

Curriculum Vitae

Chia-Wen Lin

Professor

Department of Electrical Engineering

National Tsing Hua University

Hsinchu 30013, Taiwan

Tel: +886-3-573-1152

Fax: +886-3-571-5971

Email: cwlin@ee.nthu.edu.tw

URL: <http://www.ee.nthu.edu.tw/cwlin>

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)

- Social Media Analysis
- Visual Content Analysis and Processing (Image/Video Retargeting, Summarization, Super-resolution, Inpainting, Denoising, etc.)
- Video Coding & Streaming

Experiences

A. Academic Employment

2014/8~Present: **Professor**, Dept. Electrical Engineering, National Tsing Hua University, Hsinchu, Taiwan

2016/6~Present: **Director**, Multimedia Technology Research Center, College of Electrical Engineering and Computer Science, National Tsing Hua University, Hsinchu, Taiwan

2015/8~2016/2: **Visiting Professor**, National Institute of Informatics, Tokyo, Japan (hosted by Prof. Gene Cheung)

2011/8~2015/7: **Deputy Director**, Computer & Communication Center, National Tsing Hua University, Hsinchu, Taiwan

2010/8~present: **Division Director**, Division of Network Systems, Computer & Communication Center, National Tsing Hua University, Hsinchu, Taiwan

2007/8~2014/7: **Associate Professor**, Dept. Electrical Engineering, National Tsing Hua University, Hsinchu, Taiwan

2005/8~2007/7: **Associate Professor**, Dept. Computer Science & Information Engineering, National Chung Cheng University, Taiwan

2000/8~2005/7: **Assistant Professor**, Dept. Computer Science & Information Engineering, National Chung Cheng University, Taiwan

2002/7~2002/8: **Visiting Professor**, Wireless Networking Group, Microsoft Research Asia (MSRA), Beijing, China (hosted by Dr. Wenwu Zhu)

2000/4~2000/8: **Visiting Scholar**, Information Processing Lab., Dept. EE, University of Washington.

1993/8~2000/7: **Research Assistant** at EE, National Tsing Hua University, Hsinchu, Taiwan

1990/8~1992/7: **Research Assistant** at EE, National Tsing Hua University, Hsinchu, Taiwan

1989/7~1990/6: **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: **Technical Lead** 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

1987/7 ~1989/5: **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/Recognitions

- **2018: IEEE Fellow** (for contributions to multimedia coding and editing)
- **2018/1~2019/12: Distinguished Lecturer, IEEE Circuits & Systems Society**
- **2016: Best Student Paper Award (Co-author), IEEE IVMSP Workshop 2016**

Yu Mao, Gene Cheung, Chia-Wen Lin, and Yusheng Ji, "Image classifier learning from noisy labels via generalized graph smoothness priors," in *Proc. IEEE Workshop on Image, Video, and Multidimensional Signal Processing*, Bordeaux, France, July 2016.

- **2015: Best Paper Award, IEEE VCIP 2015**

Chao Zhou and Chia-Wen Lin^{*}, "A Markov decision based rate adaption approach for dynamic HTTP streaming," in *Proc. IEEE Visual Communication and Image Processing (VCIP) Conf.*, Dec. 2015, Singapore.

- **2014/1~2015/12: Distinguished Lecturer, The Asia-Pacific Signal and Information Processing Association (APSIPA)**
- **2012/8~2015/7: MOST Outstanding Young Investigator Grant**, Ministry of Science & Technology (MOST), Taiwan
- **2013: Top 10% Paper Awards, IEEE MMSP 2013**

Li-Wei Kang, Bo-Chi Chuang, Chih-Chung Hsu, Chia-Wen Lin^{*}, and Chia-Hung Yeh, "Self-learning-based single image super-resolution of a highly compressed image," in *Proc. IEEE Workshop Multimedia Signal Processing (MMSP)*, Sept. 2013, Sardinia, Italy.

- **2010: Nominated for Best Paper Awards, SPIE VCIP 2010**
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.
- **2006~2009: MOST Young Investigator Awards (Da-You Wu Memorial Awards),** Ministry of Science & Technology (MOST), Taiwan
- **2005/8~2006/7: Young Faculty Awards,** National Chung Cheng University, 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 runner-up of 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 (Group Awards)**

Professional Activities:

Journal Editorship

- **Steering Committee Member, IEEE Transactions on Multimedia** (2013/9 ~ 2015/8)
- **Associate Editor, IEEE Transactions on Image Processing** (2017/4 ~ 2020/4)
- **Associate Editor, IEEE Transactions on Multimedia** (2011/10 ~ 2014/10)
- **Associate Editor, IEEE Transactions on Circuits and Systems for Video Technology** (2009/3 ~ 2013/12)
- **Associate Editor, IEEE Multimedia Magazine** (2012/1 ~ 2015/12)
- **Associate Editor, Journal of Visual Communication and Image Representation** (2007/4 ~ present)
- **Area Editor, EURASIP Signal Processing: Image Communication** (2011/9~2014/12)
- Guest Editor, Special Issue on Interactive Media Processing for Immersive Communication, *IEEE Journal of Selected Topics in Signal Processing* (to be published in June 2015)
- Guest Editor, ICME Special Issue, *IEEE Transactions on Multimedia* (59 submissions, published in 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)

