- [C16] Chih-Chung Hsu, Tzu-Yi Hung, Chia-Wen Lin, and Chiou-Ting Hsu, "Video forgery detection using the correlation of noise residue," in *Proc. IEEE Workshop Multimedia Signal Processing (MMSP)*, Oct. 2008, Cairns, Queensland, Australia.
- [C17] Chia-Wei Liao, Chia-Wen Lin, and Wei-Yang Lin, "Person authentication using face video with random passwords," in *Proc. IEEE Int. Conf. Multimedia and Expo*, June 2008, Hanover, Germany.

- [C18] Fan-Tung Wei, Sheng-Ting Chou, and Chia-Wen Lin, "A region-based object tracking scheme using Adaboost-based feature selection," in *Proc. IEEE Int. Symp. Circuits and Systems*, May 2008, Seattle, WA, USA. (invited paper)
- [C19] Hsin-Yu Chi, Chia-Wen Lin, Yung-Chang Chen, and Chih-Ming Chen, "Optimal rate allocation for scalable video multicast over WiMAX," in *Proc. IEEE Int. Symp. Circuits and Systems*, May 2008, Seattle, WA, USA.
- [C20] Jhih-Shen Shen, Chih-Hung Chen, Chia-Ming Tsai, and Chia-Wen Lin, "Computation-aware intra-mode decision for H.264 coding and transcoding," in *Proc. IEEE Int. Symp. Multimedia*, Dec. 2007, Taichung, Taiwan. (invited paper)
- [C21] Chia-Wen Lin and Zhi-Hong Ling, "Automatic fall incident detection in compressed video for intelligent homecare," in *Proc. Int. Workshop Multimedia Analysis & Processing*, Aug. 2007, Honolulu, Hawaii, USA.
- [C22] Chih-Ming Chen, Chia-Wen Lin, and Yung-Chang Chen, "Adaptive error resilience transcoding and fairness grouping for video multicast over wireless networks," in *Proc. IEEE Int. Conf. Commun.*, July 2007, Glasgow, Scotland.
- [C23] Chih-Wei Chiou, Chia-Ming Tsai, and Chia-Wen Lin, "Fast mode decision algorithms for adaptive GOP structure in H.264 scalable extension," in *Proc. IEEE Int. Symp. Circuits and Systems*, May 2007, New Orleans, USA.
- [C24] Yuh-Chou Tsai, Chia-Ming Tsai, and Chia-Wen Lin, "H.264 error resilience coding based on multihypothesis motion-compensated prediction and adaptive intra refresh," in *Proc. IEEE Int. Conf. Intelligent Information Hiding and Multimedia Signal Processing*, Dec. 2006, Pasadena, CA, USA. (invited paper)
- [C25] Chih-Ming Chen, Chia-Wen Lin, and Yung-Chang Chen, "Packet scheduling for video streaming over wireless with content-aware packet retry limit," in *Proc. IEEE Workshop Multimedia Signal Processing (MMSP)*, Oct. 2006, Victoria, Canada.
- [C26] Shih-Ming Hsu, Chia-Wen Lin, and I-Hsien Lee, "A new seamless bitstream switching scheme for H.264 video adaptation with enhanced coding performance," in *Proc. IEEE Int. Conf. Image Processing*, Oct. 2006, Atlanta, GA, USA.
- [C27] Chih-Ming Chen, Chia-Wen Lin, and Yung-Chang Chen, "Unequal error protection of video streaming over wires LANs using content-aware packet retry limit," in *Proc. IEEE Int. Conf. Multimedia and Expo*, pp. 1961-1964, July 2006, Toronto, Canada.
- [C28] Ke-Zhao Chen, Yao-Jen Chang, and Chia-Wen Lin, "Video-based authentication using appearance models and HMMs," in *Proc. IEEE Int. Symp. Circuits and Systems*, May 2006, Island of Kos, Greece.
- [C29] Chih-Ming Chen, Yung-Chang Chen, and Chia-Wen Lin, "Error resilience transcoding using content-aware intra-refresh based on profit tracing," in *Proc. IEEE Int. Symp. Circuits and Systems*, May 2006, Island of Kos, Greece.
- [C30] Chih-Wen Su, Hong-Yuan Mark Liao, Kuo-Chin Fan, Chia-Wen Lin and Hsiao-Rong Tyan, "A motion-flow-based fast video retrieval system," in *Proc. 7th ACM SIGMM International Workshop on Multimedia Information Retrieval*, Nov. 2005, Singapore.
- [C31] Duan-Yu Chen, Hong-Yuan Mark Liao, Hsiao-Rong Tyan, and Chia-Wen Lin, "Automatic key posture selection for human behavior analysis," in *Proc. IEEE Int. Workshop on Multimedia Signal Processing*, Oct. 2005, Shanghai, China.
- [C32] Yuh-Ruey Lee and Chia-Wen Lin, "DCT-domain downscaling transcoding using generalized DCT decimation," in *Proc. IEEE Int. Conf. Image Processing*, Sept. 2005, Genoa, Italy.
- [C33] Yuh-Chou Tsai and Chia-Wen Lin, "H.264 error resilience coding based on multihypothesis motion-compensated prediction," in *Proc. IEEE Int. Conf. Multimedia and Expo*, July 2005, Amsterdam, the Netherlands.

- [C34] Chih-Ming Chen, Yuh-Ruey Lee, Chia-Wen Lin, and Yung-Chang Chen “Adaptive error resilience transcoding for video multicast over wireless networks,” in *Proc. IEEE Int. Conf. Multimedia and Expo*, July 2005, Amsterdam, the Netherlands.
- [C35] Yu-Hsuan Ho, Chia-Wen Lin, Jing-Fung Chen, and Hong-Yuan Mark Liao “Fast coarse-to-fine video retrieval via shot-level statistics,” in *Proc. SPIE Conf. Visual Communication and Image Processing*, July 2005, Beijing, China. (**won the Young Investigator Award**)
- [C36] Yu-Lun Lai, Yu-Yuan Tseng, Chia-Wen Lin, Zhi Zhou, and Ming-Ting Sun, “H.264 encoder speed-up via joint algorithm/code-level optimization,” in *Proc. SPIE Conf. Visual Communication and Image Processing*, July 2005, Beijing, China.
- [C37] Chih-Ming Chen, Yuh-Ruey Lee, Chia-Wen Lin, and Yung-Chang Chen “Channel-aware robust video streaming over wireless LANs using multiple-description FGS coding,” in *Proc. Int. Symp. Multimedia over Wireless*, WirelessCom, June 2005, Maui, Hawaii, USA.
- [C38] Chih-Ming Chen, Yung-Chang Chen, and Chia-Wen Lin, “Seamless roaming in wireless networks for video streaming,” in *Proc. IEEE Int. Symp. Circuits and Systems*, May 2005, Kobe, Japan.
- [C39] Chia-Wen Lin, Zhi-Hong Ling, Yuan-Cheng Chang, and Chung J. Kuo, “Compressed-domain fall incident detection for intelligent home surveillance,” in *Proc. IEEE Int. Symp. Circuits and Systems*, May 2005, Kobe, Japan.
- [C40] Chen-Po Chang and Chia-Wen Lin, “R-D optimized quantization of H.264 SP-frame for bitstream switching with storage constraints,” in *Proc. IEEE Int. Symp. Circuits and Systems*, May 2005, Kobe, Japan. (invited paper for Special Session on Video Adaptation & Abstraction)
- [C41] Jing-Fung Chen, Hong-Yuan Mark Liao, and Chia-Wen Lin, “Fast video retrieval via the statistics of motion,” in *Proc. IEEE Int. Conf. Acoustics, Speech & Signal Processing*, Mar. 2005, Philadelphia, PA, USA.
- [C42] Yuh-Ruey Lee, Chia-Wen Lin, Sung-Hung Yeh, and Yung-Chang Chen, “Low-complexity DCT-domain video transcoder for arbitrary-size downscaling,” in *Proc. IEEE Int. Workshop on Multimedia Signal Processing*, Sept. 2004, Siena, Italy.