Committees & Conferences

- **Chair (2013/9~2015/8)** and Chair-Elect (2011/9~2013/8), **Multimedia Systems and Applications TC, IEEE CAS Society** (the TC has 50 voting members from worldwide)
- Elected Member, Image, Video and Multidimensional Signal Processing TC, IEEE Signal Processing Society (2012/1~ 2017/12, two terms)
- Elected Member (Chair of Workshops & Conferences Sub-Committee during 2010/1~2011/12), Multimedia Signal Processing TC, IEEE Signal Processing Society (2009/1~ 2012/12)
- Elected Member, Visual Signal Processing & Communications TC, IEEE CAS Society (since 2002)
- Elected Member, Multimedia Systems and Applications TC, IEEE CAS Society (since 2001)
- **Steering Committee Member, IEEE ICME** (2014/1 ~ 2017/12)
- **TPC Co-Chair, IEEE ICIP 2019, Taipei, Taiwan**
- **General Co-Chair, IEEE VCIP 2018, Taichung, Taiwan**
- Special Session Co-Chair, IEEE ICME 2018, San Diego, USA
- Special Session Co-Chair, IEEE VCIP 2015, Singapore
- Asia Liaison, IEEE ICME 2015
- Area Chair, IEEE ICASSP 2013, 2014, 2015
- Area Chair, IEEE ICIP 2013, 2014
- Track Chair (Multimedia Systems & Application Track), IEEE ISCAS 2012~2015
- Finance Chair, IEEE MMSP 2014
- Member, Top 10% Paper Awards Committee, IEEE MMSP 2013
- Chair, Best Paper Awards Committee, APSIPA ASC 2013
- Forum Co-Chair, APSIPA ASC 2013, Kaohsiung, Taiwan
- Registration Co-Chair, IEEE IVMSP Workshop 2013, Seoul, Korea
- Best Paper Awards Committee Member, VCIP 2012, San Diego, USA
- Publicity Co-Chair, PCM 2012, Singapore
- Publicity Co-Chair, VCIP 2011
- Technical Program Co-Chair, IEEE SPS Summer School on 3D and High Definition/High Contrast Video Processing Systems 2011
- Technical Program Committee Co-Chair, IEEE ICME 2010
- 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 ICIP 2010~2013, IEEE ICASSP 2010~2013, IEEE ICME 2002, 2004, 2006~2013, IEEE MMSP 2005~2013, ISCAS 2003~2013, IEEE PCM 2002~2013, ACM Multimedia 2012, Multimedia Modeling Conference (MMM) 2007~2012

Research Grants (2008~Present):

Project Title	Role	Amount (NTD)	Period	Sponsor
Microsoft Research Asia Collaboration Project	PI	580 K	2016/1/1~2016/12/31	Microsoft
Vision-Based Car Driving Assistance	Co-PI	6,000 K (my share)	2016/1/1~2018/12/31	ITRI
Summarization, analytics, and recommendation for life-log videos shared in a social community	PI	2,600 K	2014/11/1~2017/7/31	MOST
Visual Content Retrieval, Recommendation, and Management Based on Social Analysis and Topic Discovery	PI	2,719 K	2014/8/1~2017/7/31	MOST
Vision-based driver behavior analysis	PI	500 K	2013/6/1~2013/11/31	ITRI
Content-Aware Video Resizing for Mobile Devices	PI	2,182 K	2012/8/1~2015/7/31	MOST
Cross-Layer optimization for peer-to-peer video streaming over mesh networks (NSC Outstanding Young Investigator Grant)	PI	2,407 K	2011/8/1~2014/7/31	MOST
Mobile P2P Audio-Visual Streaming Platform (III)	PI	6,524 K	2011/12/1~2012/11/31	MOST
Cross-Layer P2P Video Streaming in Heterogeneous Networks	PI	768 K	2010/8/1~2011/7/31	MOST
Content-Aware Spatio-Temporal Video Content Retargeting	PI	2,250 K	2012/1/1~2014/12/31	NTHU
Image/Video Quality Enhancement on Mobile Phones	PI	1,105 K	2012/1/1~2012/12/31	HTC
Multimedia Studio: An Intelligent Audio-Visual editing System (Group Project)	PI	2,376 K	2009/8/1 ~ 2012/7/31	MOST
Learning-Based Video Inpainting and Hallucination	PI	1,619 K	2009/8/1 ~ 2012/7/31	MOST
Video Adaptation in Heterogeneous Environments (NSC Young Investigator Awards)	PI	3,448 K	2006/8/1 ~ 2009/7/31	MOST
Windshield Wiper Removal in Video Recorded by a Vehicle Video Recorder	PI	150 K	2011/11/1~2011/12/20	ITRI
Rain Removal in Video Recorded by a Vehicle Video Recorder	PI	150 K	2011/9/1 ~ 2011/10/31	ITRI
Video-Based Driving Assistance in Poor Weather Conditions	PI	150 K	2011/3/21~2011/6/20	ITRI
Quality Assessment and Enhancement of Digital Image/Video (II)	PI	2,200 K	2011/1/14~2011/12/13	National Archive Adm.
Quality Assessment and Enhancement of Digital Image/Video (I)	PI	1,500 K	2010/5/17~2010/11/30	National Archive Adm.
Visual Quality Enhancement in Video in Poor Weather Conditions	PI	500 K	2009/3/1~2009/11/30	ITRI
Video Super-resolution	PI	400 K	2009/4/1~2009/12/31	ITRI
Data Compression for Video Buffer of Digital TV	PI	184 K	2009/5/1~2009/10/31	NovaTek

Face Video-based Authentication	PI	78 K	2008/3/1~2008/6/30	ITRI
Intelligent Audio-visual Content Analysis, Authoring, and Recommendation	Co-PI	2,010 K	2014/8/1~2017/7/31	MOST
Sparse Coding Based Multimedia Signal Processing	Co-PI	1,128 K	2011/8/1~2014/7/31	MOST
Mobile P2P Audio-Visual Streaming Platform (II)	Co-PI	6,506 K	2010/10/1~2011/9/30	MOST
Mobile P2P Audio-Visual Streaming Platform (I)	Co-PI	7,616 K	2009/10/1~2010/9/30	MOST
Context-Aware Video streaming in Heterogeneous Environments	Co-PI	1,886 K	2008/8/1~2011/7/31	MOST
Video Transport in Heterogeneous Wireless Networks (Group Project)	Co-PI	1,133 K	2009/8/1~2010/7/31	MOST
Multimedia Defects Detection and Restoration	Co-PI	611 K	2010/8/1~2011/7/31	MOST
Long-Term Preservation of Multimedia Data Files	Co-PI	2,075 K	2008/3/1~2009/7/31	MOST
Intelligent Video Processing & Networking for Distributed Video Surveillance (Group Project)	Co-PI	3,560 K	2006/8/1~2009/7/31	MOST