- [C43] Yu-Hsuan Ho, Wei-Ren Chen, and Chia-Wen Lin, “A rate-constrained key-frame extraction scheme for channel-aware video streaming,” in *Proc. IEEE Int. Conf. Image Processing*, Oct. 2004, Singapore. (**top 10% paper, ranked 6th (out of 154) in Student Paper Awards Contest**)
- [C44] Su-Ren Chen, Chen-Po Chang, and Chia-Wen Lin, “MPEG-4 FGS performance improvement using adaptive inter-layer prediction,” in *Proc. IEEE Int. Conf. Acoustics, Speech, Signal Processing*, vol. 3, pp. 265-268, May 2004, Montreal, Canada.
- [C45] Hsiao-Cheng Wei, Yuh-Chou Tsai, and Chia-Wen Lin, “Prioritized retransmission for error protection of video streaming over WLAN,” in *Proc. IEEE Int. Symp. Circuits and Systems*, vol. 2, pp. 65-68, May 2004, Vancouver, Canada.
- [C46] Hong-Jyh Chiou, Yuh-Ruey Lee, and Chia-Wen Lin, “Error-resilient transcoding using adaptive intra-refresh for video streaming,” in *Proc. IEEE Int. Symp. Circuits and Systems*, vol. 3, pp. 777-780, May 2004, Vancouver, Canada.
- [C47] Yuh-Ruey Lee, Chia-Wen Lin, and Yen-Wen Chen, “Computation reduction in cascaded DCT-domain video downscaling transcoding,” in *Proc. IEEE Int. Symp. Circuits and Systems*, vol. 2, pp. 860-863, May 2003, Bangkok, Thailand.
- [C48] Chia-Wen Lin, Chih-Ming Wang, Yao-Jen Chang, and Yung-Chang Chen, “Realtime object extraction and tracking using an active camera with image mosaics,” in *Proc. IEEE Int. Workshop on Multimedia Signal Processing*, Dec. 2002, Virgin Islands, USA.
- [C49] Yeh-Kai Chou, Li-Chao Jian, and Chia-Wen Lin, “MPEG-4 video streaming with drift-compensated bit-stream switching,” in *Proc. IEEE Pacific-Rim Conf. Multimedia*, Dec. 2002, Hsinchu, Taiwan. (invited paper; also published in *Lecture Notes in Computer Science: Advances in Multimedia Information Processing*, pp. 847-855, Dec. 2002, Springer)

- [C50] Yuh-Ruey Lee, [Chia-Wen Lin](#), and Cheng-Chien Kao, "A DCT-domain video transcoder for spatial resolution downconversion," in *Proc. Visual Information System*, Mar. 2002, Hsinchu, Taiwan. (invited paper; also published in *Lecture Notes in Computer Science: Recent Advances in Visual Information Systems*, pp. 207-218, Mar. 2002, Springer)
- [C51] Jinhui Pan, [Chia-Wen Lin](#), Chung Gu, and Ming-Ting Sun, "A robust spatio-temporal video object segmentation scheme with prestored background information," in *Proc. IEEE Int. Symp. Circuits and Systems*, pp. 803-806, May 2002, Arizona, USA. (ISI: 5 citations; Google Scholar: 23 citations)
- [C52] [Chia-Wen Lin](#) and Yuh-Ruey Lee, "Fast algorithms for DCT-domain transcoding," in *Proc. IEEE Int. Conf. Image Processing*, pp. 421-424, Oct. 2001, Thessaloniki, Greece.
- [C53] [Chia-Wen Lin](#), Yao-Jen Chang, Yung-Chang Chen, and Ming-Ting Sun, "Implementation of a realtime object-based virtual meeting system," in *Proc. IEEE Int. Conf. Multimedia and Expo*, pp. 565-568, Aug. 2001, Tokyo, Japan.
- [C54] Supavadee Aramvith, [Chia-Wen Lin](#), Sumit Roy, and Ming-Ting Sun, "Wireless video transport using conditional retransmission and low-delay interleaving," in *Proc. IEEE Int. Symp. Circuits and Systems*, V-101-104, June 2001, Sydney, Australia.
- [C55] Supavadee Aramvith, [Chia-Wen Lin](#), and Ming-Ting Sun, "Wireless video transport using conditional retransmission and low-delay interleaving," in *Proc. Packet Video Workshop*, May 2001, Korea.
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