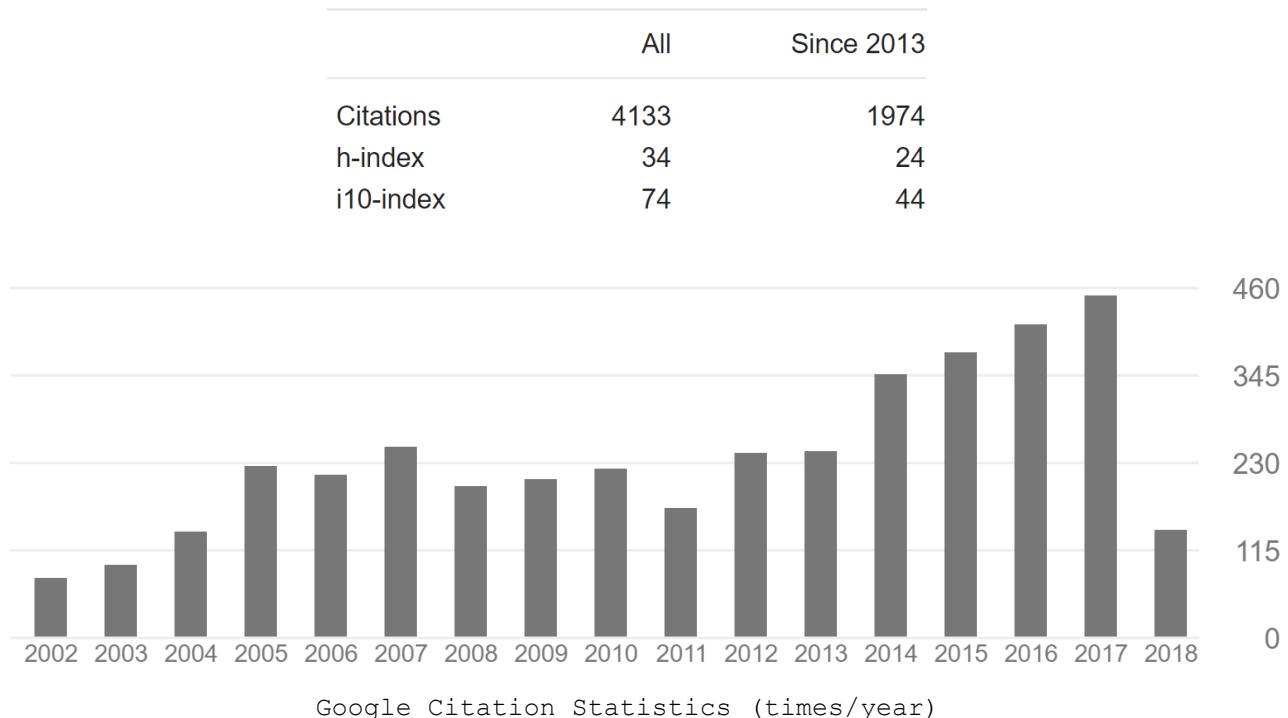
Students Supervision:

Have graduated 6 Ph.D. students (two working in academia and the other four in industry or research organizations) and 60+ master students. The graduated students have been working for leading companies in US and Taiwan, such as InterDigital, MediaTek, MorningStar, HTC, NovaTek, RealTek, Corel, Cyberlink, ASUS, ITRI, Chunghwa Telecom.

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

Google Scholar Citation Profile (as of September 25, 2017):

<http://scholar.google.com/citations?user=fXN3dl0AAAAJ&hl=en>



Journal Special Issues Edited: (* indicates Lead Guest Editor)

- [S1] Gene Cheung*, Dinei Florencio, Patrick Le Callet, Chia-Wen Lin, and Enrico Magli, *Special Issue on Interactive Media Processing for Immersive Communication, IEEE Journal of Selected Topics in Signal Processing* (published in the summer of 2015)
- [S2] Chia-Wen Lin*, Weiyao Lin, Zhenzhong Chen, Marco Tagliasacchi, and Shantanu Rane, *Special Issue on Recent Advances on Analysis and Processing for Distributed Video Systems, Journal of Visual Communication and Image Representation*. (published in the summer of 2013)
- [S3] Zicheng Liu*, Chia-Wen Lin, Ming-Ting Sun, Zhengyou Zhang, Homer Chen, Oscar Au, and Yap-Peng Tan, *Special Issue on ICME, IEEE Trans. Multimedia*, vol. 13, no. 4, June 2011. (59 submissions)
- [S4] Chia-Wen Lin*, Enrico Magli, Deepak Turaga, and Pascal Frossard, *Special Issue on Resource-Aware Adaptive Video Streaming, Journal of Visual Communication and Image Representation*, vol. 19, no. 8, pp. 471-472, Dec. 2008. (41 submissions)
- [S5] Chia-Wen Lin*, Yap-Peng Tan, Anthony Vetro, Alex Kot, and Ming-Ting Sun, *Special Issue on Video Adaptation for Heterogeneous Environments, EURASIP Journal on Advances in Signal Processing*, vol. 2007, 4 pages, May 2007. (23 submissions)

Refereed Journal Papers: (* indicates Corresponding Author)

Published/Accepted:

- [J1] Gene Cheung*, Weng-Tai Su, Yu Mao, and Chia-Wen Lin, “Robust semi-supervised graph classifier learning with negative edge weights,” *IEEE Transactions on Signal and Information Processing over Networks* (accepted)
- [J2] Chao Zhou, Chia-Wen Lin*, Xinggong Zhang, and Zongming Guo, “TFDASH: A fairness, stability, and efficiency aware rate control approach for multiple clients over DASH,” *IEEE Trans. Circuits and Systems for Video Technology* (accepted) (1 citations)
- [J3] Xianming Liu, Gene Cheung*, Chia-Wen Lin, Debin Zhao, and Wen Gao “Prior-based quantization bin matching for cloud storage of JPEG images,” *IEEE Trans. Image Processing*, vol. 27, no. 7, 14 pages, July 2018.
- [J4] Chih-Chung Hsu and Chia-Wen Lin*, “CNN-based joint clustering and representation learning with feature drift compensation for large-scale image data,” *IEEE Trans. Multimedia* (Special Issue on Large-Scale Multimedia Data Retrieval, Classification, and Understanding), vol. 20, no. 2, pp. 421–429, Feb. 2018. (3 citations)
- [J5] Chi-Wen Lo, Chao Zhou, Chia-Wen Lin*, and Yung-Chang Chen, “An unequal error protection scheme for reliable peer-to-peer scalable video streaming,” *Journal of Visual Communication and Image Representation*, vol. 38, pp. 790–801, July 2016. (1 citations)
- [J6] Chao Zhou, Chia-Wen Lin*, and Zongming Guo, “mDASH: A Markov decision based rate adaptation approach for dynamic HTTP streaming,” *IEEE Trans. Multimedia*, vol. 18, no. 4, pp. 738–751, Apr. 2016. (42 citations)
- [J7] Bing Li, Lingyu Duan*, Chia-Wen Lin, Tiejun Huang, and Wen Gao, “Depth-preserving warping for stereo image retargeting,” *IEEE Trans. Image Processing*, vol. 24, no. 9, pp. 2811–2826, Sept. 2015. (13 citations)
- [J8] Li-Wei Kang, Chih-Chung Hsu, Boqi Zhuang, Chia-Wen Lin*, and Chia-Hung Yeh, “Learning-based joint super-resolution and deblocking for a highly compressed image,” *IEEE Trans. Multimedia*, vol. 17, no. 7, pp. 921–934, July 2015. (19 citations)
- [J9] Yuming Fang*, Weisi Lin, Zhijun Fang, Zhenzhong Chen, Chia-Wen Lin, and Chengwei Deng “Visual acuity inspired saliency detection by using sparse features,” *Information Sciences*, vol. 309, no. 10, pp. 1–10, July 2015. (9 citation)

[J10] Chao Zhou, Chia-Wen Lin, Xinggong Zhang*, and Zongming Guo, “A novel JSCC Scheme for UEP-based scalable video transmission over MIMO systems,” *IEEE Trans. Circuits and Systems for Video Technology*, vol. 25, no. 6, pp. 1002–1015, June 2015. (9 citations)

[J11] Chih-Chung Hsu, Li-Wei Kang, and Chia-Wen Lin*, “Temporally coherent super-resolution of textured video via dynamic texture synthesis,” *IEEE Trans. Image Processing*, vol. 24, no. 3, pp. 919–931, Mar. 2015. (8 citations)

[J12] Chia-Hung Yeh*, Li-Wei Kang, Yi-Wen Chou, Chia-Wen Lin, and Shu-Jhen Fan Jiang, “Self-learning-based post-processing for image/video deblocking via sparse representation,” *Journal of Visual Communication and Image Representation*, vol. 25, no. 5, pp. 891–903, July 2014. (22 citations)

[J13] Chih-Chung Hsu, Chia-Wen Lin*, Yuming Fang, and Weisi Lin, “Objective quality assessment for image retargeting based on perceptual geometric distortion and information loss,” *IEEE Journal on Selected Topics in Signal Processing (Special Issue on Perception Inspired Video Processing)*, vol. 8, no. 3, pp. 377–389, June 2014. (46 citations)

[J14] Chao Zhou, Chia-Wen Lin*, Xinggong Zhang, and Zongming Guo, “A control-theoretical approach to rate adaptation for DASH over multiple content distribution servers,” *IEEE Trans. Circuits and Systems for Video Technology*, vol. 24, no. 4, pp. 681–694, Apr. 2014. (27 citations)

[J15] Bing Li, Lingyu Duan*, Jinqiao Wang, Rongrong Ji, Chia-Wen Lin, and Wen Gao, “Spatiotemporal grid flows for video retargeting,” *IEEE Trans. Image Processing*, vol. 23, no. 4, pp. 1615–1628, Apr. 2014. (15 citations)

[J16] Yuming Fang*, Kai Zeng, Zhou Wang, Weisi Lin, Zhijun Fang, and Chia-Wen Lin, “Objective quality assessment for image retargeting based on structural similarity,” *IEEE Journal on Emerging and Selected Topics in Circuits and Systems (Special Issue on Content-Aware Visual Systems: Analysis, Streaming and Retargeting)*, vol. 3, no. 1, pp. 95–105, Mar. 2014. (65 citations)

[J17] Yuming Fang, Weisi Lin*, Zhenzhong Chen, Chia-Ming Tsai, and Chia-Wen Lin, “A video saliency detection in the compressed domain,” *IEEE Trans. Circuits and Systems for Video Technology*, vol. 24, no. 1, pp. 27–38, Jan. 2014. (119 citations)

[J18] De-An Huang, Li-Wei Kang, Yu-Chiang Frank Wang*, and Chia-Wen Lin, “Self-learning based image decomposition with applications to single image denoising,” *IEEE Trans. Multimedia*, vol. 16, no. 1, pp. 83–93, Jan. 2014. (75 citations)

[J19] Chia-Wen Lin*, Chia-Ming Tsai, and Po-Chun Chen, “Low-overhead content-adaptive spatial scalability for scalable video coding,” *IEEE Journal on Selected Topics in Signal Processing (Special Issue on Video Coding: HEVC and Beyond)*, vol. 7, no. 6, pp. 1084–1095, Dec. 2013. (4 citations)

[J20] Chia-Ming Tsai, Li-Wei Kang, Chia-Wen Lin*, and Weisi Lin, “Scene-based movie summarization via role-community networks,” *IEEE Trans. Circuits and Systems for Video Technology*, vol. 23, no. 11, pp. 1927–1940, Nov. 2013. (33 citations)

[J21] 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*, vol. 22, no. 9, pp. 1388–1401, Sept. 2012. (10 citations)

[J22] Yuming Fang, Weisi Lin*, Zhenzhong Chen, and Chia-Wen Lin, “Saliency detection in the compressed domain for adaptive image retargeting,” *IEEE Trans. Image Processing*, vol. 21, no. 9, pp. 3888–3901, Sept. 2012. (200 citations)

[J23] Li-Wei Kang, Chia-Wen Lin*, and Yu-Hsiang Fu, “Automatic single-frame-based rain streaks removal via image decomposition,” *IEEE Trans. Image Processing*, vol. 21, no. 4, pp. 1742–1755, Apr. 2012. (173 citations)

[J24] 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*, vol. 14, no. 1, pp. 187–198, Feb. 2012. (118 citations)

[J25] 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, pp. 3124–3135, Nov. 2011. (13 citation)

[J26] 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. (34 citations)

[J27] 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. (26 citations)

[J28] 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. (48 citations)

[J29] 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 for Signal, Image, and Video Technology* (Special Issue on Audio-Visual Signal Processing for Intelligent Security Systems), vol. 49, no. 3, pp. 393–408, Dec. 2007. (29 citations)

[J30] 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. (71 citations)

[J31] 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. (18 citations)

[J32] 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. (10 citations)

[J33] 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. (23 citations)

[J34] 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. (6 citations)

[J35] Chih-Ming Chen, Chia-Wen Lin*, and Yung-Chang Chen, "Adaptive error resilience transcoding using prioritized intra-refresh for video multicast over wireless networks," *Signal Processing: Image Communication* (Special Issue on Mobile Video), vol. 22, no. 3, pp. 277–297, Mar. 2007. (17 citations)

[J36] 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. (31 citations)

[J37] 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. (27 citations)

[J38] 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. (24 citations)

[J39] 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. (445 citations)

[J40] 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. (41 citations)

[J41] 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. (19 citations)

[J42] 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. (111 citations)

[J43] 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. (10 citations)

[J44] 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. (113 citations)

[J45] Jeongnam Youn, Ming-Ting Sun*, and Chia-Wen Lin, “Motion vector refinement for high performance transcoding,” *IEEE Trans. Multimedia*, vol. 1, no. 1, pp. 30–40, Mar. 1999. (329 citations)

[J46] 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. (31 citations)

[J47] 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. (75 citations)

Under Review/Revision:

[J48] Megumi Kaneko*, Gene Cheung, Weng-tai Su, and Chia-Wen Lin, “Graph-based joint signal/power restoration for energy harvesting wireless sensor networks,” *IEEE Transactions on Signal Processing* (in preparation)

Refereed Conference Papers:

[C1] Bing Li, Chia-Wen Lin, C.-C. Jay Kuo, and Wen Gao, “Depth-aware stereo video retargeting,” *IEEE Conf. Computer Vision and Pattern Recognition (CVPR)*, June 2018, Salt Lake City, Utah, USA. (accepted)

[C2] Chih-Chung Hsu and Chia-Wen Lin*, “Objective quality assessment for video retargeting based on spatio-temporal distortion analysis,” in *Proc. IEEE Conf. Visual Communication and Image Processing (VCIP)*, Dec. 2017, Florida, USA.

[C3] Megumi Kaneko*, Gene Cheung, Weng-Tai Su, and Chia-Wen Lin, “Graph-based joint signal / power restoration for energy harvesting wireless sensor networks,” in *Proc. IEEE Int. Conf. GlobeCom*, Dec. 2017, Singapore.

[C4] Chih-Chung Hsu and Chia-Wen Lin*, “Unsupervised convolutional neural networks for large-scale image clustering,” in *Proc. IEEE Int. Conf. Image Processing*, Sept. 2017, Beijing, China.

[C5] Weng-Tai Su, Gene Cheung*, and Chia-Wen Lin, “Graph Fourier transform with negative edge weights for depth image coding,” in *Proc. IEEE Int. Conf. Image Processing*, Sept. 2017,

Beijing, China.

- [C6] Weng-Tai Su, Gene Cheung*, and Chia-Wen Lin, "Robust graph-based image classifier with negative edge weights," in *Proc. IEEE Int. Conf. Multimedia & Expo.*, July 2017, Hong Kong, China.
- [C7] Yu Mao, Gene Cheung*, Chia-Wen Lin, and Yusheng Ji, "Joint learning of similarity graph and image classifier from partial labels," in *Proc. APSIPA ASC*, Jeju, Korea, December 2016.
- [C8] Fang-Yu Chao, Jia Xu, and Chia-Wen Lin*, "Mining user interests from social media by fusing textual and visual features," in *Proc. APSIPA ASC*, Jeju, Korea, December 2016.
- [C9] Yu Mao, Gene Cheung, Chia-Wen Lin, and Yusheng Ji, "Image classifier learning from noisy labels via generalized graph smoothness priors," in *Proc. IEEE Workshop on Image, Video, and Multidimensional Signal Processing*, Bordeaux, France, July 2016. **(Best Student Paper Award)**
- [C10] Zhen Ju, Weiyao Lin*, Michael Ying Yang, Bo Zhang, Chuanfei Luo, Chia-Wen Lin, and Tao Mei, "A representative-based framework for parsing and summarizing events in surveillance videos," in *Proc. Int. Conf. Multimedia and Expo. Workshops* (Workshop on Emerging Multimedia Systems and Application: Multimedia Big Data Processing and Analytics), Seattle, Washington, USA, July 2016.
- [C11] Yanning Wang, Heming Sha, Weiyao Lin*, Hua Yang, Chia-Wen Lin, "Improved 3D-model texture mapping with region-of-interest weighting and iterative boundary-texture updating," in *Proc. Int. Conf. Multimedia and Expo. Workshops* (Workshop on Emerging Multimedia Systems and Application: Multimedia Big Data Processing and Analytics), Seattle, Washington, USA, July 2016.
- [C12] Weng-Tai Su, Chih-Chung Hsu, Chia-Wen Lin*, and Weiyao Lin "Supervised-learning based face hallucination for enhancing face recognition," in *Proc. IEEE Int. Conf. Acoustics, Speech & Signal Processing*, March 2016, Shanghai, China.
- [C13] Xianming Liu*, Gene Cheung, Chia-Wen Lin, and Debin Zhao, "Quantization bin matching for cloud storage of JPEG images," in *Proc. IEEE Int. Conf. Acoustics, Speech & Signal Processing*, March 2016, Shanghai, China.
- [C14] Chao Zhou and Chia-Wen Lin*, "A Markov decision based rate adaption approach for dynamic HTTP streaming," in *Proc. IEEE Visual Communication and Image Processing (VCIP) Conf.*, Dec. 2015, Singapore. **(Best Paper Award)**
- [C15] Jun-Ying Li, Li-Wei Kang, Chia-Ming Tsai, and Chia-Wen Lin*, "Learning-based movie summarization via role-community analysis and feature fusion," in *Proc. IEEE Workshop Multimedia Signal Processing (MMSP)*, Oct. 2015, Xiamen, China.
- [C16] Bing Li*, Lingyu Duan, Chia-Wen Lin, and Wen Gao, "Region-based depth-preserving stereoscopic image retargeting," in *Proc. IEEE Int. Conf. Image Processing*, Oct. 2014, Paris, France.
- [C17] Chih-Chung Hsu, Li-Wei Kang, and Chia-Wen Lin*, "Video super-resolution via dynamic texture synthesis," in *Proc. IEEE Workshop Multimedia Signal Processing (MMSP)*, Sept. 2014, Jakarta, Indonesia.
- [C18] Chao Zhou*, Chia-Wen Lin, Xinggong Zhang, and Zongming Guo, "Buffer-based smooth rate adaptation for dynamic HTTP streaming," in *Proc. APSIPA Annual Summit and Conference*, Oct. 2013, Kaohsiung, Taiwan.
- [C19] Chih-Chung Hsu, Chia-Wen Lin*, Yuming Fan, and Weisi Lin, "Quality assessment for image retargeting based on geometric distortion and information loss," in *Proc. IEEE Visual Communication and Image Processing (VCIP) Conf.*, Nov. 2013, Sarawak, Malaysia.
- [C20] Li-Wei Kang, Bo-Chi Chuang, Chih-Chung Hsu, Chia-Wen Lin*, and Chia-Hung Yeh, "Self-learning-based single image super-resolution of a highly compressed image," in *Proc. IEEE Workshop Multimedia Signal Processing (MMSP)*, Sept. 2013, Sardinia, Italy. **(top 10% paper award)**

- [C21] Chi-Wen Lo, Chia-Wen Lin^{*}, and Yung-Chang Chen, "A hybrid sender/receiver-driven error protection scheme for reliable peer-to-peer video streaming," in *Proc. IEEE Int. Conf. Image Process.*, Sept. 2013, Melbourne, Australia.
- [C22] Chia-Wen Lin^{*}, Chia-Ming Tsai, Po-Chun Chen, and Li-Wei Kang, "Low-overhead content-adaptive spatial scalability for scalable video coding," in *Proc. IEEE China Summit and Int. Conf. Signal Information Process.* (ChinaSIP), July 2013, Beijing, China. (invited paper)
- [C23] Yuming Fang, Weisi Lin^{*}, Zhenzhong Chen, Chia-Wen Lin, Zhijun Fang, and Chenwei Deng "A saliency detection model based on sparse features and visual acuity," in *Proc. IEEE Int. Symp. Circuits and Systems*, May 2013, Beijing, China.
- [C24] Yi-Wen Chiou, Li-Wei Kang, Chia-Hung Yeh^{*}, and Chia-Wen Lin, "Efficient image/video deblocking via sparse representation," in *Proc. IEEE Visual Communication and Image Processing (VCIP) Conf.*, Nov. 2012, San Diego, CA.
- [C25] Yuming Fang, Weisi Lin^{*}, Zhenzhong Chen, and Chia-Wen Lin, "Video saliency detection in the compressed domain," in *Proc. ACM Multimedia (Short Paper Track)*, Nov. 2012, Nara, Japan.
- [C26] Chih-Hung Ling, Chia-Wen Lin^{*}, Chiou-Ting Hsu, and Hong-Yuan Mark Liao, "Exemplar-based object posture super-resolution using manifold learning," in *Proc. IEEE Workshop Multimedia Signal Processing (MMSP)*, Sept. 2012, Banff, Canada.
- [C27] De-An Huang, Li-Wei Kang, Chih-Yun Tsai, Ming-Chun Yang, Chia-Wen Lin, and Yu-Chiang Frank Wang^{*}, "Context-aware single image rain removal," in *Proc. IEEE Int. Conf. Multimedia and Expo*, July 2012, Melbourne. (top 15% oral paper)
- [C28] Li-Wei Kang, Chia-Wen Lin^{*}, Che-Tsung Lin and Yu-Cheng Lin, "Self-learning-based rain streak removal for image/video," in *Proc. IEEE Int. Symp. Circuits and Systems*, May 2012, Seoul, Korea.
- [C29] Chun-Yu Lin, Chih-Chun Hsu, Chia-Wen Lin^{*}, and Li-Wei Kang, "Fast deconvolution-based image super-resolution using gradient prior," in *Proc. Visual Communication and Image Processing (VCIP) Conf.*, Nov. 2011, Tainan, Taiwan. (invited paper)
- [C30] Yu-Min Fang, Zhenzhong Chen, Weisi Lin^{*}, Chia-Wen Lin, and Chia-Ming Tsai, "Image retargeting based in the sensitivity-tuned visual significance map," in *Proc. Conf. Visual Communication and Image Processing (VCIP)*, Nov. 2011, Tainan, Taiwan. (invited paper)
- [C31] Chih-Chung Hsu and Chia-Wen Lin, "Image superresolution via feature-based affine transform," in *Proc. IEEE Workshop Multimedia Signal Processing (MMSP)*, Oct. 2011, Hang-Zhou, China.
- [C32] Yuming Fang, Weisi Lin, Zhenzhong Chen, and Chia-Wen Lin, "Saliency-based image retargeting in compressed domain," in *Proc. ACM Multimedia (Short Paper Track)* Nov. 2011, Scottsdale, Arizona, USA.
- [C33] 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*, Sept. 2011, Brussels, Belgium.
- [C34] Chia-Ming Tsai, Tzu-Chieh Yen, and Chia-Wen Lin, "Mosaic-guided video retargeting for video adaptation," in *Proc. Conf. Applications of Digital Image Process. XXXIV, SPIE Optics+Photonics 2011*, Aug. 2011, San Diego, CA, USA. (invited paper)
- [C35] 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.
- [C36] 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.

- [C37] 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.
- [C38] 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.
- [C39] 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)
- [C40] 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.
- [C41] 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)
- [C42] 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.
- [C43] 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.
- [C44] 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.
- [C45] 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.
- [C46] 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. (111 citations)
- [C47] 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.
- [C48] 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)
- [C49] 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. (32 citations)
- [C50] 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)
- [C51] 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. (51 citations)
- [C52] 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.

- [C53] 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.
- [C54] 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)
- [C55] 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.
- [C56] 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.
- [C57] 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.
- [C58] 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.
- [C59] 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.
- [C60] 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.
- [C61] 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.
- [C62] 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.
- [C63] 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.
- [C64] 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.
- [C65] 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)**
- [C66] 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.
- [C67] 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.
- [C68] 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.

- [C69] 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. (**27** citations)
- [C70] 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. (**14** citations)
- [C71] 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.
- [C72] 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.
- [C73] 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**) (**18** citations)
- [C74] 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.
- [C75] 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.
- [C76] 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.
- [C77] 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. (**14** citations)
- [C78] 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.
- [C79] 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.
- [C80] 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. (**28** citations)
- [C81] 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. (**36** citations)
- [C82] 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. (**37** citations)
- [C83] 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.
- [C84] 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.

[C85] 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.

[C86] Chia-Wen Lin, Jian Zhou, and Ming-Ting Sun, "Minimum cost implementation of full VCR functionality in MPEG video streaming," in *Proc. IEEE Int. Symp. Circuits and Systems*, Sydney, V-33-36, June 2001, Sydney, Australia.

[C87] Chia-Wen Lin, Wei-Xien Lin, Yung-Chang Chen, and Ming-Ting Sun, "Implementation of H.323 compliant virtual meeting systems," in *Proc. Int. Computer Symp., Workshop on Computer Networks, Internet, and Multimedia*, pp. 88-95, Dec. 2000, Chiayi, Taiwan.

[C88] Chia-Wen Lin, Yung-Chang Chen, and Ming-Ting Sun, "Dynamic region of interest transcoding for multipoint video conferencing," in *Proc. Int. Computer Symp., Workshop on Computer Networks, Internet, and Multimedia*, pp. 114-121, Dec. 2000, Chiayi, Taiwan.

[C89] Chia-Wen Lin, Jeongnam Youn, Jian Zhou, Ming-Ting Sun and Iraj Sodagar, "MPEG video streaming with VCR functionality," in *Proc. IEEE Int. Symp. Multimedia Software Eng.*, pp. 146-153, Dec. 2000, Taipei, Taiwan.

[C90] Chia-Wen Lin, Yao-Jen Chang, and Yung-Chang Chen, "Low-complexity face-assisted video coding," in *Proc. IEEE Int. Conf. Image Proc.*, pp. 207-210, Sep. 2000, Vancouver, BC, Canada. (31 citations)

[C91] Chia-Wen Lin, Wen-Hao Wang, Yung-Chang Chen, Ming-Ting Sun and Jenq-Neng Hwang, "Implementation of H.323 video conference systems with personal presence control," in *Proc. IEEE Int. Conf. Consumer Electronics*, June 2000, Los Angeles.

[C92] Chia-Wen Lin, Te-Jen Liao, and Yung-Chang Chen, "Dynamic rate control in multipoint video transcoding," in *Proc. IEEE Int. Symp. Circuits and Systems*, pp. II-17-20, May 2000, Geneva, Switzerland. (23 citations)

[C93] Chia-Wen Lin, Eryin Fei, and Yung-Chang Chen, "Rate-distortion constrained quadtree segmentation for stereoscopic video coding," in *Proc. IEEE Int. Symp. Circuits and System*, Jun. 1999, Florida, USA.

[C94] Chia-Wen Lin, Eryin Fei, and Yung-Chang Chen, "Efficient video coding with R-D constrained quadtree segmentation," in *Proc. Picture Coding Sym.*, pp. 57-60, Mar. 1999, Portland, USA.

[C95] Chia-Wen Lin, Yao-Jen Chang, and Yung-Chang Chen, "Hierarchical motion estimation algorithm based on pyramidal successive elimination," in *Proc. Int. Computer Symp.*, pp. 41-44, Dec. 1998, Tainan, Taiwan.

[C96] Chia-Wen Lin, Eryin Fei, and Yung-Chang Chen, "Rate-distortion optimized quadtree coding of Video," in *Proc. Int. Symp. Multimedia Information Proc.*, Dec. 1998, Chung-Li, Taiwan.

[C97] Chia-Wen Lin, Jeongnam Youn, Yung-Chang Chen, and Ming-Ting Sun "A study on video transcoder architecture," in *Proc. IEEE Int. Symp. Consumer Electronics*, Oct. 1998, Taipei, Taiwan.

[C98] Jenq-Neng Hwang, Tzong-Der Wu, and Chia-Wen Lin, "Dynamic frame skipping in video transcoding," in *Proc. IEEE Workshop Multimedia Signal Proc.*, Dec. 1998, Redondo Beach, CA. (108 citations)

[C99] Chia-Wen Lin, Eryin Fei, and Yung-Chang Chen, "Hierarchical disparity estimation using spatial correlation," in *Proc. IEEE Int. Conf. Consumer Electronics*, June 1998, Los Angeles, USA.

[C100] Ming-Yu Hwang, Chia-Wen Lin, and Yung-Chang Chen, "3-D object-based coding algorithm for stereo image sequences," in *Proc. Int. Symp. Multimedia Information Proc.*, pp. 131-134, Sep. 1997, Taipei, Taiwan.

[C101] Chia-Wen Lin and Shih-Chun Wang, "A study on SONET OC-3 Terminal Multiplexer

architecture," in *Proc. IEEE Int. Conf. Communication System*, 1994, Singapore.

- [C102] Chia-Wen Lin, Yung-Chang Chen and Chin-Liang Wang, "Efficient VLSI architectures for multirate systems and subband filtering", in *Proc. IEEE Workshop on Visual Signal Processing and Communications*, pp. 1-4, 1993, Melbourne, Australia.
- [C103] Chia-Wen Lin, Yung-Chang Chen and Chin-Liang Wang, "Efficient bit-level systolic array for QMF banks", in *Proc. SPIE Conf. Visual Communication and Image Processing*, 1992, Boston, U.S.A.
- [C104] Chia-Wen Lin, Yung-Chang Chen and Chin-Liang Wang, "An efficient architecture for HDTV subband filter banks," in *Proc. International Workshop on HDTV'92*, Oct. 1992, Kawasaki, Japan.

Patents:

- [P1] Jeongnam Youn, Ming-Ting Sun, and Chia-Wen Lin, "Method and apparatus for motion estimation for high performance transcoding," USA patent #6,466,623 (filed in Mar. 1999; awarded in Oct. 2002). (72 citations)
- [P2] Ting-Ying Kuo, C.-C. Jay Kuo, and Chia-Wen Lin, "Fast motion-compensated frame interpolator," USA patent #6,618,493 (filed in July 1999; awarded in Sept. 2003). (39 citations)
- [P3] Jeongnam Youn, Ming-Ting Sun, Chia-Wen Lin and Wen-Hao Wang, "Transcoding apparatus and method," USA patent #6,650,707 (filed in Mar. 2001; awarded in Nov. 2003). (17 citations)
- [P4] Chia-Wen Lin, "Video transcoder, video transcoding method, and video communication system and method using video transcoding with dynamic sub-window skipping," USA patent #6,711,212 (filed in Sept. 2000; awarded in Mar. 2004). (73 citations)
- [P5] Chia-Wen Lin, Ming-Ting Sun, and Hung-Hseng Hsu, "Methods and systems for video streaming with VCR functionality," USA patent #6,738,980 (filed in Nov. 2001; awarded in May 2004). (46 citations)
- [P6] Chia-Wen Lin, Yuh-Ruey Lee, and Yeh-Kai Chou, "Low-complexity spatial downscaling video transcoder and method thereof," USA patent #7,180,944 (filed in July 2004; awarded in Feb. 2007). (12 citations)
- [P7] Chia-Wen Lin and Su-Ren Chen, "Method and apparatus for MPEG-4 FGS performance enhancement," USA patent # 7,227,894 (filed in Feb. 2004; awarded in June 2007). (17 citations)
- [P8] Chia-Wen Lin, Hsu-Kai Tsai, and Jia-Jyh Luo, "Methods and systems for video transcoding in DCT domain with low complexity," USA patent # 7,236,529 (filed in May 2002; awarded in June 2007). (3 citations)
- [P9] Chia-Wen Lin, Zhi-Hong Ling, and Kual-Zheng Lee, "Object tracking systems and methods utilizing compressed-domain motion-based segmentation," USA patent # 7,835,542 (filed in May 2006; awarded in Nov. 2010). (10 citations)
- [P10] I-Hsien Lee, Chia-Wen Lin, and Shih-Ming Hsu, "Encoders and image encoding methods," USA patent # 8,175,151 (filed in Mar. 2007; awarded in May 2012).
- [P11] Chi-Sheng Shen and Chia-Wen Lin, "Methods for selecting a prediction mode," USA patent # 8,467,451 (filed in Nov. 2007; awarded in June 2013).
- [P12] Chia-Wen Lin and Chih-Chung Hsu "Method and system for example-based face hallucination," USA patent # 8,488,913 (filed in Aug. 2010; awarded in July 2013). (3 citations)
- [P13] Li-Wei Kang, Chia-Wen Lin and Che-Tsung Lin, and Yu-Chen Lin, "Method and apparatus for single-image-based rain streak removal," USA patent # 8,774,546 (filed in July 2012; awarded in July 2014).